***ANS MH10.8.2-2016***
***(Continuous Maintenance of ANS MH10.8.2-2016)***

Normative reference:

***ISO/IEC 15418***

Rev: 2020-08-27

American National Standard

# *Data Identifier and Application Identifier Standard*

Approved: June 10, 2016
Updated: August 27, 2020

**Abstract**
This standard provides a comprehensive dictionary of MH 10/SC 8 Data Identifiers and GS1 Application Identifiers, provides for the assignment of new Data Identifiers, as required, and provides a document detailing the correlation, or mapping, of Data Identifiers to Application Identifiers, where a correlation exists.

***Material Handling Industry***
*8720 Red Oak Blvd., Suite 201*
*Charlotte, NC 28217-3992*
*Published:*

American National Standard

Approval of an American National Standard requires verification by the American National Standards Institute (ANSI) that the requirements for due process, consensus, and other criteria for approval have been met by the standards developer.

Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution.

The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards.

The American National Standards Institute does not develop standards and will in no circumstances give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretations should be addressed to the sponsor whose name appears on the title page of this standard.

**CAUTION NOTICE:** This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken periodically to reaffirm, revise, or withdraw this standard. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.

Published by:

**Material Handling Industry for:**

**MH10, Unit-Loads & Transport-Packages,**
**MH10 is an ANSI Accredited Standards Committee**

**Secretariat: Material Handling Industry**

**8720 Red Oak Blvd., Suite 201, Charlotte, NC 28217-3992**

Copyright © 2016 by Material Handling Industry

All rights reserved.

No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without prior written permission of the publisher.

Printed in the United States of America

# Disclaimer

This standard was developed under the ANSI Committee method and approved by ANSI on June 10, 2016. It was developed with the sole intent of offering information to parties engaged in the manufacture, marketing, purchase, or use of automatic identification equipment, software and services. This standard is advisory only and acceptance is voluntary and the standard should be regarded as a guide that the user may or may not choose to adopt, modify, or reject. The information does not constitute a comprehensive safety program and should not be relied upon as such. Such a program should be developed and an independent safety adviser consulted to do so.

Material Handling Industry (MHI), the MH10 Committee and its officers and members assume no responsibility and disclaim all liability of any kind, however arising, as a result of acceptance or use or alleged use of this standard. User specifically understands and agrees that MHI, the MH10 Committee and their officers, committee members, agents, and members shall not be liable under any legal theory of any kind for any action or failure to act with respect to the design, installation, manufacture, preparation for sale, sale, characteristics, features, or delivery of anything covered by this standard. Any use of this information must be determined by the user to be in accordance with applicable federal, state, and local laws and regulations.

MHI, the MH10 Committee and its officers and members make no warranties of any kind, express, implied, or statutory, in connection with the information in this standard. MHI and the MH10 Committee specifically disclaim all implied warranties of merchantability or of fitness for particular purpose.

By referring to or otherwise employing this standard, the user agrees to defend, protect, indemnify, and hold MHI, the MH10 Committee, their officers, committee members, agents, and members harmless from and against all claims, losses, expenses, damages, and liabilities, direct, incidental, or consequential, arising from acceptance or use or alleged use of this standard, including loss of profits and reasonable attorneys' fees which may arise out of the acceptance or use or alleged use of this standard. The intent of this provision and of the user is to absolve and protect MHI, the MH10 Committee, committee officers, agents, and members from any and all loss relating in any way to this standard, including those resulting from the user's own negligence.

# Foreword

It is the mission of this committee to develop a comprehensive dictionary of Data and Application Identifiers, assign new Data Identifiers, as required, and to provide a document detailing the correlation, or mapping, of Data Identifiers to Application Identifiers, where a correlation exists.

As with any American National standard, as new requirements are identified, interested parties request the assignment of new Data Identifiers and Application Identifiers to meet the needs of a particular industry or activity. ANSI has designated this standard as being "Under Continuous Maintenance". Proposed changes to the standard that are accepted by the MH10.8.2 Data Identifier Committee shall be integrated into the previously published version at the recommendation of the committee. Upon approval of the new version by MH10 Subcommittee 8 and the full MH10 committee, the standard will be published as a new version.

The committee plans to incorporate accepted revisions into the standard as frequently as necessary, but in no case will a published revised standard be issued more frequently than yearly, in line with indicated needs and industry developments. Each accepted revision since the last published version shall be identified in a "Document Maintenance Summary" appearing immediately before the Table of Contents of the standard.

This standard has been updated from the last published issue of ANS MH10.8.2 representing the fourth five-year revision of the standard, published in 2015, published in 2006, published in 2002; the first revision occurring in 1995. Requests received subsequent to the date of the standard will be added to the draft standard for trial use and will be considered for incorporation at the fifth five-year revision of the standard.

Users desiring assignment of new Data Identifiers may submit their request to:

**EMAIL:** DIrequests@mhi.org

**MAIL:** DIMC
c/o MHI
8720 Red Oak Blvd – Suite #201
Charlotte, NC 28007-3992
USA

**PHONE:** +1 704.676.1190 Ask for Director of Standards

Users desiring assignment of new Application Identifiers may submit their request to http://www.gs1.org/.

**Note:**

The following annexes are provided:

Annex A Quick Reference to Data Identifier (DI) Categories
Annex B Annotated Listing of Assigned Data Identifier (DI) Categories
Annex C Data Identifier (DI) Application Notes
Annex D ANS X12.3 Data Element Number 355 Unit of Measure Code
Annex E ANS X12.3 Data Element Number 374 Date/Time Codes
Annex F ANS X12.3 Data Element Numbers 208 & 209 Hazardous Material Codes
Annex G ISO 4217 Currencies and Funds Codes
Annex H ISO 3166-1 Country Codes
Annex I Data Identifier and Application Identifier Request Forms & Metadata
Annex J User Guidance
Annex K System Identifiers
Annex L Identifiers for Returnable Packaging Items
Annex M Material categories and material codes

**At the time of approval, the MH10 committee consisted of the following members:**

American Trucking Associations
American Wood Packaging Association
APA - The Engineered Wood Association
Association of American Railroads
Assoc. of Professional Material Handling Consultants
ASTM
Automotive Industry Action Group
Containerization & Intermodal Institute, Inc.
Fibre Box Association
Flexible Intermediate Bulk Containers Association
Glass Packaging Institute
GS1 US
IDEAlliance
Institute of Packaging Professionals
Integrated Business Communications Alliance
Intermec Technologies Corporation
International Association of Movers
International Cargo Handling Coordination Association
International Foodservice Distributors Association
International Safe Transit Association
Material Handling Industry
Material Handling Management Society
Millwood, Inc.
National Wooden Pallet & Container Association
Packaging Machinery Manufacturers Institute
Paper Shipping Sack Mfg. Association
Plastic Drum Institute
Rack Manufacturers Institute
Reusable Industrial Packaging Association
Steel Shipping Container Institute
The Coca-Cola Company
The Soap & Detergent Association
U.S. Air Force
U.S. Dept. of Agriculture
U.S. Dept. of Defense AIT Office
U.S. Forest Products Laboratory
United Parcel Service
Virginia Tech – Center for Unit Load Design

**Data Identifier Maintenance Committee**

ANSI MH10.8.2 is a reference standard to ISO/IEC 15418 (GS1 Application Identifiers and MH 10/SC 8 Data Identifiers). As such a Data Identifier Maintenance Committee was established representing diverse interests from various countries. Data Identifier Maintenance Committee Members are:

Bill Hoffman, Automotive Industry Action Group (AIAG) Chair
Joo-Sang Park, KAIST
Sten Lindgren, ODX Consulting AB
Erich Guenter, IBM (Germany) & EDIFICE
Heinrich Oehlmann, Eurodata Council, DIN
Clive Hohberger, Consultant
Richard Fisher, DoD (retired)

# DOCUMENT MAINTENANCE SUMMARY

Any changes to this document will be reflected in the Document Maintenance Summary, below.

| Date | Action | Summary |
|---|---|---|
| 2016-07-19 | Add | 30B – Packaging Item Number.<br>Number to identify the type of packaging item (material) used when packing products and packages<br>The number will enable packaging item (material) be identified and separated from products, packages, Returnable Transport Items (RTIs) and Returnable Packaging Items (RPIs) during packing.<br>The number is constructed as a sequence of minimum 1 data element:<br>Packaging item (material) number that is unique within the holder's domain. |
| 2016-07-19 | Add | 31B – Global Unique Packaging Number<br>Global unique number to identify the type of packaging item (material) used when packing products and packages.<br>The global unique number will enable packaging items (materials) be identified and separated from products, packages, Returnable Transport Items (RTIs) and Returnable Packaging Items (RPIs) during packing.<br>The number is constructed as a sequence of 3 concatenated data elements:<br>The IAC, followed by the CIN, followed by the Packaging item (material) number that is unique within the CIN holder's domain. |
| 2016-08-12 | Corrected | 10N - Due to an error in the assignment of DI “10N” (there is no central authority for data-definition nor maintenance), no new uses of DI “10N” should be implemented.<br>The function of DI “10N” is established in Category 18, MISCELLANEOUS with DI “5R”.<br>It is strongly recommended that existing applications that use DI “10N” migrate to DI 5R”. |
| 2016-08-12 | Added | 5R - Data in the format and using semantics defined by the holder of a Company Identification Number (CIN) that has been issued by an Issuing Agency Code (IAC) in accordance with ISO/IEC 15459, defined as a sequence of concatenated data elements: IAC, followed by CIN, followed by the separator character “:” (colon) followed by the data in the format and using semantics as defined by the CIN holder.<br>NOTE: Only the data syntax rules (if any) as provided by the declared IAC+CIN within each DI “10N” data stream shall be applied to the data following DI 10N+IAC+CIN. |
| 2016-08-29 | Added | 6R - ISO/IEC 20248 digital signature data construct. If the underlying data carrier encoding is 7 bits, then only the ISO/IEC 20248 raw format may be used. |
| 2016-09-22 | Added | 11N - Data fields related to reverse logistics, which covers returns, repair, refurbishing and recycling. |

| Date | Action | Summary |
|---|---|---|
| Original Date: 2015-11-03<br>Added back: 2016-12-06 | Added back<br>(This DI was missed in the 2016 document update) | 4I - Globally unique transport vehicle identifier (e.g., Trucks, Trailer) with exclusive assignment - Vehicle Identification Number (VIN) as defined in the U.S. under 49 CFR, §§ 565 and internationally by ISO 3779 followed by the "+" character and the (mandatory) field for the Vehicle Registration License Plate Number. |
| Original Date: 2016-01-28<br>Added back: 2016-12-06 | Added back<br>(This DI was missed in the 2016 document update) | 5I - Unique production vehicle identifier that will be used during the vehicle production processes, consisting of the Body Tag Number (BTN; or any other descriptor used to identify the raw car body, or stated another way, the assemblage of parts that are used to start the vehicle's production), followed by the "+" character, then followed by the Production Order Number (PON), followed by the "+" character, and then followed by the Manufacturer-assigned Serial Number (SN). NOTE: The SN component shall be replaced by the VIN as soon as the VIN is available in the assembly process. |
| 2016-12-06 | Corrected | 11N - Due to an error in the assignment of DI "11N" (the language which states: 'DI "11N" shall never be encoded in a 2D or RFID tag together with any other DI elements.' is not a valid statement), no new uses of DI "11N" should be implemented. The function of DI "11N" is established in DI "12N". It is strongly recommended that existing applications that use DI "11N" migrate to DI "12N". |
| 2016-12-06 | Added | 12N - The Data construct is defined and controlled by the RLA, comprised of 2 segments: the field identifier (FI) code, immediately followed by the data as defined for that element according to the data dictionary of the RLA. It is essentially a catalog of fields with standardized content. The Field Identifiers are posted at http://rla.org/11ncodes The use and structure of these codes are defined at: http://rla.org/11nformat Examples can be found at that site. |
| Original Date: 2015-09-08<br>Added back: 2016-12-06 | Added back<br>(This DI was missed in the 2016 document update) | 13E - Moisture Sensitivity Level, class of time period in which a moisture sensitive device can be exposed to ambient room conditions, according to IPC/JEDEC J-STD-020E. |
| 2017-08-02 | Added | 25D – Best before date (YYYYMMDD). |
| 2017-08-02 | Added | 26D - First freeze date: (YYYYMMDD). The first freeze date is defined as the date on which products are frozen directly after slaughtering, harvesting, catching or after initial processing. |
| 2017-08-02 | Added | 27D - Harvest date: (YYYYMMDD). The date when an animal was slaughtered or killed, a fish has been harvested, or a crop was harvested. |
| 2017-08-02 | Added | 28D - Harvest date range: (YYYYMMDDYYYYMMDD). The start date and end date range over which harvesting occurred. |
| 2017-08-02 | Added | 8J - Maritime Mobile Service Identity (MMSI), a nine digit number regulated by the International Telecommunications Union to uniquely identify a ship or a coast radio station. |

| Date | Action | Summary |
|---|---|---|
| 2017-08-02 | Added | 18L - FAO fishing area code: Fishing area code as defined by the Fisheries and Aquaculture Department of the Food and Agricultural Organization (FAO) (http://www.fao.org. Search for Fishing Area Code sub-site). All characters of the GS1 General Specification-defined sub-set of ISO/IEC 646 are allowed. |
| 2017-08-02 | Added | 35L - A government-assigned approval number of vessel / aquaculture site / farm / processor, starting with an ISO 3166-1 alpha-2 country code, followed by the approval number. |
| 2017-08-02 | Added | 36L - A government-assigned approval number of producer or farm or first deboning / cutting hall, starting with an ISO 3166-1 alpha-2 country code, followed by the approval number. |
| 2017-08-02 | Added | 7R - Aquatic Sciences and Fisheries Information System (ASFIS) 'Inter-agency 3-alpha species code', maintained by the Food and Agriculture Organization of the United Nations (www.fao.org). |
| 2017-08-02 | Added | 8R - Food and Agricultural Organization (FAO) International Standard Classification of Fishing Gears (ISSCFG) code. (www.fao.org). |
| 2017-08-02 | Added | 9R - Production method for fish and seafood as specified by the Fisheries and Aquaculture Department of the Food and Agricultural Organization (FAO) of the United Nations, according to EU Regulation 1379/2013. (www.fao.org) |
| 2017-08-02 | Added | 23V- Government-assigned Value Added Tax identification number identifying supplier, starting with an ISO 3166-1 alpha-2 country code (except for Greece, which uses the ISO 639-1 language code EL), followed by the government-assigned VAT number. |
| 2017-08-02 | Added | 24V - Government-assigned Value Added Tax identification number identifying customer, starting with an ISO 3166-1 alpha-2 country code (except for Greece, which uses the ISO 639-1 language code EL), followed by the government-assigned VAT number. |
| 2017-8-10 | Corrected | • Numerous punctuation and grammar errors/omissions.<br>• Added DIs "27Q" through "31Q" to Section III.<br>• DIs "28Q", "29Q" and "30Q"; corrected the examples to reflect the proper DIs (e.g., the example for DI "29Q" said "31Q10").<br>• Updated DI Request Form to latest version. |
| 2017-10-5 | Corrected | • Additional corrections to DIs "28Q", "29Q" and "30Q" that were not corrected in the 10AUG2017 correction, above. |
| 2018-1-31 | Added | 26H - Globally Unique Personal ID, with a "Party Qualifier" code value from EDIFACT Code List 3035, assigned by a holder of a Company Identification Code (CIN) and including the related Issuing Agency Code (IAC) in accordance with ISO/IEC 15459 and its registry, structured as a sequence of 5 concatenated data elements: IAC followed by CIN, followed by an ID unique within the CIN holder's domain, followed by the Plus character (+) and a code value from EDIFACT Code List 3035 "Party Qualifier". |

| Date | Action | Summary |
|---|---|---|
| 2020-5-27 | Added | 53P – Identifier for Specific Marine Equipment approved under the European Union Directive on Marine Equipment (2014/90/EU and Implementing Regulation (EU) 2018/608 |
| 2020-5-27 | Revised | Revised DIMC roster to remove Martin Treder and Mark Lewis |
| 2020-8-27 | Added | 54P – Identifier for UDI-DI (Unique Device Identification - Device Identifier) for Medical Devices (MD) and In-vitro-Diagnostics (IvD) as the unique key to public UDI data bases (GUDID, EUDAMED, etc.) |
| | | |

**TABLE OF CONTENTS**

# Data Identifier and Application Identifier Standard

## 1. Scope

This standard provides a comprehensive dictionary of MH 10/SC 8 Data Identifiers and GS1 Application Identifiers, provides for the assignment of new Data Identifiers, as required, and provides a document detailing the correlation, or mapping, of Data Identifiers to Application Identifiers, where a correlation exists.

This standard does not supersede or replace any applicable safety or regulatory marking or labeling requirements. The standard is to be applied in addition to any other mandated labeling requirements.

Unless otherwise stated within the document, the allowable character set for data fields identified by an ANS MH10.8.2 Data Identifier are the upper case alphabetic characters A to Z and the numeric characters 0 to 9.

## 2. Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

| | |
|---|---|
| ISO/IEC 646 | Information technology -- ISO 7-bit coded character set for information interchange |
| ISO 3166-1 | Codes for the representation of names of countries and their subdivisions - Part 1: Country codes |
| ISO 4217 | Codes for the representation of currency and funds |
| ISO/IEC 15418 | Information technology – Automatic identification and data capture techniques – GS1 Application Identifiers and ASC MH10 Data Identifiers and maintenance |
| ISO/IEC 15424 | Information technology – Automatic identification and data capture techniques – Data carrier identifiers (including Symbology Identifiers) |
| ISO/IEC 15459-1 | Information technology - Automatic Identification and Data Capture Techniques — Unique identification -- Part 1: Individual transport units |
| ISO/IEC 15459-2 | Information technology – Unique identifiers–-- Part 2: Registration procedures |
| ISO/IEC 19762 | Information technology - Automatic identification and data capture (AIDC) techniques -- Harmonized vocabulary |
| UN/EDIFACT Code List 8053 | United Nations Directories for Electronic Data Interchange for Administration, Commerce and Transport – Equipment Type Code Qualifier |
| UN/EDIFACT Code List 3035 | United Nations Directories for Electronic Data Interchange for Administration, Commerce and Transport – Party Function Code Qualifier |
| UPU Standard M82-3 | Universal Postal Union – Attribute Definitions |
| ANS X12.3 | Electronic Data Interchange Data Element Dictionary |
| ANSI HIBC 2.3 | The Health Industry Bar Code (HIBC) Supplier Labeling Standard |
| IEEE 802.11 | Wireless LANs |

| | |
|---|---|
| GS1 General Specifications | GS1 General Specifications |
| GR-485-CORE | COMMON LANGUAGE® Equipment Codes (CLEI™ Codes) - Generic Requirements for Processes and Guidelines |

# 3. Terms and Definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 19762 and the following apply.

### 3.1 "+ " (plus sign)

The "+" is used with specific Data Identifiers defined within this document (e.g., 14K and 3W) to separate different types of data that are encoded within a single field (e.g., a single bar code symbol). The "+" is also referenced as a flag character used by the HIBCC. The "+" may also be used to concatenate multiple data fields using Data Identifiers.

### 3.2 allocated

set aside for a specific purpose, such as a set of Data Identifiers allocated for a specific Category

### 3.3 assigned

designated for a specific purpose

*NOTE: Example; "Container Type" has been assigned the Data Identifier "B".*

### 3.4 carrier

party that provides transportation services

### 3.5 category

class or division in a scheme of classification of Data Identifiers

*NOTE: Example; the Category for date formats is **Category 4: Date.**)*

### 3.6 security seal

pre-numbered device designed to secure a container to preclude the doors being opened without detection

### 3.7 DUNS Number

nine-digit site-specific trading partner identification code assigned by Dun & Bradstreet

### 3.8 fixed asset

durable or non-consumable item owned by a company or agency

### 3.9 flag character

character that is used to signify that the data, which follows, conforms to a specific industry standard

*NOTE: these standards do not conform to the overall ANSI MH10.8.2 DAI Standard. See **Category 0**.*

### 3.10 mutually defined

meaning that has been agreed upon by all appropriate parties to the transaction

### 3.11 package ID

code that provides the ability to differentiate one package from any other package (e.g., carton or label serial number)

*NOTE: Also see "Serial Number" and “License Plate”.*

### 3.12 PRO number (PRO #)

unique number assigned by a motor freight carrier and placed on a freight bill for internal billing purposes

*NOTE: The PRO (PROgressive) number is usually the freight bill (invoice) number. May also be affixed to a container (or containers) in a shipment for tracking purposes.*

### 3.13 returnable (container, packaging item, pallet, etc.)

materials, whose ownership does not transfer, that are shipped with full expectation that such devices will be returned to the supplier (owner)

*NOTE: See Annex L.*

### 3.14 VMRS

Vehicle Maintenance Reporting Standard

# SECTION I
# DATA IDENTIFIERS
# (DIs)

# DEFINED CATEGORIES

Notes:

1. The usage of the term "number" below is not intended to be restricted to numeric characters only, but generically refers to a code structure which may contain numeric and/or alphabetic data.
2. The following Data Identifiers are assigned to the usages described.
3. The usage of any alphabetic, numeric, or special character in a leading position (as a "Data Identifier or Application Identifier") not defined herein is reserved for future assignment by the body controlling these guidelines.
4. Unless otherwise specified leading zeroes (0's) are non-significant and not to be employed (e.g., 0A, 00A, 000A, 01A, 011A).
5. References to other Standards are to the most current version of that standard.
6. Where field lengths are provided, they are provided along with the length of the identifier, for example, Container serial number “7B” is shown to have a length of “11an” or 11 alphanumeric characters. When the DI is included, the combined fields are 13 characters in length (an2+an11).
7. The META DATA details are interpreted as;
    a. Examples:
        i. an2+an1…25 = two alphanumeric characters followed by from 1 to 25 alphanumeric characters.
        ii. an4+n3+an…5 = four alphanumeric characters followed by three numeric digits followed by from zero (no data) to five alphanumeric characters.

| **CATEGORY 0:** | **FLAG CHARACTERS NOT ASSIGNED OR CONTROLLED BY ANSI/MH10.8** [NOTE1 & 2] | |
|---|---|---|
| | The usage of any alphabetic, numeric, or special character in a leading position (as a "Data Identifier or Application Identifier") not defined herein is reserved for future assignment by the body controlling these guidelines. | |
| Allocation: | **All Non-Alphanumeric Characters** | |
| Assigned: | | |
| **META DATA** | **DI** | **EXPLANATION** |
| | **+** | The “PLUS” character. Health Industry Business Communications Council (HIBCC). |
| | **-** | The “DASH” character. Reserved. |
| | **&** | The “AMPERSAND” character. ICCBBA[3]. |
| | **=** | The “EQUAL” character. ICCBBA[4]. |
| | **FNC1** | Function 1 (FUNC1) character. Appears in the first position following the symbology start character of a Code 128, Code 49, or Code 16K Symbol to signify a GS1-controlled symbol. |

[1] See Annex K

[2] This is not an exhaustive list. It is not advisable to assign special characters in a "closed" system unless an exhaustive search has been accomplished that ensures that the special characters in question will never be scanned on items supplied from outside the closed system.

[3] Formerly “American Association of Blood Banks (AABB)”

[4] Formerly “International Society for Blood Transfusion (ISBT)”

| | | |
|---|---|---|
| | **[)>$^{R}_{S}$** | "Left Square Bracket", "Right Parenthesis", "Greater Than Sign", "Record Separator" characters. Data structure compliant to ISO/IEC 15434, *Information technology — Automatic Identification and Data Capture Techniques — Syntax for High Capacity ADC Media.* |
| | - | The "HYPHEN" or "MINUS" character. Pharmaceutical Central Number (PZN), controlled by IFA-ABDATA, Germany (Registration of this system identifier expires on 2016-07-01). Replaced by "9N". |
| | ! | The "EXCLAMATION MARK". Eurocode-IBLS. |
| | | |
| **CATEGORY 1:** | **RESERVED** | |
| Allocation: | **A - 999A** | |
| Assigned: | | |
| | **A - 999A** | Reserved |
| | | |
| **CATEGORY 2:** | **CONTAINER INFORMATION** | |
| Allocation: | **B - 999B** | |
| Assigned: | | |
| **META DATA** | **DI** | **EXPLANATION** |
| | **B** | Container Type (internally assigned or mutually defined). |
| | **1B** | Returnable Container Identification Code assigned by the container owner or the appropriate regulatory agency (e.g., a metal tub, basket, reel, unit load device (ULD), trailer, tank, or intermodal container) (excludes gas cylinders *See "2B"*). |
| | **2B** | Gas Cylinder Container Identification Code assigned by the manufacturer in conformance with U.S. Department of Transportation (D.O.T.) standards. |
| | **3B** | Motor Freight Transport Equipment Identification Code assigned by the manufacturer in conformance with International Organization for Standardization (ISO) standards. |
| | **4B** | Standard Carrier Alpha Code (SCAC) (4 alphanumeric characters) and an optional carrier assigned trailer number (one to ten alphanumeric characters). When used, the carrier assigned trailer number is separated from the SCAC by a dash "-". |

| | | |
|---|---|---|
| an2+an1...35 | **5B** | Receptacle Asset Number – Consisting of two joined parts:<br>— Identification of an organization in accordance with ISO/IEC 15459 and a unique entity identification assigned in accordance with rules established by the issuing agency.<br>— A unique serial number assigned by the entity, ending with a 3-character container type code taken from EDIFACT Code List 8053 or UPU standard M82-3. (If the container type code listed is less than three characters in length, the field will be dash "-" filled left to the length of three characters). |
| | **6B** | Reserved. |
| an2+an11 | **7B** | Container Serial Number.<br>According to ISO 6346. OC EI CSN CD, where the OC is the three letter owner code assigned in cooperation with BIC, the EI is the one letter equipment category identifier, the CSN is a 6-digit unique container identification assigned by the equipment owner, and CD is a modulus 11 check digit calculated in accordance with Annex A, ISO 6346. |
| an2+an3 | **8B** | Identification of a Returnable Container owner assigned in cooperation with BIC. |
| an2+an4 | **9B** | Container Size/Type Code.<br>According to ISO 6346, §4.2. |
| an3+an4 | **10B** | Container Ownership Code.<br>Actual four-character abbreviation marked on the container by the owner. For DOD owned containers see Defense Transportation Regulation App EE-6. |
| | **11B** | Van Number (complete number minus check digit). |
| | **12B** | Check digit of Van Number identified in 11B. |
| | **13B** | Container Number Code (last 5 digits of number not counting check digit). |
| an3+a1 | **14B** | Tag Status.<br>Y=Authorized / N=Unauthorized |
| an3+an1...4 | **15B** | Dangerous Cargo Class.<br>IMDG Class in the format "n.na" where n = numeric, decimal point expressly encoded, and a = conditional alphabetic qualifier.<br>http://docs.imo.org/ |
| an3+an4 | **16B** | UN Code for Dangerous Goods.<br>For dangerous cargo provided by shipper in accordance with UN Code.<br>www.unece.org/trans/danger/publi/unrec/English/part3.pdf |
| an3+an1...35 | **17B** | Name Of Transportation Subject.<br>Vessel name or vehicle code/train trip number in English. |

| | | |
|---|---|---|
| an3+an3+n7 | **18B** | Vessel Registration Number.<br>The three letters "IMO" followed by the seven-digit number assigned to all ships by IHS Fairplay when constructed.<br>http://www.imonumbers.lrfairplay.com/ |
| an3+an18 | **19B** | Voyage number/Trip number.<br>Letter and number. |
| an3+an2 | **20B** | Vessel Country.<br>ISO 3166-1 Alpha 2 Code. |
| an3+6 | **21B** | Reserved for Electronic Seal Numbers.<br>Comprised of the 18185-1 seal tag ID - 32 bits and the ISO 14816 16-bit manufacturers ID (ISO 646). |
| an3+an11+n2 | **22B** | Entry Number/Type.<br>Comprised of the three-digit filer code, followed by the seven-digit entry number, and completed with the one digit check digit. Entry Filer Code represents the three-character alphanumeric filer code assigned to the filer or importer by CBP. Entry Number represents the seven-digit number assigned by the filer. The number may be assigned in any manner convenient, provided that the same number is not assigned to more than one CBP Form 7501. Leading zeros must be shown. Check Digit is computed on the previous 10 characters. The formula for calculating the check digit can be found in Appendix 1, CBP 7501 Instructions.<br>Entry type is a two-digit code compliant to Block 2, CBP 7501 Instructions. |
| an3+n3 | **23B** | Surety Number.<br>The three-digit numeric code that identifies the surety company on the Customs Bond. This code can be found in block 7 of the CBP Form 301, or is available through CBP's automated system to ABI filers, via the importer bond query transaction. For U.S. Government importations and entry types not requiring surety, code 999 should appear in this block. When cash or Government securities are used in lieu of surety, use code 998. |
| an3+n5 | **24B** | Foreign Port of Lading.<br>"Schedule K" (Classification of Foreign Ports by Geographic Trade Area and Country) for the foreign port at which the merchandise was actually laden on the vessel that carried the merchandise to the U.S.<br>http://www.navigationdatacenter.us/wcsc/scheduleK/schedulek.htm |
| an3+an1...35 | **25B** | Identification of a Party to a Transaction as defined in ISO 17364, assigned by a holder of a Company Identification Number (CIN) and including the related Issuing Agency Code (IAC) in accordance with ISO/IEC 15459 and its registry, structured as a sequence of 3 concatenated data elements: IAC, followed by CIN, followed by the RTI serial number that is unique within the CIN holder's domain. |

| | | |
|---|---|---|
| | **26B** | Unique Returnable Transport Item Identifier comprised of a sequence of 5 data elements: “IAC”, followed by “CIN”, followed by “RTI Number” (RTIN), followed by the “+” character, followed by the supplier assigned (or managed) “RTI Serial Number” (RTISN) that is globally unique within the CIN holder’s domain; in the format IAC CIN RTIN + RTISN (spaces added for visual clarity only; they are not part of the data). See Annex C.11. |
| an3+an20...50 | **27B** | Globally Unique Asset Identifier of a Large Load Carrier (LLC) Returnable Transport Item (RTI) with a side base of ≥ 1000 mm, as defined in ISO 17365:2013, tertiary packaging, layer 3 comprised of a sequence of 5 data elements: “IAC”, followed by “CIN”, followed by RTI Type Code “RTITC”, followed by the “+” character, followed by the owner assigned (or managed) RTI Serial Number “RTISN” that is globally unique within the CIN holder´s domain in the format IAC CIN RTITC + RTISN (spaces added for visual clarity only; they are not part of the data). |
| an3+an20...50 | **28B** | Globally Unique Asset Identifier of a Small Load Carrier (SLC) Returnable Transport Item with a side base of < 1000 mm, as defined in ISO 17364:2013 (RTI), tertiary packaging, layer 2 comprised of a sequence of 5 data elements: “IAC”, followed by “CIN”, followed by RTI Type Code “RTITC”, followed by the “+” character, followed by the owner assigned (or managed) RTI Serial Number “RTISN” that is globally unique within the CIN holder´s domain in the format IAC CIN RTITC + RTISN (spaces added for visual clarity only; they are not part of the data). |
| an3+an1…50 | **29B** | Globally Unique Returnable Packaging Item (RPI) identifier of the category packaging aid (lid, blister, inlay, …) comprised of a sequence of 5 data elements: “IAC”, followed by “CIN”, followed by “RPI Number” RPIN, followed by the “+” character, followed by the owner assigned (or managed) “RPI Serial Number” RPISN that is globally unique within the CIN holder´s domain in the format IAC CIN RPIN + RPISN (spaces added for visual clarity only; they are not part of the data). |
| an3+an2…35 | **30B** | Packaging Item Number.<br>Number to identify the type of packaging item (material) used when packing products and packages<br>The number will enable packaging item (material) be identified and separated from products, packages, Returnable Transport Items (RTIs) and Returnable Packaging Items (RPIs) during packing.<br>The number is constructed as a sequence of minimum 1 data element:<br>Packaging item (material) number that is unique within the holder's domain. |

| | | |
|---|---|---|
| an3+an6…35 | **31B** | Global Unique Packaging Number<br>Global unique number to identify the type of packaging item (material) used when packing products and packages.<br>The global unique number will enable packaging items (materials) be identified and separated from products, packages, Returnable Transport Items (RTIs) and Returnable Packaging Items (RPIs) during packing.<br>The number is constructed as a sequence of 3 concatenated data elements:<br>The IAC, followed by the CIN, followed by the Packaging item (material) number that is unique within the CIN holder's domain. |
| | **32B – 54B** | Reserved. |
| an3+an1...50 | **55B** | Global Unique Returnable Packaging Item (RPI) as defined in ISO 17364, assigned by a holder of a Company Identification Number (CIN) and including the related Issuing Agency Code (IAC) in accordance with ISO/IEC 15459 and its registry, structured as a sequence of 3 concatenated data elements: IAC, followed by CIN, followed by the RPI serial number that is unique within the CIN holder's domain. |
| | **56B – 999B** | Reserved for future assignment. |
| | | |
| **CATEGORY 3:** | **FIELD CONTINUATION** | |
| Allocation: | **C - 999C** | |
| Assigned: | | |
| **META DATA** | **DI** | **EXPLANATION** |
| | **C** | Continuation of an Item Code (Category 16) assigned by Customer that is too long for a required field size. |
| | **1C** | Continuation of Traceability Code (Category 20) assigned by Supplier. |
| | **2C** | Continuation of Serial Number (Category 19) assigned by Supplier. |
| | **3C** | Continuation of Free Text (Category 26) mutually defined between Supplier/Carrier/Customer. |
| | **4C** | Continuation of Transaction Reference (Category 11) mutually defined between Supplier/Carrier/Customer. |
| | **5C** | Continuation of Item Code (Category 16) Assigned by Supplier. |
| | **6C - 999C** | Reserved for future assignment. |
| | | |
| **CATEGORY 4:** | **DATE** | |
| Allocation: | **D - 999D** | |
| Assigned: | | |

| META DATA | DI | EXPLANATION |
|---|---|---|
| an2+n6 | **D** | Format YYMMDD. Note 5 |
| an2+n6 | **1D** | Format DDMMYY. Note 5 |
| an2+n6 | **2D** | Format MMDDYY. Note 5 |
| an2+n4 | **3D** | Format YDDD (Julian). Note 5 |
| an2+n5 | **4D** | Format YYDDD (Julian). Note 5 |
| an2+n6+an3 | **5D** | ISO format YYMMDD, immediately followed by an ANSI X12.3 Data Element Number 374 Qualifier providing a code specifying type of date (e.g., ship date, manufacture date). |
| an2+n8+an3 | **6D** | ISO format YYYYMMDD, immediately followed by an ANSI X12.3 Data Element Number 374 Qualifier providing a code specifying type of date (e.g., ship date, manufacture date). |
| an2+n4 | **7D** | Format MMYY. Note 5 |

[5] Mutually Defined Significance

| | | |
|---|---|---|
| an2+n14...15 | **8D** | Event, Date, And Time.<br>ISO format YYYYMMDDHHMM (24 hour clock - UTC) immediately followed by a UN/EDIFACT Code Qualifier 2005 providing a code specifying type of date), e.g.,<br>**11** [Date when goods are expected to be dispatched/shipped message is issued.]<br>**17** [Estimated delivery date/time when goods are expected to be delivered]<br>**35** [Date on which goods are delivered to their destination.]<br>**118** [Booking Confirmed]<br>**129** [Date when the vessel/merchandise departed the last foreign port in the exporting country.]<br>**132** [Date/time when the carrier estimates that a means of transport should arrive at the port of discharge or place of destination.]<br>**133** [Date/time when carrier estimates that a means of transport should depart at the place of departure]<br>**137** [Date/time when the supplier ships parts based on the customer's request. (Date when DESADV message is issued. Recommendation is the DESADV is issued within 30 minutes of goods being picked up at Ship-From party]<br>**146** [Estimated Entry date (Customs) date on which the official date of a Customs Entry is anticipated.]<br>**151** [Import Date (Arrived at port with intent to unlade]<br>**186** Departs a Facility (“Gate-out)]<br>**204** [Date on which Customs releases merchandise to the carrier or importer]<br>**253** [Departs from a Port (“Vessel Departure")]<br>**252** [Arrives at a Port (“Vessel Arrival”)]<br>**283** [Arrives at a Facility (“Gate-in)]<br>**342** [Conveyance Loaded]<br>**351** [Terminal Gate Inspection]<br>**411** [Ordered Stuffed]<br>**412** [Ordered Stripped]<br>**420** [Conveyance unloaded]<br>**534** [Repaired]<br>**677** [Confirmed Stuffed]<br>**678** [Confirmed Stripped]<br>**696** [Filing Date] |
| | **9D** | Date (structure and significance mutually defined). |
| an3+n4 | **10D** | Format YYWW. Note 5 |
| an3+n6 | **11D** | Format YYYYWW. Note 5 |
| an3+n8 | **12D** | Format YYYYMMDD. Note 5 |
| an3+n8 | **13D** | Oldest and Newest Manufacturing Date in the format YYWWYYWW. |
| an3+n8 | **14D** | Expiration Date (YYYYMMDD). |

| | | |
|---|---|---|
| an3+n8 | **15D** | Expiration Date (DDMMYYYY). |
| an3+n8 | **16D** | Production Date (YYYYMMDD) – Date of manufacture. |
| an3+n8 | **17D** | Production Date (DDMMYYYY). |
| an3+n12 | **18D** | Tag Activation Time.<br>YYYYMMDDHHMM (24 hour clock - UTC). |
| an3+n12 | **19D** | Tag Deactivation Time.<br>YYYYMMDDHHMM (24 hour clock - UTC). |
| an3+n8 | **20D** | Inspection Date (DDMMYYYY). |
| | **21D** | Required Delivery Date (DDD Julian) or DOD MILSTAMP Code. |
| an3+n12 | **22D** | Record Time.<br>YYYYMMDDHHMM (24 hour clock - UTC). |
| | **23D** | Date, represented in modified UTC compliant form:<br>yyyy[mm[dd[hh[mm[ss[fff]]]]]][poooo] where square brackets indicate optionality and yyyy is the year, mmdd the month and day, hhmmss the time of day in hours minutes and seconds, fff the fractions of sections and poooo the offset from UTC expressed in hours and minutes, the offset being positive if p is a point (.), negative if P is a minus sign (-).<br>EXAMPLE:<br>2005 (UTC) calendar year 2005<br>200505 (UTC) calendar month May 2005<br>20050518 (UTC) 18 May 2005<br>200505181247 12:47 UTC on 18 May 2005<br>200505181247.0100 12:47 local time, being 11:47 UTC, on 18 May 2005<br>20050518124723099 99 milliseconds after UTC 12:47:23 on 18 May 200 |
| | **24D** | Qualified Date, comprising the concatenation of:<br>— an ISO/IEC 15459 issuing agency code;<br>— a date qualifier conforming to the specifications of that issuing agency;<br>— a date whose format and interpretation comply with the specifications of the issuing agency for that date qualifier. |
| an3+n8 | **25D** | Best before date: (YYYYMMDD).<br>Example: 25D20170202 = February 2, 2017 |
| an3+n8 | **26D** | First freeze date (YYYYMMDD).<br>The first freeze date is defined as the date on which products are frozen directly after slaughtering, harvesting, catching or after initial processing.<br>Example: 26D20170721 = July 21, 2017 |
| an3+n8 | **27D** | Harvest date (YYYYMMDD).<br>The date when an animal was slaughtered or killed, a fish has been harvested, or a crop was harvested.<br>Example: 27D20170615 = June 15, 2017 |

| | | |
|---|---|---|
| an3+n16 | **28D** | Harvest date range (YYYYMMDDYYYYMMDD).<br>The start date and end date range over which harvesting occurred.<br>For example; animals were slaughtered or killed, fish were harvested, or a crop was harvested.<br>The data stream is defined as the first YYYYMMDD as the start date and the last YYYYMMDD as the end date.<br>Example:<br>28D2017012320170214 = Start; January 23, 2017. End; February 14, 2017 |
| | **29D– 999D** | Reserved for future assignment. |
| | | |
| **CATEGORY 5:** | **ENVIRONMENTAL FACTORS** | |
| Allocation: | **E - 999E** | |
| Assigned: | | |
| **META DATA** | **DI** | **EXPLANATION** |
| an1+a2 | **E** | Restricted Substances Classification – “Environmental Classification Code” including Lead-Free (Pb-Free) finish categories defined in JESD97 (IPC JEDEC J-STD-609), and future industry or governmental agency assigned codes related to environmental regulatory compliance and hazardous material content. |
| | **1E** | Air Pressure – (altitude) expressed in Pascal’s as the standard international measure. |
| an2+n1...4 | **2E** | Maximum Allowed Temperature.<br>Maximum permitted temperature; Degrees Celsius, "-" (minus) encoded, if required. |
| an2+n1...4 | **3E** | Minimum Allowed Temperature.<br>Minimum permitted temperature; Degrees Celsius, "-" (minus) encoded, if required. |
| an2+n1...2 | **4E** | Maximum Allowed Relative Humidity.<br>Maximum permitted relative humidity, implied as percent. |
| an2+n1...2 | **5E** | Minimum Allowed Relative Humidity.<br>Maximum permitted relative humidity, expressed as percent. |
| an2+n1...4 | **6E** | Refrigerator Container Temperature.<br>For temperature-controlled cargo, target specified by shipper, Degrees Celsius, "-" (minus) encoded, if required. |
| | **7E – 9E** | Reserved. |
| | **10E** | Cumulative Time Temperature Index – expressed as the number of measurements or counts. |
| | **11E** | Time Temperature Index – Next Higher Assembly – expressed as the number of measurements or counts. |

| | | |
|---|---|---|
| an3+an9...15 | **12E** | Declaration of Packaging Material Category*, Code* and Weight for a given packaging material used in a given packaging according to the EU packaging and packaging waste directive. (Material category and code defined in Annex M).<br>12ECCMMMMMMNNNNNUU where<br>- "12E" (an3) is the Data Identifier,<br>- "CC" (n2) is the Material Category per Annex M,<br>- "MMMMMM" (an1...6) is the Material Code per Annex M,<br>- "NNNNN" (n5) Material Weight, including decimal point (e.g., 12.12),<br>- "UU" (an2) is the Unit of measure for weight (e.g., KG, GR, LB or OZ per ANSI X12.3 as in Annex D). |
| | **13E** | The data following DI 13E will be one of the MSL indicators (1, 2, 2a, 3, 4, 5, 5a, 6) as shown in the LEVEL column in Table 5-1 of JEDEC standard IPC/JEDEC J-STD-020E. The Table is shown below for reference only; the currently released version of the referenced standard shall be used to obtain the correct MSL for the actual component.<br>Example: 13E2a |
| Assigned: | **14E – 999E** | Reserved for future assignment. |
| | | |
| **CATEGORY 6:** | **LOOPING** | |
| Allocation: | **F - 999F** | |
| Assigned: | | |
| **META DATA** | **DI** | **EXPLANATION** |
| | **F** | Looping Header as defined as Section VI of this document. |
| | **1F** | My "parent" is . . . Unique identifier followed by a Data Identifier and associated data (for use with returnable packaging – See Annex L). This Data Identifier must immediately follow the field (constructed of a Data Identifier, data and a group separator) with which it is associated. |
| | **2F** | Reserved (prior use). |
| | **3F** | I have _____ children . . . (for use with returnable packaging, e.g.; 3F10, for ten children – See Annex L). This Data Identifier must immediately follow the field (constructed of a Data Identifier, data and a group separator) with which it is associated. |

| | | |
|---|---|---|
| | **4F** | Logical Assignment of a Page of Information within a group of pages that are spread across several data carriers, structured as a sequence of up to three (3) concatenated data elements, separated by a slash ( / ) :<br>Page number (required), followed by page count (optional, required for the last page), followed by an alphanumeric group ID (optional; if used then required for all pages and structured in accordance with ISO/IEC 15459-3 as a sequence of 3 data elements: Issuing Agency Code, followed by the Company Identification Number, followed by an alphanumeric code unique within the issuer's domain).<br>Trailing slashes are optional. |
| | **5F** | I have _____ children and they are . . . (for use with returnable packaging – See Annex L) This Data Identifier must immediately follow the field (constructed of a Data Identifier, data and a group separator) with which it is associated. |
| | **6F – 999F** | Reserved for future assignment. |
| | | |
| **CATEGORY 7:** | **RESERVED** | |
| Allocation: | **G - 999G** | |
| Assigned: | | |
| | **G - 999G** | Reserved. |
| | | |
| **CATEGORY 8:** | **HUMAN RESOURCES** | |
| Allocation: | **H - 999H** | |
| Assigned: | | |
| **META DATA** | **DI** | **EXPLANATION** |
| an1+an1...60 | **H** | Name of Party.<br>Name of a party followed by a plus (+) character followed by one or more code values from EDIFACT Code List 3035 "Party Qualifier", e.g.,<br>**BY** [Buyer]<br>**CF** [Container operator]<br>**CN** [Consignee]<br>**CS** [Consolidator]<br>**DEI** [Vessel operator/captain of vessel]<br>**FA** [Operational staff code]<br>**IM** [Importer]<br>**MF** [Manufacturer]<br>**OS** [Shipper]<br>**SE** [Seller]<br>**ST** [Ship To]<br>**UC** [Ultimate consignee] |
| | **1H** | Employee Identification Code assigned by employer. |

| | | |
|---|---|---|
| an2+n9 | **2H** | U.S. Social Security Number. |
| | **3H** | ID Number for Non-Employee (internally assigned or mutually defined) (e.g., contract workers, vendors, service, and delivery personnel). |
| | **4H** | National Social Security Number. |
| | **5H** | Last Name. |
| an2+an1...35 | **6H** | Party Name (Line 2). |
| an2+n10…15 | **7H** | Contact Phone.<br>Country Code, Area Code, Exchange, number [XX YYY ZZZ ZZZZ]. |
| an2+an3...35 | **8H** | Contact Email. |
| an2+an10…12 | **9H** | Consignee Number.<br>The unique identifying number can be the IRS, EIN, SSN, or the CBP assigned number, as required on the Security Filing. Only the following formats shall be used:<br>**IRS EIN:** NN-NNNNNNN<br>**IRS EIN w/ suffix:** NN-NNNNNNNXX<br>**SSN:** NNN-NN-NNNN<br>**CBP assigned nbr:** YYDDPP-NNNNN |
| | **10H** | Personal Identification Code (first initial, Last initial, last four of SSN). |
| | **11H** | First Name and Middle Initial. |
| an2+an2 | **12H** | Military Grade (E1-E9, W1-W5, and O1-O10). |
| | **13H – 14H** | Reserved. |
| an3+an2+an1…an20 | **15H** | A National Identification Number, National Identity Number, or National Insurance Number used as a means of identifying individuals within a country for the purposes of work, taxation, government benefits, health care, and other governmentally-related functions.<br>This structure of the identifier is DI (15H) followed by the ISO 3166-1 Alpha2 Country Code followed by the predominant government assigned identification code for individuals. |
| | **16H – 24H** | Reserved. |
| | **25H** | Globally Unique Personal ID.<br>assigned by a holder of a Company Identification Code (CIN) and including the related Issuing Agency Code (IAC) in accordance with ISO/IEC 15459 and its registry, structured as sequence of 3 concatenated data elements: IAC followed by CIN, followed by the ID unique within the holder's domain. |

| | | |
|---|---|---|
| an3+an3…35+"+"+a1…3 | **26H** | Globally Unique Personal ID, with a "Party Qualifier" code value from EDIFACT Code List 3035, assigned by a holder of a Company Identification Code (CIN) and including the related Issuing Agency Code (IAC) in accordance with ISO/IEC 15459 and its registry, structured as a sequence of 5 concatenated data elements: IAC followed by CIN, followed by an ID unique within the CIN holder's domain, followed by the Plus character (+) and a code value from EDIFACT Code List 3035 "Party Qualifier", e.g.:<br>BG Employer<br>GP Packer<br>LK Patient<br>LL Patient companion<br>LM Medical treatment executant<br>MF Manufacturer of goods<br>Example: 26HLHHIBC987XY65+LK |
| | **27H – 999H** | Reserved for future assignment. |
| | | |
| **CATEGORY 9:** | **RESERVED** | |
| Allocation: | **I - 999I** | |
| Assigned: | | |
| **META DATA** | **DI** | **EXPLANATION** |
| | **I** | Exclusive Assignment - Vehicle Identification Number (VIN) as defined in the U.S. under 49 CFR, §§ 565 and internationally by ISO 3779. (These are completely compatible data structures). |
| | **1I** | Reserved. |
| | **2I** | Abbreviated VIN Code. |
| | **3I** | Reserved – Prior assignment. |
| | **4I** | Globally unique transport vehicle identifier (e.g., Trucks) consisting of the Vehicle Identification Number (VIN) as defined in the U.S. under 49 CFR §§ 565, and internationally by ISO 3779, followed by the "+" character, then followed by the government-issued Vehicle Registration License Plate Number in the form of "4I" "VIN" "+" "government-issued Vehicle Registration License Plate Number" (quotes and spaces shown for clarity only; they are not part of the data). |

| | | |
|---|---|---|
| | **5I** | Unique production vehicle identifier that will be used during the vehicle production processes, consisting of the Body Tag Number (BTN; or any other descriptor used to identify the raw car body, or stated another way, the assemblage of parts that are used to start the vehicle's production), followed by the "+" character, then followed by the Production Order Number (PON), followed by the "+" character, and then followed by the Manufacturer-assigned Serial Number (SN). NOTE: The SN component shall be replaced by the VIN as soon as the VIN is available in the assembly process.<br>The construction will be as follows;<br>"5I" "BTN" "+" "PON" "+" "SN"<br>changing to (when VIN available)<br>"5I" "BTN" "+" "PON" "+" "VIN"<br>NOTE: Quotes and spaces are shown for clarity only; they are not part of the data.<br>NOTE: This DI is never to be concatenated with other DIs in a linear symbol or other media where the concatenation character is a plus (+) character.<br>Examples:<br>SN version: 5IABCD1234+CO1234+W0L201600500001<br>VIN version: 5IABCD1234+CO1234+W0L0XAP68F4050901 |
| | **6I - 999I** | Reserved - Not recommended for use due to similarity of "1" to "I". |
| | | |
| **CATEGORY 10:** | **LICENSE PLATE** | |
| Allocation: | **J - 999J** | |
| Assigned: | | |
| **META DATA** | **DI** | **EXPLANATION** |
| an1+an1...35 | **J** | Unique license plate number[6]. |
| an2+an1...35 | **1J** | Unique license plate number6 assigned to a transport unit which is the lowest level of packaging, the unbreakable unit. |
| an2+an1...35 | **2J** | Unique license plate number6 assigned to a transport unit which contains multiple packages. |
| an2+an1...35 | **3J** | Unique license plate number6 assigned to a transport unit which is the lowest level of packaging, the unbreakable unit and which has EDI data associated with the unit. |

[6] For a license plate number to be unique world-wide requires: 1) A unique number assigned by the trading partner, 2) A unique code assigned to the trading partner by an organization, and 3) A unique code providing global identification of the assigning organization. ISO/IEC 15459-1:1999 describes the format and usage of these Data Identifiers.

| | | |
|---|---|---|
| an2+an1...35 | **4J** | Unique license plate number6 assigned to a transport unit which contains multiple packages and which is associated with EDI data. |
| an2+an1...20 | **5J** | Unique license plate number6 assigned to a mixed transport unit containing unlike items on a single customer transaction and may or may not have associated EDI data. |
| an2+an1...20 | **6J** | Unique license plate number6 assigned to a master transport unit containing like items on a single customer transaction and may or may not have associated EDI data. |
| | **7J** | Vehicle Registration License Plate Number (not unique without identification of country and issuing governmental region/authority)[7]. |
| an2+n9 | **8J** | Maritime Mobile Service Identity (MMSI).<br>A nine digit number regulated by the International Telecommunications Union to uniquely identify a ship or a coast radio station.<br>Example:<br>8J211123456 |
| | **9J– 999J** | Reserved for future assignment. |
| | | |
| **CATEGORY 11:** | **TRANSACTION REFERENCE USED IN TRADING RELATIONSHIPS** | |
| Allocation: | **K - 999K** | |
| Assigned: | | |
| **META DATA** | **DI** | **EXPLANATION** |
| | **K** | Order Number assigned by Customer to identify a Purchasing Transaction (e.g., purchase order number). |
| | **1K** | Order Number assigned by Supplier to identify a Purchasing Transaction. |
| | **2K** | Bill of Lading/Waybill/Shipment Identification Code assigned by Supplier/Shipper. |
| | **3K** | Bill of Lading/Waybill/Shipment Identification Code assigned by Carrier. |
| | **4K** | Line Number of the order assigned by Customer to identify a Purchasing Transaction. (See Annex C.9). |
| | **5K** | Reference Number assigned by the Customer to identify a Shipment Authorization (Release) against an established Purchase Order. |
| | **6K** | PRO# Assigned by Carrier. |

[7] The format of "7J" is such that while a Vehicle Registration License Plate Number may, in practice, be unique within a governmental sub-division, it may not be unique worldwide without having met the requirements of items 2 and 3 of Note 3, above.

| | | |
|---|---|---|
| | **7K** | Carrier Mode in Free Text format mutually defined between Customer and Supplier (e.g., Air, Truck, Boat, Rail). |
| | **8K** | Contract Number. |
| | **9K** | Generic Transaction Reference Code (internally assigned or mutually defined). |
| | **10K** | Invoice Number. |
| | **11K** | Packing List Number. |
| an3+an4+an1…25 | **12K** | SCAC (Standard Carrier Alpha Code) (an4 - dash "-" filled left) and carrier assigned PROgressive number. |
| an3+an4+an1...12 | **13K** | Bill of Lading Number /Transport Receipt Number<br>SCAC + Container cargo's B/L number or waybill number. |
| | **14K** | Combined Order Number and Line Number in the format nn...nn+nn...n where a plus (+) symbol is used as a delimiter between the Order Number and Line Number. |
| | **15K** | KANBAN Number. |
| | **16K** | DELINS Number: code assigned to identify a document which contains delivery information. |
| | **17K** | Check Number. |
| | **18K** | Structured Reference. (See Annex C.10). |
| | **19K** | Foreign Military Sales Case Number. |
| | **20K** | License Identifier, being a globally unique identifier for a license or contract under which items are generated, submitted for processing and/or paid for, that is constructed by concatenating:<br>— an ISO/IEC 15459 issuing agency code;<br>— a license or contract number which accords with specifications of the issuing agency concerned;<br>and that:<br>— comprises only upper case alphabetic and/or numeric characters;<br>— is unique (that is, is distinct from any other ISO/IEC 15459 compliant identifier) within the domain of the issuing agency[6];<br>— cannot be derived from any other ISO/IEC 15459 compliant identifier, issued under the same issuing agency, by the simple addition of characters to, or their removal from, its end[8]. |

[8] 20K license identifiers, 26S equipment identifiers and, subject to certain conditions, 18V party identifiers can be used as the root component of 26T batch identifiers and of ISO/IEC 15459 transport unit identifiers. To ensure uniqueness of the latter, it is essential that such identifiers differ not only from all other identifiers of the same class, but also from all other identifiers of other classes. That is, the specifications of the issuing agency concerned are required to ensure that a 20K license identifier is distinct both from other 20K license identifiers and from 26S equipment identifiers, 18V party identifiers, license plates, etc. Since component-based transport unit identifiers are constructed by simple concatenation, it is also required that one root component cannot be derived from another by adding characters to it.

| | | |
|---|---|---|
| | **21K** | Customer Data, being data that:<br>— from a customer perspective, is related to or associated with an item or transaction, or to a batch or related items or transactions, and<br>— comprises up to 35 printable characters and/or spaces, other than plus (+), drawn from the character set defined in ISO/IEC 646. |
| | **22K** | "22K" Transaction Authentication Information, being a value, constructed by concatenating:<br>— an ISO/IEC 15459 issuing agency code;<br>— a value which accords with specifications of the issuing agency concerned,<br>that allows verification of the authenticity of the transaction concerned and, in particular, that the transaction was initiated by the party, claimed within the transaction to have been its initiator, by:<br>— the recipient of a transaction, and/or<br>— one or more of the parties involved in its handling or processing, and/or<br>— a trusted third party. |
| | **23K – 24K** | Reserved |
| | **25K** | Global Unique Identification of Groupings of Transport Units Assigned by the Carrier, defined as:<br>Identification of a Party to a Transaction as defined assigned by a holder of a Company Identification Number (CIN) and including the related Issuing Agency Code (IAC) in accordance with ISO/IEC 15459 and its registry, structured as a sequence of 3 concatenated data elements: IAC, followed by CIN, followed by the Bill of Lading or Waybill or Shipment Identification Code that is unique within the CIN holder's domain |
| | **26K** | Global Unique Identification of Groupings of Transport Units Assigned by the Shipper, defined as:<br>Identification of a Party to a Transaction assigned by a holder of a Company Identification Number (CIN) and including the related Issuing Agency Code (IAC) in accordance with ISO/IEC 15459 and its registry, structured as a sequence of 3 concatenated data elements: IAC, followed by CIN, followed by the Bill of Lading or Waybill or Shipment Identification Code that is unique within the CIN holder's domain |
| an3+an1...35 | **27K** | Supplier Assigned Quotation Number – Number assigned to a quotation by the supplier in response to a request for quote from the customer. |
| | **28K – 999K** | Reserved for future assignment. |
| | | |
| **CATEGORY 12:** | **LOCATION REFERENCE** | |
| Allocation: | **L - 999L** | |

| Assigned: | | |
|---|---|---|
| **META DATA** | **DI** | **EXPLANATION** |
| | **L** | Storage Location. |
| | **1L** | Location. |
| | **2L** | "Ship To:" Location Code defined by an industry standard or mutually defined. |
| | **3L** | "Ship From:" Location Code defined by an industry standard or mutually defined. |
| an2+a2 | **4L** | Country of Origin, two-character ISO 3166 country code. *With agreement of trading partners and when the Country of Origin is mixed, Country Code "AA" shall be used.* |
| | **5L** | "Ship For:" Location Code defined by an industry standard or mutually defined. |
| | **6L** | Route Code assigned by the supplier to designate a specific transportation path. |
| an2+an6 | **7L** | 6-character Department of Defense Activity Code (DoDAAC). |
| | **8L** | Port of Embarkation – Mutually Defined. |
| | **9L** | Port of Debarkation – Mutually Defined. |
| | **10L** | Reserved. |
| an3+n5…27 | **11L** | Location (Latitude/Longitude/Altitude) encoded in the format xnn.nnnnn/xnnn.nnnnnn/xnnnn[9]. |
| | **12L** | "Ship To:" Location (Latitude/Longitude/Altitude) encoded in the format xnn.nnnnn/xnnn.nnnnnn/xnnnn[9]. |
| | **13L** | "Ship From:" Location (Latitude/Longitude/Altitude) encoded in the format xnn.nnnnn/xnnn.nnnnnn/xnnnn[9]. |
| | **14L** | Reserved. |
| | **15L** | "Ship For:" Location (Latitude/Longitude/Altitude) encoded in the format xnn.nnnnn/xnnn.nnnnnn/xnnnn[9]. |
| an3+an1...60 | **16L** | Tag Activation Location.<br>English location name (character set: 0-9, A-Z <Space>). |

[9] One degree is equivalent to approximately 110 000 meters, depending upon one's location on the earth where, because of its spheroid shape, a degree is of greater distance at the equator than at the poles. Degrees can be reduced to minutes (1/60th of a degree) and then seconds (1/60th of a minute) to where a second of latitude or longitude is approximately 30.56 meters. Likewise, we can decimally represent a portion of a meter where to six significant digits one can get to a resolution of 0.11 meters. Secondly, many representations of latitude and longitude include either a North / South designation for latitude and an East / West designation for longitude. Alternately, some designations of South latitude and West longitude are differentiated from their North and East counterparts by a "-" (minus) prefix. Further, there are 360 degrees of longitude from 180° E to 180° W (alternately 180° to -180°) and 180 degrees of latitude from 90° N to 90° S (alternately, 90° to -90°). Also, the tallest building in 2011 is 828 meters, though plans do exist for structures greater than 1 000 meters in height. Finally, there are locations that exist below sea level, so a minus (-) is also required for altitude.

Consequently, the format recommended by this standard for Latitude / Longitude / Altitude is xnn.nnnnn/xnnn.nnnnnn/xnnnn is in a range of 5 (intersection of the Prime Meridian with the Equator - n/n/n) to 27 characters (xnn.nnnnn/xnnn.nnnnnn/xnnnn). The "x" value is to permit the inclusion of a "-" (minus) prefix for South latitudes and West longitudes. The "-" (minus) prefix, "." (decimal point), and "/" solidus are explicitly encoded.

| | | |
|---|---|---|
| an3+an1...60 | **17L** | Tag Deactivation Location.<br>English location name (character set: 0-9, A-Z <Space>). |
| an3+an2...12 | **18L** | FAO fishing area code as defined by the Fisheries and Aquaculture Department of the FAO (http://www.fao.org. Search for Fishing Area Code sub-site).<br>All characters of the GS1 General Specification-defined sub-set of ISO/IEC 646 are allowed.<br>Examples:<br>18L37.1.3 Western Mediterranean Sea, Sardinia<br>18L47.B.1 Atlantic, Southeast, SEAFO Division, Namibia EEZ<br>18L67 Pacific, Northeast |
| | **19L– 19L** | Reserved . |
| ***The following DIs can be used to provide for Location identification, which is different than or in addition to Location Reference provided by "L".*** | | |
| | **20L** | First Level (internally assigned). |
| | **21L** | Second Level (internally assigned). |
| | **22L** | Third Level (internally assigned. |
| | **23L** | Fourth Level (internally assigned). |
| | **24L** | Fifth Level (internally assigned). |
| an3+an1...35 | **25L** | Identification of a Party to a Transaction, e.g., 25L IAC CIN LOC assigned by a holder of a Company Identification Number (CIN) and including the related Issuing Agency Code (IAC) in accordance with ISO/IEC 15459 and its registry, structured as a sequence of 3 concatenated data elements: IAC, followed by CIN, followed by the physical internal location (LOC) that is unique within the CIN holder's domain. |

| | | |
|---|---|---|
| | **26L** | "26L" Location Code, being a code identifying a location or geographic area, or an associated group of such locations or areas, that has relevance to a related transaction and that complies with **one** or the structures defined in (a) to (f) below:<br>a) two upper case alphabetic character corresponding to the ISO 3166-1 two alpha country code of the country in which, or consisting of which, the location(s) or area(s) are situated;<br>b) three upper case alphabetic characters corresponding to the IATA code of the airport or city in, close to, or consisting of which the location(s) or area(s) are situated;<br>c) four or more characters of which the first three correspond to an ISO 3166-1 country code followed by a dash (-), with the balance being a postcode in the country concerned;<br>d) four or more characters of which the first three correspond to an ISO 3166-1 country code followed by a dot (.), with the balance being an ISO 3166-2 country subdivision code in the country concerned;<br>e) five upper case alphabetic characters corresponding to the UN/LOCODE of the area in, close to, or consisting of which, the location(s) or area(s) are situated;<br>f) the concatenation, being not less than seven or more than 35 characters in length, of:<br>— an ISO/IEC 15459 issuing agency code;<br>— a location code, consisting of characters drawn from the set {A-Z; 0-9} which accords with specifications of the issuing agency concerned. |
| an3+an5+n1...3 | **27L** | Event Location UN/LOCODE.<br>UN/LOCODE followed by a plus (+) character followed by one or more code values from EDIFACT Code List 3227 "Location function code qualifier", e.g.,<br>**7** Place of Final Delivery<br>**5** Port of Departure<br>**9** Port of Lading<br>**11** Port of Unlading<br>**13** Place of transhipment<br>**24** Port of Entry<br>**35** Exportation country<br>**88** Place of Carrier Receipt<br>**125** Foreign Port prior to Depart to U.S<br>**147** Stowage cell/position<br>**159** Place of delivery (to consignee)<br>**248** Loading Location<br>http://www.unece.org/cefact/locode/ |
| an3+an1...35 | **28L** | Number and Street Address.<br>Used in conjunction with H, 6H, 28L, 29L, 30L, 31L, 32L. |
| an3+an1...35 | **29L** | City Name.<br>Used in conjunction with H, 6H, 28L, 29L, 30L, 31L, 32L. |

| | | |
|---|---|---|
| an3+an1...9 | **30L** | Country Sub-entity Details.<br>Used in conjunction with H, 6H, 28L, 29L, 30L, 31L, 32L. |
| an3+an4...11 | **31L** | Postal Code.<br>Used in conjunction with H, 6H, 28L, 29L, 30L, 31L, 32L (If a "-" dash is used, it shall be expressly encoded). |
| an3+a2 | **32L** | Country Code.<br>ISO 3166-1 Alpha 2 Code<br>Used in conjunction with H, 6H, 28L, 29L, 30L, 31L, 32L. |
| | **33L** | Uniform Resource Locator (URL).<br>Includes all characters that form a URL, including header data such as e.g., http://. Character set as listed in RFC 1738. |
| | **34L** | Pointer to Process URL (P2P URL) for initiating a URL to carry all other data elements encoded in an AIDC media according to the following rule: Scan the code and initiate the URL starting with the P2P URL string, omitting DI 34L and ISO/IEC 15434 envelope syntax (prefix and postfix) and append all other data elements that have been scanned in same sequence as encoded in the media, including DIs and data element separators. Convert special characters in the appended data into RFC 1738 format (e.g., Group Separator "$^{G}_{S}$" translated into RFC 1738 sequence %1D). Note that this does not apply to the P2P URL itself.<br>Example: Encoded data string (using ISO/IEC 15434)<br>[)>$^{R}_{S}$06$^{G}_{S}$25SUN123456789PA12345$^{G}_{S}$4LUS$^{G}_{S}$16D20131108 $^{G}_{S}$34LHTTP://WWW.SECUREUID.COM/ITEMDATA/?SCAN= $^{R}_{S}$05 $^{G}_{S}$13131108$^{R}_{S}$$^{E}_{OT}$<br>results in the following URL with the transmitted data:<br>HTTP://WWW.SECUREUID.COM/ITEMDATA/?SCAN=25SU N123456789PA12345%1D4LUS%1D16D20131108<br>*Note: data from the "05" format envelope was not incorporated in the URL since the 34L was encoded in the "06" format envelope* |
| an3+a2+an3...27 | **35L** | A government-assigned approval number of vessel / aquaculture site / farm / processor, starting with an ISO 3166-1 alpha-2 country code, followed by the approval number.<br>All characters of the GS1 General Specification-defined sub-set of ISO/IEC 646 are allowed.<br>Example:<br>35LIECK0107EC = Country; Ireland. Vessel Name; FV Endurance DA31. |
| an3+a2+an3...27 | **36L** | A government-assigned approval number of producer or farm or first deboning / cutting hall, starting with an ISO 3166-1 alpha-2 country code, followed by the approval number.<br>All characters of the GS1 General Specification-defined sub-set of ISO/IEC 646 are allowed.<br>Example:<br>36LIECK0107EC = Country; Ireland. Vessel Name; FV Endurance DA31. |
| | **37L– 50L** | Reserved. |

| | | |
|---|---|---|
| ***The following two Data Identifiers are to be used for shipments within the jurisdiction of a single postal authority.*** | | |
| an3+an1...9 | **51L** | "Ship From:" - Location code defined by a postal authority (e.g., 5-digit and 9-digit ZIP codes identifying U.S. locations or 6-character postal codes identifying Canadian locations). |
| an3+an1...9 | **52L** | "Ship To:" - Location code defined by a postal authority (e.g., 5-digit and 9-digit ZIP codes identifying U.S. locations or 6-character postal codes identifying Canadian locations). |
| | **53L** | Reserved. |
| ***The following two Data Identifiers are to be used for shipments between locations governed by different postal authorities*** | | |
| an3+an1...9 | **54L** | "Ship From:" - Location code defined by a postal authority in the format: postal codes (e.g., 5-digit ZIP codes identifying U.S. locations or 6- or 7-character postal codes identifying United Kingdom locations) followed by two character ISO 3166 country code (e.g., US or GB). |
| an3+an1...9 | **55L** | "Ship To:" - Location code defined by a postal authority in the format: postal codes (e.g., 5-digit ZIP codes identifying U.S. locations or 6- or 7-character postal codes identifying United Kingdom locations) followed by two character ISO 3166 country code (e.g., US or GB). |
| | **56L - 999L** | Reserved for future assignment. |
| | | |
| **CATEGORY 13:** | **RESERVED** | |
| Allocation: | **M - 999M** | |
| Assigned: | | |
| **META DATA** | **DI** | **EXPLANATION** |
| | **M** | Reserved. |
| | **1M – 9M** | Reserved. |
| | **10M** | Army Form 2410 data. Format is data value preceded by the block number of the form 2410. Field lengths and acceptable characters can be found at; http://www.apd.army.mil/pdffiles/p738_751.pdf. |
| | **11M** | Army Form 2408 data. Format is data value preceded by the block number of the form 2408. Field lengths and acceptable characters can be found at; http://www.apd.army.mil/pdffiles/p738_751.pdf. |
| | **12M** | Army Form 2407 data. Format is data value preceded by the block number of the form 2407. Field lengths and acceptable characters can be found at; http://www.apd.army.mil/pdffiles/p738_751.pdf. |
| | **13M** | Air Force Form 95 data. Format is data value preceded by the block number of the form 95. Field lengths and acceptable characters can be found at; http://www.gsa.gov/portal/forms/download/116418. |

| | | |
|---|---|---|
| | **14M** | Navy Form 4790 data. Format is data value preceded by the block number of the form 2410. Field lengths and acceptable characters can be found at; http://www.navair.navy.mil/logistics/4790/library/Chapter%2015.pdf. |
| | **15M – 999M** | Reserved for future assignment. |
| | | |
| **CATEGORY 14:** | **INDUSTRY ASSIGNED CODES** | |
| Allocation: | **N - 999N** | |
| Assigned: | | |
| **META DATA** | **DI** | **EXPLANATION** |
| an1+an13...15 | **N** | National/NATO Stock Number (NSN). |
| | **1N** | Product Characteristic Data defined by the Chemical Industry Data Exchange (CIDX). |
| | **2N** | Reserved. |
| | **3N** | Coding Structure in Accordance with Format Defined by Electronic Industries Association Japan (EIAJ). |
| | **4N** | Coding Structure and Formats in Accordance with GS1 Application Identifiers (AI plus data) (GS1). |
| | **5N** | Coding Structure and Formats in Accordance with AIAG Recommendations. The full Data Identifier is in the form 5Nxx where the "xx" is found in the full code list that can be found at http://www.mhi.org/standards - see under "MH10 Data Identifiers (Continuous Maintenance Version)". |
| | **6N** | U.S. DOD Requisition and Issue Procedure Codes. The format is the appropriate MILSTRIP code followed by the data value associated with that code. (The full list of codes is available at; http://www2.dla.mil/j-6/dlmso/elibrary/Manuals/DLM/MILSTRIP/MILSTRIP.pdf. |
| | **7N** | U.S. Defense Transportation Regulation Codes. The format is the DTR code followed by the appropriate data value associated with that code. (The full list of codes is available at; http://www.transcom.mil/dtr/part-ii/dtr_part_ii_toc.pdf. |
| | **8N** | Production Animal Identification Codes. The format is the production animal code followed by the appropriate data value associated with that code. The Technical Report and the full list of Extended Data Elements (codes) is maintained at; http://www.aimglobal.org/store/view_product.asp?id=4926441 Extended Data Elements (Codes). http://www.aimglobal.org/store/view_product.asp?id=4926483 Technical Report. |

| | | |
|---|---|---|
| an2+an5…22 | **9N** | Pharmacy Product Number maintained by IFA (www.ifaffm.de) and structured as follows:<br>Two-digit product registration agency code followed by the registered product number (assigned by product registration agencies) and two PPN check digits. |
| | **10N** | **NOTE: Due to an error in the assignment of DI "10N" (there is no central authority for data-definition nor maintenance), no new uses of DI "10N" should be implemented.**<br>**The function of DI "10N" is established in Category 18, MISCELLANEOUS with DI "5R".**<br>**It is strongly recommended that existing applications that use DI "10N" migrate to DI 5R".**<br>Data in the format and using semantics defined by the holder of a Company Identification Number (CIN) that has been issued by an Issuing Agency Code (IAC) in accordance with ISO/IEC 15459, defined as a sequence of concatenated data elements: IAC, followed by CIN, followed by the separator character ":" (colon) followed by the data in the format and using semantics as defined by the CIN holder.<br>NOTE: Only the data syntax rules (if any) as provided by the declared IAC+CIN within each DI "10N" data stream shall be applied to the data following DI 10N+IAC+CIN. |
| | **11N** | **NOTE: Due to an error in the assignment of DI "11N" (the language which states: 'DI "11N" shall never be encoded in a 2D or RFID tag together with any other DI elements.' is not a valid statement), no new uses of DI "11N" should be implemented. The function of DI "11N" is established in DI "12N". It is strongly recommended that existing applications that use DI "11N" migrate to DI "12N".** The Data construct is defined and controlled by the RLA, and is comprised of 2 segments: the field identifier code, immediately followed by the data as defined for that element according to the data dictionary of the RLA. It is essentially a catalog of fields with standardized content. The Field Identifiers are posted at http://rla.org/11ncodes. The use and structure of these codes are defined at: http://rla.org/11nformat Additional examples can be found at that site as well. DI "11N" shall never be encoded in a 2D or RFID tag together with any other DI elements. |
| | **12N** | The Data construct is defined and controlled by the RLA, comprised of 2 segments: the field identifier (FI) code, immediately followed by the data as defined for that element according to the data dictionary of the RLA. It is essentially a catalog of fields with standardized content. The Field Identifiers are posted at http://rla.org/12ncodes The use and structure of these codes are defined at: http://rla.org/12nformat. Examples can be found at that site. |
| | **13N – 999N** | |
| | | |
| **CATEGORY 15:** | **RESERVED** | |

| | | |
|---|---|---|
| Allocation: | **O - 999O** | |
| Assigned: | | |
| | **O - 999O** | Not recommended for use due to similarity of "0" (zero) to "O" (letter). |
| | | |
| **CATEGORY 16:** | **ITEM INFORMATION** | |
| Allocation: | **P - 999P** | |
| Assigned: | | |
| **META DATA** | **DI** | **EXPLANATION** |
| | **P** | Item Identification Code assigned by Customer. |
| | **1P** | Item Identification Code assigned by Supplier. |
| | **2P** | Code Assigned to Specify the Revision Level for an Item (e.g., engineering change level, edition, or revision). |
| an2+n13…14 | **3P** | Combined Manufacturer Identification Code/Item Code Under the 12/13-digit GS1 Formats, plus supplemental codes, if any. |
| | **4P** | Item Code Portion of GS1 Formats. |
| | **5P** | Freight Classification Item Number Assigned by Carrier for Purposes of Rating Hazardous Materials (e.g., Motor Freight, Air, Boat, Rail Classification). |
| | **6P** | Combined Supplier Identification and Item Code (internally assigned or mutually defined). |
| | **7P** | Common Language Equipment Identification (CLEI) assigned by the manufacturer to some telecommunications equipment. |
| an2+n14 | **8P** | 14-digit GS1 format for GTIN-14 code structure. |
| | **9P** | Combined Manufacturer Identification Code (9-digit DUNS number assigned by Dun & Bradstreet) and the Item Code/Part Number (assigned by the manufacturer). |
| | **10P** | Hazardous Material Code as defined by ANSI X12.3 in the format Data Element 208 (1-character code qualifier) followed by Data Element 209 (Hazardous Material Code) |
| an3+an10 | **11P** | 10-character CLEI Code for telecommunications equipment. |
| | **12P** | Document Type (e.g., Pick List, Design Drawing, etc.) (internally assigned or mutually defined). |
| | **13P** | VMRS System Code. |
| | **14P** | VMRS System and Assembly Code. |
| | **15P** | VMRS System, Assembly, & Part Code. |
| | **16P** | VMRS System, Assembly, or Part Code. (User Modified). |
| | **17P** | Combined GS1 Supplier Identification and Item Code Assigned By The Supplier. |
| | **18P** | Combined VMRS supplier ID and Supplier Assigned Part Number. |

| | | |
|---|---|---|
| | **19P** | Component of an Item. (One product contained in multiple packages). |
| ***The following five DIs can be used to provide for Item identification (Item ID), which is different than or in addition to Item ID provided by "P".*** | | |
| | **20P** | First Level (Customer Assigned). |
| | **21P** | Second Level (Customer Assigned). |
| | **22P** | Third Level (Customer Assigned). |
| | **23P** | Fourth Level (Customer Assigned). |
| | **24P** | Fifth Level (Customer Assigned). |
| | **25P** | Identification of a Party to a Transaction Assigned by a Holder of a Company Identification Number (CIN) and including the related Issuing Agency Code (IAC) in accordance with ISO/IEC 15459 and its registry, structured as a sequence of 3 concatenated data elements: IAC, followed by CIN, followed by the supplier assigned part number that is unique within the CIN holder's domain. |
| | **26P** | Part Number of Next Higher Assembly. |
| an3+n7...12 | **27P** | Commodity HTS-6 Code;<br>Using the format: 4012.11 or 4012.11.4000<br>(Decimal point is expressly encoded)<br>The Harmonized System (HS) Classification is a 6-digit standardized numerical method of classifying traded products. HS numbers are used by customs authorities around the world to identify products for the application of duties and taxes. Additional digits are added to the HS number by some governments to further distinguish products in certain categories. In the United States, numbers used to classify exported products are called “Schedule B” numbers. The U.S. Census Bureau administers the Schedule B system. Schedule B numbers, not HS numbers, must be provided on the Shippers’ Export Declaration (SED).<br>http://www.niccomp.com/rohs/files/NIC_HTS1006.pdf<br><br>Import codes are administered by the U.S. International Trade Commission (USITC). http://hts.usitc.gov/ |
| an3+an1...100 | **28P** | Cargo Name.<br>Plain language description (English). |
| an3+n5 | **29P** | Product Classification Code as defined with the GMDN (Global Medical Device Nomenclature - http://www.gmdnagency.org). |
| ***The following five DIs can be used to provide for Item identification (Item ID), which is different than or in addition to Item ID provided by "1P".*** | | |
| | **30P** | First Level (Supplier Assigned). |
| | **31P** | Second Level (Supplier Assigned). |
| | **32P** | Third Level (Supplier Assigned). |
| | **33P** | Fourth Level (Supplier Assigned). |

| | | |
|---|---|---|
| | **34P** | Fifth Level (Supplier Assigned). |
| | **35P – 39P** | Reserved. |
| | **40P** | A Code Assigned BY A Customer TO THE Identification Number OF THE Manufacturer's Material Safety Data Sheet (MSDS) document that describes the uses, hazards, and chemical composition of a hazardous material. |
| | **41P – 48P** | Reserved |
| an3+an3...9 | **49P** | Export Controlled Item.<br>Subject to export control and or restrictions as identified in the Wassenaar Arrangement.<br>DI followed by the Alpha-2 ISO 3166 Country Code of the country that imposed the restriction followed by Wassenaar Code (http://www.wassenaar.org/controllists/index.html). |
| an3+an3…35 | **50P** | Manufacturer-Assigned Item Identifier - comprising an item number assigned by the item manufacturer, followed by a plus (+) sign, followed - if required to uniquely identify the item within the manufacturer's product range - by a manufacturer-assigned item version.<br>Example 50PABC+6 would represent item number ABC, item version 6<br>*Note: The item number shall always be followed by a plus sign, even if no item version is present. This is required to permit the unambiguous concatenation of manufacturer-assigned item identifier with another data construct using the concatenation character plus (+). For example, the combination of a 50P manufacturer-assigned item identifier with no item version and a serial number (Data identifier S) on an entity might be encoded as 50PDEF++S1234.* |
| | **51P** | Globally Unique Item Identifier comprising the Identification of a party to a transaction assigned by a holder of a Company Identification Number (CIN) and including the related Issuing Agency Code (IAC) in accordance with ISO/IEC 15459 and its registry, followed by a plus (+) sign, followed by the Manufacturer-assigned item identifier as defined with 50P<br>Example: 51PJ4LBE0431863103+ABC+ would represent the item with item number ABC and no version number manufactured by the company with Belgian VAT number 0431863103. |
| an3+an1...50 | **52P** | Color Code.<br>Color of an item/object identified by a code or term mutually agreed upon between trading partners. |

| | | |
|---|---|---|
| an3+a1+n4+an5…20 | **53P** | Identifier for Specific Marine Equipment approved under the European Union Directive on Marine Equipment (2014/90/EU) and Implementing Regulation (EU) 2018/608<br><br>Format:<br>– DI (an3);<br>– Type of conformity assessment (CA) module(s) set out in Annex II to Directive 2014/90/EU used for the conforming assessment (a1);<br>– Notified body (NB) identification number assigned by the Commission in accordance with point 3.1 of Annex IV to Directive 2014/90/EU (n4);<br>– Certificate (an5…20) |
| an3+an1…35 | **54P** | UDI-DI (Unique Device Identification - Device Identifier) for Medical Devices (MD) and In-vitro-Diagnostics (IvD) as the unique key to public UDI data bases (GUDID, EUDAMED, etc.), according to national regulatory requirements, as outlined by the International Medical Device Regulators Forum (IMDRF). All printable characters of the UTF-8 character set are allowed. |
| | **55P - 999P** | Reserved for future assignment. |
| | | |
| **CATEGORY 17:** | **MEASUREMENT** | |
| Allocation: | **Q - 999Q**<br>***NOTE: If decimal points are to be used, they should be included within the data.*** | |
| Assigned: | | |
| **META DATA** | **DI** | **EXPLANATION** |
| | **Q** | Quantity, Number of Pieces, or Amount (numeric only) (unit of measure and significance mutually defined. |
| | **1Q** | Theoretical Length/Weight (numeric only). |
| | **2Q** | Actual Weight (numeric only). |
| an2+an2 | **3Q** | Unit of Measure, as defined by the two character ANSI X12.3 Data Element Number 355 Unit of Measurement Code. |
| | **4Q** | Gross Amount. |
| | **5Q** | Net Amount. |
| | **6Q** | Where Multiple Containers Comprise a Single Product (the contents of each container must be combined with the content of the other containers to constitute a single product) the Data Identifier “6Q” shall be used to link the various containers. The format # of # (“this is the nth piece of x pieces to define the product”) Presented in the format “n/x”, where the “/” (slash) is used as a delimiter between two values. |

| | | |
|---|---|---|
| an2+n1…8+an2 | **7Q** | Quantity, Amount, or Number of Pieces in the format: Quantity followed by the two character ANSI X12.3 Data Element Number 355 Unit of Measurement Code. |
| an2+n4...6 | **8Q** | Container Rated Weight.<br>Manufacturer-assigned weight carrying capability of the container. Assigned at time of manufacture. Unit of measure is kg. |
| | **9Q** | Piece Weight: weight of a single item. |
| | **10Q** | Reserved . |
| an3+n4...6 | **11Q** | Tare Weight: weight of an empty container<br>Container body weight.<br>Manufacturer-assigned weight of the empty container. Assigned at time of manufacture. Unit of measure is kg (Tare weight). |
| an3+n1…10+an3 | **12Q** | Monetary Value established by the Supplier in the format of: the value followed by an ISO 4217 data element code for representing unit of value of currencies and funds (e.g., 12Q2.50USD) (2.50 Monetary Value in USA Dollars) significance mutually defined.<br>Entry Value;<br>Value followed by an ISO 4217 data element code for representing unit of value of currencies and funds (e.g., 12Q2.50USD) (2.50 Monetary Value in USA Dollars) |
| | **13Q** | # of # ("this is the *nth* piece of *x* pieces in this shipment") Presented in the format "*n/x*", where the "/" (slash) is used as a delimiter between two values. See Annex C.6.3 for further information. |
| | **14Q** | Beginning Secondary Quantity. |
| | **15Q** | Ending Secondary Quantity. |
| | **16Q** | Number Of Pieces in Van. |
| | **17Q** | Number Of Shipments in Van. |
| | **18Q** | Cube expressed in cubic meters or cubic feet followed by the ANSI X12.3 data element number 355 unit of measure code (CR of CF). No implied decimal point. |
| | **19Q** | Width expressed in linear meters or linear feet followed by the ANSI X12.3 data element number 355 unit of measure code (LC or LF). No implied decimal point. |
| | **20Q** | Height expressed in linear meters or linear feet followed by the ANSI X12.3 data element number 355 unit of measure code (LC or LF). No implied decimal point. |
| | **21Q** | Length expressed in linear meters or linear feet followed by the ANSI X12.3 data element number 355 unit of measure code (LC or LF). No implied decimal point. |
| | **22Q** | Net Weight Of Shipment expressed in pounds or kilograms (kilos) followed by the ANSI X12.3 data element number 355 unit of measure (LB or KG). No implied decimal point. |

| | | |
|---|---|---|
| | **23Q** | Van Length expressed in linear meters or linear feet followed by the ANSI X12.3 data element number 355 unit of measure (LC or LF). No implied decimal point. |
| | **24Q** | Inside Cube of a Van expressed in cubic meters or cubic feet followed by the ANSI X12.3 data element number 355 of unit measure code (CR or CF). No implied decimal point. |
| | **25Q** | Net Explosive Weight (a computed value of explosive equivalent expressed in pound of TNT). The measure of NEW is used internationally for explosive safety quantity distance arc computations. No implied decimal point. |
| | **26Q** | Packaging Level, specifying the hierarchical level of packaging in accordance with HIBC (Health Industry Bar Code) specifications. |
| an3+an1…20 | **27Q** | Single Product Price Value, Net, "." (dot) used as decimal point (e.g., 27Q1000.5 for the price value of 1000.50)<br>Structure: an3+an1…20<br><DI><price value><br>Character set: 0 to 9, dot (ISO 646 ASCII value decimal 46, hexadecimal 2E).<br>Example of encoding using a net price value of 1000: 27Q1000<br>Example of encoding using a net price value of 1000.50: 27Q1000.5<br>*NOTE: If currency is required it can be taken from another data element used in same code, e.g., 12Q.* |
| an3+an1…10 | **28Q** | Single Price Charge Value For Postage And Packaging, "." (dot) represents the position of a comma (e.g., 28Q100.50 for the value of 100,50)<br>Structure: an3+an1…10<br><DI><price value><br>Character set: 0 to 9, dot<br>Example of encoding using postage & packing value of 100: 28Q100<br>Example of encoding using postage & packing value of 100,50: 28Q100.50<br>*NOTE: If currency is required it can be taken from another data element used in same code, e.g., 12Q.* |
| an3+n1…6 | **29Q** | Discount Percentage, "." (dot) represents the position of a comma (e.g., 29Q8.5 for a discount value of 8,5%)<br>Structure: an3+n1…6 (12.456)<br><DI><discount percentage (%)><br>Character set: 0 to 9, dot<br>Example of encoding using discount percentage of 10%: 29Q10<br>Example of encoding using discount percentage of 8,5%: 29Q8.5 |

| | | |
|---|---|---|
| an3+an1…5 | **30Q** | VAT Percentage, "." (dot) represents the position of a comma (e.g., 30Q8.5 for the VAT value of 8,5%)<br>Structure: an3+an1…5 (12.45)<br><DI><VAT percentage (%)><br>Character set: 0 to 9, dot<br>Example of encoding using VAT percentage of 19%: 30Q19<br>Example of encoding using VAT percentage of 8,5%: 30Q8.5 |
| an3+an3 | **31Q** | Currency, ISO 4217 currency code.<br>Structure: an3+an3<br><DI><Currency, e.g., EUR><br>Character set: A-Z, 0 to 9<br>Example of encoding using ISO alphabetic code of US Dollar: 31QUSD<br>Example of encoding using ISO alphabetic code of EURO: 31QEUR<br>Example of encoding using ISO numeric code of EURO: 31Q978 |
| | **32Q – 999Q** | Reserved for future assignment. |

| **CATEGORY 18:** | **MISCELLANEOUS** | |
|---|---|---|
| Allocation: | **R - 999R** | |
| Assigned: | | |
| **META DATA** | **DI** | **EXPLANATION** |
| | **R** | Reserved. |
| | **1R** | Return Authorization Code (RMA) assigned by the Supplier. |
| | **2R** | Return Code Assigned by the Customer. |
| | **3R** | Reserved. |
| an4 | **4R** | U.S. Department of Defense Identification Code (DoDIC). |
| | **5R** | Data in the format and using semantics defined by the holder of a Company Identification Number (CIN) that has been issued by an Issuing Agency Code (IAC) in accordance with ISO/IEC 15459, defined as a sequence of concatenated data elements: IAC, followed by CIN, followed by the separator character ":" (colon) followed by the data in the format and using semantics as defined by the CIN holder.<br>NOTE: Only the data syntax rules (if any) as provided by the declared IAC+CIN within each DI "5R" data stream shall be applied to the data following DI 5R+IAC+CIN.4. |

| | | |
|---|---|---|
| | **6R** | ISO/IEC 20248 digital signature data construct. If the underlying data carrier encoding is 7 bits, then only the ISO/IEC 20248 raw format may be used.<br>Example with an URL format:<br><6R><https://20248.sigvr.it/?Oo586eJAMEYCIQCf31EqIJMLGclBpHLlRgBdO><br>Example with a raw format:<br><6R><Oo586eJAMEYCIQCf31EqIJMLGclBpHLlRgBdO><br>An ISO/IEC 20248 data structure contains a digital signature which is used to verify the specified data elements of the message of data elements. The value of 6R, as the first parameter, and the data elements to be verified (stripped from all non-printable characters), as the second parameter, is passed to the ISO/IEC 20248 DecoderVerifier - which will return the verification result: ACCEPT, REJECT or ERROR(error code), and the JSON object of decoded ISO/IEC 20248 additional fields. The ISO/IEC 20248 data structure may contain additional fields and instructions to decode and verify one or more messages of data elements. These instructions will be processed by the ISO/IEC 20248 DecoderVerifier. |
| an3+an1…3 | **7R** | Aquatic Sciences and Fisheries Information System (ASFIS) 'Inter-agency 3-alpha species code', maintained by the Food and Agriculture Organization of the United Nations (www.fao.org, then search for "ASFIS").<br>Examples;<br>7RMUC = Mud carp<br>7RPCD = Australian freshwater herring<br>7RWSH = Great white shark |
| an3+an1...10 | **8R** | Food and Agricultural Organization (FAO) International Standard Classification of Fishing Gears (ISSCFG) code. (www.fao.org)<br>All characters of the GS1 General Specification-defined sub-set of ISO/IEC 646 are allowed.<br>Examples:<br>8R02.1.0 = Beach seines<br>8R03.1.5 = Shrimp trawls<br>8R05.1.0 = Portable lift net |
| an3+an2 | **9R** | Production method for fish and seafood as specified by the Fisheries and Aquaculture Department of the Food and Agricultural Organization (FAO) of the United Nations, according to EU Regulation 1379/2013. (www.fao.org).<br>All characters of the GS1 General Specification-defined sub-set of ISO/IEC 646 are allowed.<br>Examples;<br>9R01 = Caught at sea<br>9R02 = Caught in fresh water<br>9R03 = Farmed |
| | **10R- 999R** | Reserved for future assignment. |

| | | |
|---|---|---|
| **CATEGORY 19:** | **TRACEABILITY NUMBER FOR AN ENTITY** | |
| Allocation: | **S - 999S** | |
| Assigned: | | |
| **META DATA** | **DI** | **EXPLANATION** |
| | **S** | Serial Number or Code Assigned by the Supplier to an Entity for its Lifetime, (e.g., computer serial number, traceability number, contract tool identification). |
| | **1S** | Additional Code Assigned by the Supplier to an Entity for its Lifetime (e.g., traceability number, computer serial number). |
| an2+an2...30 | **2S** | Advance Shipment Notification (ASN) Shipment ID (SID) corresponds to ANSI ASC X12 Data Element 396. |
| | **3S** | Unique Package Identification Assigned by Supplier (lowest level of packaging which has a package ID code; shall contain like items). |
| | **4S** | Package Identification Assigned by Supplier to master packaging containing like items on a single customer order. (See Annex C.7). |
| | **5S** | Package Identification Assigned by Supplier to master packaging containing unlike items on a single customer order. (See Annex C.7). |
| | **6S** | Package Identification Assigned by Supplier to master packaging containing like items over multiple customer orders. (See Annex C.7). |
| | **7S** | Package Identification Assigned by Supplier to master packaging containing unlike items over multiple customer orders. (See Annex C.7). |
| an2+n18 | **8S** | Supplier ID/Unique Container ID presented in the data format specified by the GS1 SSCC-18. |
| | **9S** | Package Identification, Generic (mutually defined). |
| | **10S** | Machine, Cell, or Tool ID Code. |
| | **11S** | Fixed Asset ID Code. |
| | **12S** | Document Number (internally assigned or mutually defined). |
| | **13S** | Container Security Seal[10]. |
| | **14S** | 4th Class Non-identical parcel post manifesting. |
| | **15S** | Serial Number Assigned by the Vendor Entity, that can only be used in conjunction with "13V". |
| | **16S** | Version Number, e.g., Software Version. |
| | **17S** | Combined 6-digit GS1 Supplier Identification and Unique Package Identification Assigned by the Supplier. |

[10] For Freight Containers, this refers to a mechanical seal. See ISO 17712.

| | | |
|---|---|---|
| an3+an5 + an1...20[11] | **18S** | CAGE Code & Serial Number Unique Within CAGE. |
| | **19S** | Combined Dun & Bradstreet company identification of the supplier followed by a unique package identification assigned by the supplier, in the format nn...nn+nn...n where a plus symbol (+) is used as a delimiter between the DUNS Number and unique package identification. |
| | **20S** | Traceability Code for an Entity Assigned by the Customer. |
| | **21S** | Tire Identification Number as defined by the U.S. Department of Transportation (D.O.T) under U.S. Code 49 CFR 574.5. |
| | **22S** | Unique Individual Identity for Cellular Mobile Telephones. |
| an3+an12 | **23S** | Media Access Control (MAC) Address conforming with IEEE 802.11. |
| an3+n6...26 | **24S** | According to ISO/IEC 15963 (value is a conversion of its bit value to 8-bit ASCII values). This Data Identifier could possibly assume any ASCII-256 value. For freight container tags the Registration Authority (RA) for manufacturers is the RA for ISO 14816. (ISO 646). |
| | **25S** | Identification of a party to a transaction assigned by a holder of a Company Identification Number (CIN) and including the related Issuing Agency Code (IAC) in accordance with ISO/IEC 15459 and its registry, structured as a sequence of 3 concatenated data elements: IAC, followed by CIN, followed by the supplier assign serial number that is unique within the CIN holder's domain. (See Annex C.11). |

[11] For the purposes of DI 18S, the characters dash "-" and slash "/" are part of the allowable character set.

| | | |
|---|---|---|
| an3+an1...35 | **26S** | Equipment Identifier, being a globally unique identifier for a device, an item of equipment or instance of a computer application used in the production, transport, processing or other handling of items, that is constructed by concatenating:<br>— an ISO/IEC 15459 issuing agency code;<br>— an equipment number which accords with specifications of the issuing agency concerned;<br>and that:<br>— comprises only upper case alphabetic and/or numeric characters;<br>— is unique (that is, is distinct from any other ISO/IEC 15459 compliant identifier) within the domain of the issuing agency[6];<br>— cannot be from any other ISO/IEC 15459 compliant identifier, issued under the same issuing agency, by the simple addition of characters to, or their removal from, its end[6].<br>Reader ID.<br>Equipment identifier, being a globally unique identifier for a device, an item of equipment or instance of a computer application used in the production, transport, processing or other handling of items. |
| | **27S** | Item Number Within Batch, being a string of numeric digits:<br>— that uniquely distinguishes an item, within an identifiable batch of related items, from all other items in the same batch;<br>— whose length is the same for all items within the batch concerned. |
| | **28S** | Batch-and-Item Number, being the concatenation of a data identifier 27T batch number and the data identifier 27S item number of an item belonging to the batch concerned. |
| | **29S** | Reserved. |
| | **30S** | Additional Traceability Code For An Entity Assigned by the Supplier in addition to or different from the traceability code(s) provided by "S" or "1S". |
| | **31S** | Beginning Serial Number for serial numbers in sequence. |
| | **32S** | Ending Serial Number for serial numbers in sequence. |
| | **33S** | Serial Number of Next Higher Assembly. |
| | **34S** | Serial Number or Part Number of End Item. |
| | **35S** | Bumper Number. (Used in Unit DOD Move). |
| | **36S** | Pallet Identifier. (Used for loaded 463L air pallets). |

| | | |
|---|---|---|
| | **37S** | Unique Item Identifier comprised of a sequence of 5 data elements: “IAC”, followed by “CIN”, followed by “Part Number (PN)”, followed by the “+” character, followed by the supplier assigned (or managed) “Part Serial Number (PSN)” that is globally unique within the CIN holder’s domain; in the format IAC CIN PN + PSN (spaces provided for visual clarity only; they are not part of the data). See Annex C.11. |
| | **38S - 41S** | Reserved. |
| an3+n2+an1…3+an1...9+an1...30 | **42S** | Unique Item Identifier (UII) in 25S format preceded by numeric value indicating serial number element length for use by systems that require the “serial number” component of a concatenated Serial Number element (IAC+CIN+SN).<br>Format: DI+LI+IAC+CIN+SN (LI=length of SN). |
| an3+n1...7+n12…18+n1 | **43S** | Integrated Circuit Card Identifier (ICCID) in accordance with ITU-T Recommendation E.118 and ETSI Recommendation GSM 11.11; a maximum of 20 digits consisting of Issuer identification number (IIN; maximum of 7 digits), Individual account identification (variable; length determined by IIN, but the same length within individual IINs), Check digit (single digit calculated using Luhn algorithm. http://en.wikipedia.org/wiki/Luhn_algorithm).<br>43Siiiiiiinnnnnnnnnnnnc (i = IIN, n = account identification, c = check digit) |
| | **44S - 49S** | Reserved |
| ***The following five DIs can be used to provide for identification of entities within a single unit that is different than or in addition to identification provided by "S".*** | | |
| an3+an1...20 | **50S** | First Level (Supplier Assigned). |
| an3+an1...20 | **51S** | Second Level (Supplier Assigned). |
| an3+an1...20 | **52S** | Third Level (Supplier Assigned). |
| an3+an1...20 | **53S** | Fourth Level (Supplier Assigned). |
| an3+an1...20 | **54S** | Fifth Level (Supplier Assigned). |
| | **55S - 95S** | Reserved. |
| an3+16...26 | **96S** | EPC number (Typically Serialized Global Trade Identification Number - SGTIN). |
| an3+an4...25 | **97S** | Encrypted serial number assigned by the Supplier to an entity, which can be authenticated by an independent trusted third party. The encrypted serial number does not describe any parameters of the entity without decryption by an independent third party. |
| | **98S – 999S** | Reserved for future assignment. |
| | | |
| **CATEGORY 20:** | **TRACEABILITY NUMBER FOR GROUPS OF ENTITIES** | |
| Allocation: | **T - 999T** | |
| Assigned: | | |

| META DATA | DI | EXPLANATION |
|---|---|---|
| | **T** | Traceability Number assigned by the Customer to identify/trace a unique group of entities (e.g., lot, batch, heat). |
| | **1T** | Traceability Number assigned by the Supplier to identify/trace a unique group of entities (e.g., lot, batch, heat). |
| | **2T** | Reserved. |
| | **3T** | Exclusive Assignment. (U.S. EPA vehicle identification for emissions testing). |
| | **4T - 19T** | Reserved. |
| ***The following five DIs can be used to provide for identification of a group of entities, which is different than or in addition to identification provided by "T".*** | | |
| | **20T** | First Level (Customer Assigned). |
| | **21T** | Second Level (Customer Assigned). |
| | **22T** | Third Level (Customer Assigned). |
| | **23T** | Fourth Level (Customer Assigned). |
| | **24T** | Fifth Level (Customer Assigned). |
| | **25T** | Identification of a party to a transaction assigned by a holder of a Company Identification Number (CIN) and including the related Issuing Agency Code (IAC) in accordance with ISO/IEC 15459 and its registry, structured as a sequence of 3 concatenated data elements: IAC, followed by CIN, followed by the supplier assigned traceability number that is unique within the CIN holder's domain. |
| | **26T** | Batch Identifier comprising the concatenation of either:<br>— a data identifier 26S mail processing equipment identifier, or<br>— a data identifier 20K license identifier, or<br>— a data identifier 18V party identifier that:<br>  — is distinct from any other ISO/IEC 15459 compliant identifier within the domain of the issuing agency concerned[6];<br>  — cannot be derived from another party identifier or any other ISO/IEC 15459 compliant identifier, issued under the same issuing agency, by the simple addition of characters to, or their removal from, its end[6];<br>with a data identifier 27T batch number, the two being separated by a dash (-) character[12]. |

[12] Note that the dash character cannot occur in either of the two components and can thus be used to support decomposition of the batch identifier into these components. A transport unit identifier constructed from the same two components and a “27S” item number contains no such separator and cannot be decomposed.

| | | |
|---|---|---|
| | **27T** | Batch Number, issued under the control of an identified party or unit of processing equipment, or under the provisions of an identified license, that:<br>— uniquely distinguishes one batch of related items from all other batches to which a batch number is assigned by the party or equipment, or under the license, concerned;<br>— comprises a string of maximum length 10 characters, of which the first (numeric) character indicates the number of following characters, each of which is taken from the set {0-9; A-Z}. |
| | **28T – 29T** | Reserved. |
| ***The following five DIs can be used to provide for identification of a group of entities, which is different than or in addition to identification provided by "1T".*** | | |
| | **30T** | First Level (Supplier Assigned). |
| | **31T** | Second Level (Supplier Assigned). |
| | **32T** | Third Level (Supplier Assigned). |
| | **33T** | Fourth Level (Supplier Assigned). |
| | **34T** | Fifth Level (Supplier Assigned). |
| | **35T - 999T** | Reserved for future assignment. |
| | | |
| **CATEGORY 21:** | **UPU/MH 10/SC8 AGREED UPON CODES** | |
| Allocation: | **U - 999U** | |
| Assigned: | | |
| **META DATA** | **DI** | **EXPLANATION** |
| | **U-4U** | Reserved. |
| | **5U** | Specification of a postal service and associated process data in accordance with UPU standard S25 data construct “Service Data”. |
| | **6U** | Licensing Post Data, in accordance with the specification in UPU standard S25. |
| | **7U – 14U** | Reserved for Assignment for UPU needs in collaboration with ASC MH10/SC 8/WG 2. |
| | **15U** | Specification of supplementary postal service and associated process data in accordance with UPU standard S25 data construct “Supplementary Service Data”. |
| | **16U** | Postal Administration Identifications, being the identification, expressed in accordance with the specification in UPU standard S25, of one or more postal administrations involved in the processing of a mail item or batch. |

| | | |
|---|---|---|
| | **17U** | UPU Location Code, being a code identifying a location or geographic area, or an associated group of such locations or areas, that has relevance to a related transaction and that complies with one of the structures defined in a) to g) below:<br>a) two upper case alphabetic characters corresponding to the ISO 3166-1 two alpha country code of the country in which, or consisting of which, the location(s) or area(s) are situated;<br>b) three upper case alphabetic characters corresponding to the IATA code of the airport or city in, close to, or consisting of which the location(s) or area(s) are situated;<br>c) four or more characters of which the first three correspond to an ISO 3166-1 country code followed by a dash (-), with the balance being a postcode in the country concerned;<br>d) four or more characters of which the first three correspond to an ISO 3166-1 country code followed by a dot (.), with the balance being an ISO 3166-2 country subdivision code in the country concerned;<br>e) five upper case alphabetic characters corresponding to the UN/LOCODE of the area in, close to, or consisting of which, the location(s) or area(s) are situated;<br>f) six upper case alphanumeric characters corresponding to a UPU IMPC code allocated in accordance with UPU standard S34;<br>g) the concatenation, being not less than seven nor more than 25 characters in length, of:<br>— an issuer code allocated in accordance with UPU standards S31;<br>— a location code, consisting of characters drawn from the set {A-Z; 0-9} which accords with specifications of the issuer concerned. |
| | **18U** | Qualified UPU Location Code, concatenation of:<br>— a location category drawn from UPU code list 139;<br>— a data identifier 17U UPU location code. |
| | **19U** | License Plate with Service Data and Location Code is a compound data construct, compliant with the specification in UPU standard S25, which includes specification of:<br>— an ISO/IEC 15459-compliant item identifier;<br>— a data identifier 5U compliant specification of the service to be provided in respect of the item;<br>— a data identifier 17U compliant UPU location code or a data identifier 18U compliant qualified UPU location code.<br>*Note: For further details, please refer to UPU standard S25. The distinction between a simple UPU location code (DI 17U) and a qualified UPU location code (DI 18U) can be determined from the first character. If this is numeric, 18U applies; if it is alphabetic, 17U applies.* |
| | **20U – 54U** | Reserved for Assignment for UPU needs in collaboration with ASC MH 10/SC 8/WG 2. |

| | | |
|---|---|---|
| | **55U** | OCR Data Locator. |
| | **56U – 999U** | Reserved for future assignment. |
| | | |
| **CATEGORY 22:** | **PARTY TO THE TRANSACTION** | |
| Allocation: | **V - 999V** | |
| Assigned: | | |
| **META DATA** | **DI** | **EXPLANATION** |
| | **V** | Supplier Code Assigned by Customer. |
| | **1V** | Supplier Code Assigned by Supplier. |
| an2+n8 | **2V** | U.P.C. Company Prefix. |
| an2+n9 | **3V** | GS1 Company Prefix. |
| | **4V** | Carrier Identification Code assigned by an industry standard mutually defined by the Supplier, Carrier, and Customer. |
| | **5V** | Financial Institution Identification Code (mutually defined). |
| | **6V** | Manufacturer's Identification Code (mutually defined). |
| | **7V** | Code assigned to a party which has financial liability for an entity or group of entities (e.g., owner of inventory) (mutually defined). |
| | **8V** | Customer Code Assigned by the Customer. |
| | **9V** | Customer Code Assigned by the Supplier. |
| an3+an10...15 | **10V** | Manufacturer ID.<br>*NOTE: See Appendix 2, CBP 7501 Instructions.* |
| | **11V** | Organization with budget responsibility for an entity, process, or procedure (e.g., shop, division, department)(internally assigned). |
| an3+n9...13 | **12V** | DUNS Number Identifying Manufacturer. |
| an3+n9...13 | **13V** | DUNS Number Identifying Supplier. |
| an3+n9...13 | **14V** | DUNS Number Identifying Customer. |
| | **15V** | Carrier-Assigned Shipper Number. |
| | **16V** | VMRS Supplier ID. |
| an3+an5 | **17V** | U.S. DoD CAGE Code. |
| | **18V** | Identification of a party to a transaction in which the data format consists of two concatenated segments. The first segment is the Issuing Agency Code (IAC) in accordance with ISO/IEC 15459, the second segment is a unique entity identification Company Identification Number (CIN) assigned in accordance with rules established by the issuing agency (see http://www.aimglobal.org/?page=Reg_Authority15459&hhSearchTerms=%22IAC%22). |

| | | |
|---|---|---|
| | **19V** | Specification of a party's role(s), in a transaction, consisting of one or more code values from EDIFACT Code List 3035 "Party Qualifier", separated by plus (+) characters (Never to be concatenated with other DIs in a linear symbol or other media where the concatenation character is a plus (+) character). |
| | **20V** | Identification of a party to a transaction assigned by a holder of a Company Identification Number (CIN) and including the related Issuing Agency Code (IAC) in accordance with ISO/IEC 15459 and its registry, structured as a sequence of 3 concatenated data elements: IAC, followed by CIN, followed by a plus (+) character followed by one or more code values from EDIFACT Code List 3035 "Party Qualifier", separated by plus (+) characters (Never to be concatenated with other DIs in a linear symbol or other media where the concatenation character is a plus (+) character). |
| an3+an1...35 | **21V** | Identification of a party to a transaction, e.g., 21V IAC CIN OSU, assigned by a holder of a Company Identification Number (CIN) and including the related Issuing Agency Code (IAC) in accordance with ISO/IEC 15459 and its registry, structured as a sequence of 3 concatenated data elements: IAC, followed by CIN, followed by the organizational sub-unit identification assigned by the CIN that is unique within the CIN holder's domain. |
| an3+an4 | **22V** | Carrier SCAC.<br>Standard Carrier Alpha Code - The National Motor Freight Traffic Association, Inc., (NMFTA) assigns SCACs for all companies except those codes used for identification of freight containers not operating exclusively in North America, intermodal chassis and trailers, non-railroad owned rail cars, and railroads. http://www.nmfta.org/Pages/welcome.aspx<br>Companies seeking identification codes for freight containers not operating in North America should contact the Bureau International des Containers, 38, rue des Blancs Manteaux, F-75004 Paris, France, email: bic@bic-code.org, web www.bic-code.org. Railroads and owners of intermodal chassis, trailers and non-railroad owned rail cars should contact Railinc Customer Service, Attn: Private Marks, 7001 Weston Parkway, Suite 200, Cary, NC 27513, (800) 544-7245, email: private.marks@railinc.com. |
| an3+a2+an3...18 | **23V** | Government-assigned Value Added Tax identification number identifying supplier, starting with an ISO 3166-1 alpha-2 country code (except for Greece, which uses the ISO 639-1 language code EL), followed by the government-assigned VAT number.<br>Example:<br>23VIE6388047V assigned to Google Ireland |

| | | |
|---|---|---|
| an3+a2+an3...18 | **24V** | Government-assigned Value Added Tax identification number identifying customer, starting with an ISO 3166-1 alpha-2 country code (except for Greece, which uses the ISO 639-1 language code EL), followed by the government-assigned VAT number.<br>Example:<br>24VIE6388047V assigned to Google Ireland |
| | **25V– 999V** | Reserved for future assignment. |
| | | |
| **CATEGORY 23:** | **ACTIVITY REFERENCE** | |
| Allocation: | **W - 999W** | |
| Assigned: | | |
| **META DATA** | **DI** | **EXPLANATION** |
| | **W** | Work Order Number (e.g., "Production Paper") (internally assigned). |
| | **1W** | Operation Sequence Number. A number that defines the order of a particular operation in a series of operations, generally in a manufacturing or assembly process. |
| | **2W** | Operation Code/Work Code - the type of work to be performed (internally assigned or mutually defined). |
| | **3W** | Combined Work Order Number and Operation Sequence Number in the format nn...n+nn...n where a plus symbol (+) is used as a delimiter between the Work Order Number and the Operation Sequence Number. |
| | **4W** | Status Code (internally assigned or mutually defined). |
| | **5W** | Work Unit Code – identifies system, subsystem, assembly, component etc. on which maintenance is performed. |
| | **6W** | Nomenclature – (internally assigned or mutually defined). |
| | **7W – 9W** | Reserved. |
| | **10W** | Form Control Number – Preprinted control number on forms. |
| | **11W** | Quality Assurance Inspector – Last Name. |
| | **12W** | Telephone Number of the Person/Activity Completing the Form – expressed in the format (country code) city or area code plus local number i.e. (1) 319 555 1212. |
| | **13W – 999W** | Reserved for future assignment. |
| | | |
| **CATEGORY 24:** | **RESERVED** | |
| Allocation: | **X - 999X** | |
| Assigned: | | |
| | **X - 999X** | Reserved. |

| | | |
|---|---|---|
| **CATEGORY 25:** | **INTERNAL APPLICATIONS** | |
| Allocation: | **Y - 999Y** | |
| Assigned: | | |
| | **Y - 999Y** | Never to appear on item/document which leaves a closed system environment. |
| | | |
| **CATEGORY 26:** | **MUTUALLY DEFINED** | |
| Allocation: | **Z - 999Z** | |
| Assigned: | | |
| **META DATA** | **DI** | **EXPLANATION** |
| | **Z** | Mutually Defined Between Customer and Supplier. |
| | **1Z** | Mutually Defined Between Carrier and Supplier. |
| | **2Z** | Mutually Defined Between Customer and Carrier. |
| | **3Z** | Free Text. |
| | **4Z** | Mutually Defined Between Carrier and Trading Partner. |
| | **5Z - 9Z** | Reserved. |
| | **10Z** | Structured Free Text (Header Data). |
| | **11Z - 99Z** | Structured Free Text (Line 1-89 Data). |
| | **100Z - 999Z** | Reserved for future assignment. |

# SECTION II
# GS1 APPLICATION IDENTIFIERS
# (AIs)

The AIs listed in Section II of this standard represent the assignments made through January 2015. Those wishing further information should contact the GS1 for the current list of AI assignments and relevant standards. Those requesting new AI assignments should use the GS1 Application Identifier Standard Request Form attached to this document.

**GS1 Application Identifiers as of 28 January 2015**

| AI | DATA TITLE | DATA CONTENT | FORMAT (*) | FNC1 REQUIRED (****) |
|---|---|---|---|---|
| 00 | SSCC | Serial Shipping Container Code | N2+N18 | |
| 01 | GTIN | Global Trade Item Number | N2+N14 | |
| 02 | CONTENT | GTIN of Contained Trade Items | N2+N14 | |
| 10 | BATCH/LOT | Batch or Lot Number | N2+X1...20 | ✓ |
| 11 (**) | PROD DATE | Production Date (YYMMDD) | N2+N6 | |
| 12 (**) | DUE DATE | Due Date (YYMMDD) | N2+N6 | |
| 13 (**) | PACK DATE | Packaging Date (YYMMDD) | N2+N6 | |
| 15 (**) | BEST BEFORE or BEST BY | Best Before Date (YYMMDD) | N2+N6 | |
| 16 (**) | SELL BY | Sell By Date (YYMMDD) | N2+N6 | |
| 17 (**) | USE BY OR EXPIRY | Expiration Date (YYMMDD) | N2+N6 | |
| 20 | VARIANT | Variant Number | N2+N2 | |
| 21 | SERIAL | Serial Number | N2+X1...20 | ✓ |
| 240 | ADDITIONAL ID | Additional Item Identification | N3+X1...30 | ✓ |
| 241 | CUST. PART NO. | Customer Part Number | N3+X1…30 | ✓ |
| 242 | MTO VARIANT | Made-to-Order Variation Number | N3+N1...6 | ✓ |
| 243 | PCN | Packaging Component Number | N3+X1...20 | ✓ |
| 250 | SECONDARY SERIAL | Secondary Serial Number | N3+X1...30 | ✓ |
| 251 | REF. TO SOURCE | Reference to Source Entity | N3+X1...30 | ✓ |
| 253 | GDTI | Global Document Type Identifier | N3+N13+X1...17 | ✓ |
| 254 | GLN EXTENSION COMPONENT | GLN Extension Component | N3+X1...20 | ✓ |
| 255 | GCN | Global Coupon Number | N3+N13+N1...12 | ✓ |
| 30 | VAR. COUNT | Count of Items (Variable Measure Trade Item) | N2+N1...8 | ✓ |
| 310 (***) | NET WEIGHT (kg) | Net weight, kilograms (Variable Measure Trade Item) | N4+N6 | |

| AI | DATA TITLE | DATA CONTENT | FORMAT (*) | FNC1 REQUIRED (****) |
|---|---|---|---|---|
| 311 (***) | LENGTH (m) | Length or first dimension, metres (Variable Measure Trade Item) | N4+N6 | |
| 312 (***) | WIDTH (m) | Width, diameter, or second dimension, metres (Variable Measure Trade Item) | N4+N6 | |
| 313 (***) | HEIGHT (m) | Depth, thickness, height, or third dimension, metres (Variable Measure Trade Item) | N4+N6 | |
| 314 (***) | AREA ($m^2$) | Area, square metres (Variable Measure Trade Item) | N4+N6 | |
| 315 (***) | NET VOLUME (l) | Net volume, litres (Variable Measure Trade Item) | N4+N6 | |
| 316 (***) | NET VOLUME ($m^3$) | Net volume, cubic metres (Variable Measure Trade Item) | N4+N6 | |
| 320 (***) | NET WEIGHT (lb) | Net weight, pounds (Variable Measure Trade Item) | N4+N6 | |
| 321 (***) | LENGTH (i) | Length or first dimension, inches (Variable Measure Trade Item) | N4+N6 | |
| 322 (***) | LENGTH (f) | Length or first dimension, feet (Variable Measure Trade Item) | N4+N6 | |
| 323 (***) | LENGTH (y) | Length or first dimension, yards (Variable Measure Trade Item) | N4+N6 | |
| 324 (***) | WIDTH (i) | Width, diameter, or second dimension, inches (Variable Measure Trade Item) | N4+N6 | |
| 325 (***) | WIDTH (f) | Width, diameter, or second dimension, feet (Variable Measure Trade Item) | N4+N6 | |
| 326 (***) | WIDTH (y) | Width, diameter, or second dimension, yards (Variable Measure Trade Item | N4+N6 | |
| 327 (***) | HEIGHT (i) | Depth, thickness, height, or third dimension, inches (Variable Measure Trade Item) | N4+N6 | |

| AI | DATA TITLE | DATA CONTENT | FORMAT (*) | FNC1 REQUIRED (****) |
|---|---|---|---|---|
| 328 (***) | HEIGHT (f) | Depth, thickness, height, or third dimension, feet (Variable Measure Trade Item) | N4+N6 | |
| 329 (***) | HEIGHT (y) | Depth, thickness, height, or third dimension, yards (Variable Measure Trade Item) | N4+N6 | |
| 330 (***) | GROSS WEIGHT (kg) | Logistic weight, kilograms | N4+N6 | |
| 331 (***) | LENGTH (m), log | Length or first dimension, metres | N4+N6 | |
| 332 (***) | WIDTH (m), log | Width, diameter, or second dimension, metres | N4+N6 | |
| 333 (***) | HEIGHT (m), log | Depth, thickness, height, or third dimension, metres | N4+N6 | |
| 334 (***) | AREA ($m^2$), log | Area, square metres | N4+N6 | |
| 335 (***) | VOLUME (l), log | Logistic volume, litres | N4+N6 | |
| 336 (***) | VOLUME ($m^3$), log | Logistic volume, cubic metres | N4+N6 | |
| 337 (***) | KG PER $m^2$ | Kilograms per square metre | N4+N6 | |
| 340 (***) | GROSS WEIGHT (lb) | Logistic weight, pounds | N4+N6 | |
| 341 (***) | LENGTH (i), log | Length or first dimension, inches | N4+N6 | |
| 342 (***) | LENGTH (f), log | Length or first dimension, feet | N4+N6 | |
| 343 (***) | LENGTH (y), log | Length or first dimension, yards | N4+N6 | |
| 344 (***) | WIDTH (i), log | Width, diameter, or second dimension, inches | N4+N6 | |
| 345 (***) | WIDTH (f), log | Width, diameter, or second dimension, feet | N4+N6 | |
| 346 (***) | WIDTH (y), log | Width, diameter, or second dimension, yard | N4+N6 | |
| 347 (***) | HEIGHT (i), log | Depth, thickness, height, or third dimension, inches | N4+N6 | |
| 348 (***) | HEIGHT (f), log | Depth, thickness, height, or third dimension, feet | N4+N6 | |

| AI | DATA TITLE | DATA CONTENT | FORMAT (*) | FNC1 REQUIRED (****) |
|---|---|---|---|---|
| 349 (***) | HEIGHT (y), log | Depth, thickness, height, or third dimension, yards | N4+N6 | |
| 350 (***) | AREA ($i^2$) | Area, square inches (Variable Measure Trade Item) | N4+N6 | |
| 351 (***) | AREA ($f^2$) | Area, square feet (Variable Measure Trade Item) | N4+N6 | |
| 352 (***) | AREA ($y^2$) | Area, square yards (Variable Measure Trade Item) | N4+N6 | |
| 353 (***) | AREA ($i^2$), log | Area, square inches | N4+N6 | |
| 354 (***) | AREA ($f^2$), log | Area, square feet | N4+N6 | |
| 355 (***) | AREA ($y^2$), log | Area, square yards | N4+N6 | |
| 356 (***) | NET WEIGHT (t) | Net weight, troy ounces (Variable Measure Trade Item) | N4+N6 | |
| 357 (***) | NET VOLUME (oz) | Net weight (or volume), ounces (Variable Measure Trade Item) | N4+N6 | |
| 360 (***) | NET VOLUME (q) | Net volume, quarts (Variable Measure Trade Item) | N4+N6 | |
| 361 (***) | NET VOLUME (g) | Net volume, gallons U.S. (Variable Measure Trade Item) | N4+N6 | |
| 362 (***) | VOLUME (q), log | Logistic volume, quarts | N4+N6 | |
| 363 (***) | VOLUME (g), log | Logistic volume, gallons U.S. | N4+N6 | |
| 364 (***) | VOLUME ($i^3$) | Net volume, cubic inches (Variable Measure Trade Item) | N4+N6 | |
| 365 (***) | VOLUME ($f^3$) | Net volume, cubic feet (Variable Measure Trade Item) | N4+N6 | |
| 366 (***) | VOLUME ($y^3$) | Net volume, cubic yards (Variable Measure Trade Item) | N4+N6 | |
| 367 (***) | VOLUME ($i^3$), log | Logistic volume, cubic inches | N4+N6 | |
| 368 (***) | VOLUME ($f^3$), log | Logistic volume, cubic feet | N4+N6 | |
| 369 (***) | VOLUME ($y^3$), log | Logistic volume, cubic yards | N4+N6 | |
| 37 | COUNT | Count of Trade Items | N2+N1...8 | ✓ |

| AI | DATA TITLE | DATA CONTENT | FORMAT (*) | FNC1 REQUIRED (****) |
|---|---|---|---|---|
| 390 (***) | AMOUNT | Applicable Amount Payable or Coupon Value, local currency | N4+N1…15 | ✓ |
| 391 (***) | AMOUNT | Applicable Amount Payable with ISO Currency Code | N4+N3+N1...15 | ✓ |
| 392 (***) | PRICE | Applicable Amount Payable, single monetary area (Variable Measure Trade Item) | N4+N1…15 | ✓ |
| 393 (***) | PRICE | Applicable Amount Payable with ISO Currency Code (Variable Measure Trade Item) | N4+N3+N1...15 | ✓ |
| 400 | ORDER NUMBER | Customer's Purchase Order Number | N3+X1...30 | ✓ |
| 401 | GINC | Global Identification Number for Consignment (GINC) | N3+X1...30 | ✓ |
| 402 | GSIN | Global Shipment Identification Number (GSIN) | N3+N17 | ✓ |
| 403 | ROUTE | Routing Code | N3+X1...30 | ✓ |
| 410 | SHIP TO LOC | Ship to - Deliver to Global Location Number | N3+N13 | ✓ |
| 411 | BILL TO | Bill to - Invoice to Global Location Number | N3+N13 | ✓ |
| 412 | PURCHASE FROM | Purchased from Global Location Number | N3+N13 | ✓ |
| 413 | SHIP FOR LOC | Ship for - Deliver for - Forward to Global Location Number | N3+N13 | ✓ |
| 414 | LOC No | Identification of a Physical Location - Global Location Number | N3+N13 | ✓ |
| 415 | PAY TO | Global Location Number of the Invoicing Party | N3+N13 | ✓ |
| 420 | SHIP TO POST | Ship to - Deliver to Postal Code Within a Single Postal Authority | N3+X1...20 | ✓ |
| 421 | SHIP TO POST | Ship to - Deliver to Postal Code with ISO Country Code | N3+N3+X1...9 | ✓ |
| 422 | ORIGIN | Country of Origin of a Trade Item | N3+N3 | ✓ |

| AI | DATA TITLE | DATA CONTENT | FORMAT (*) | FNC1 REQUIRED (****) |
|---|---|---|---|---|
| 423 | COUNTRY - INITIAL PROCESS. | Country of Initial Processing | N3+N3+N1…12 | ✓ |
| 424 | COUNTRY - PROCESS. | Country of Processing | N3+N3 | ✓ |
| 425 | COUNTRY - DISASSEMBLY | Country of Disassembly | N3+N3 | ✓ |
| 426 | COUNTRY – FULL PROCESS | Country Covering full Process Chain | N3+N3 | ✓ |
| 427 | ORIGIN SUBDIVISION | Country Subdivision of Origin | N3+X1...3 | ✓ |
| 7001 | NSN | NATO Stock Number (NSN) | N4+N13 | ✓ |
| 7002 | MEAT CUT | UN/ECE Meat Carcasses and Cuts Classification | N4+X1...30 | ✓ |
| 7003 | EXPIRY TIME | Expiration Date and Time | N4+N10 | ✓ |
| 7004 | ACTIVE POTENCY | Active Potency | N4+N1...4 | ✓ |
| 7005 | CATCH AREA | Catch Area | N4+X1...12 | ✓ |
| 7006 | FIRST FREEZE DATE | First Freeze Date | N4+N6 | ✓ |
| 7007 | HARVEST DATE | Harvest Date | N4+N6...12 | ✓ |
| 7008 | AQUATIC SPECIES | Species for Fishery Purposes | N4+X1...3 | ✓ |
| 7009 | FISHING GEAR TYPE | Fishing Gear Type | N4+N1...10 | ✓ |
| 7010 | PROD METHOD | Production Method | N4+X1...2 | ✓ |
| 703s | PROCESSOR # s | Number of Processor with ISO Country Code | N4+N3+X1...27 | ✓ |
| 710 | NHRN PZN | National Healthcare Reimbursement Number (NHRN) – Germany PZN | N3+X1...20 | ✓ |
| 711 | NHRN CIP | National Healthcare Reimbursement Number (NHRN) – France CIP | N3+X1...20 | ✓ |
| 712 | NHRN CN | National Healthcare Reimbursement Number (NHRN) – Spain CN | N3+X1...20 | ✓ |
| 713 | NHRN DRN | National Healthcare Reimbursement Number (NHRN) – Brasil DRN | N3+X1...20 | ✓ |

| AI | DATA TITLE | DATA CONTENT | FORMAT (*) | FNC1 REQUIRED (****) |
|---|---|---|---|---|
| nnn (*****) | NHRN xxx | National Healthcare Reimbursement Number (NHRN) – Country “A” NHRN | N3+X1...20 | ✓ |
| 8001 | DIMENSIONS | Roll Products (Width, Length, Core Diameter, Direction, Splices) | N4+N14 | ✓ |
| 8002 | CMT No | Cellular Mobile Telephone Identifier | N4+X1…20 | ✓ |
| 8003 | GRAI | Global Returnable Asset Identifier | N4+N14+X1...16 | ✓ |
| 8004 | GIAI | Global Individual Asset Identifier | N4+X1...30 | ✓ |
| 8005 | PRICE PER UNIT | Price Per Unit of Measure | N4+N6 | ✓ |
| 8006 | GCTIN | Identification of the Components of a Trade Item | N4+N14+N2+N2 | ✓ |
| 8007 | IBAN | International Bank Account Number | N4+X1...34 | ✓ |
| 8008 | PROD TIME | Date and Time of Production | N4+N8+N1...4 | ✓ |
| 8010 | CPID | Component / Part Identifier | N4 + X1...30 | ✓ |
| 8011 | CPID SERIAL | Component / Part Identifier Serial Number (CPID SERIAL) | N4 + N1...12 | ✓ |
| 8017 | GSRN - PROVIDER | Global Service Relation Number to identify the relationship between an organisation offering services and the provider of services | N4+N18 | ✓ |
| 8018 | GSRN - RECIPIENT | Global Service Relation Number to identify the relationship between an organisation offering services and the recipient of services | N4+N18 | ✓ |
| 8019 | SRIN | Service Relation Instance Number | N4+N1...10 | ✓ |
| 8020 | REF No | Payment Slip Reference Number | N4+X1...25 | ✓ |
| 8110 | - | Coupon Code Identification for Use in North America | N4+X1...70 | ✓ |
| 8200 | PRODUCT URL | Extended Packaging URL | N4+X1…70 | ✓ |

| AI | DATA TITLE | DATA CONTENT | FORMAT (*) | FNC1 REQUIRED (****) |
|---|---|---|---|---|
| 90 | INTERNAL | Information Mutually Agreed Between Trading Partners | N2+X1...30 | ✓ |
| 91 to 99 | INTERNAL | Company Internal Information | N2+X1...30 | ✓ |

NOTES:

(*): The first position indicates the length (number of digits) of the GS1 Application Identifier. The following value refers to the format of the data content. The following convention is applied:

- N numeric digit
- X any character in “Table 1”, below
- N3 3 numeric digits, fixed length
- N1...3 from one up to 3 numeric digits
- X1...3 from one up to 3 characters in “Table 1”, below

(**): If only year and month are available, DD must be filled with two zeroes.

(***): The fourth digit of this GS1 Application Identifier indicates the implied decimal point position.

Example:

- 3100 Net weight in kg without a decimal point
- 3102 Net weight in kg with two decimal points

(****): All GS1 Application Identifiers indicated with (FNC1) are defined as of variable length and shall be delimited unless this Element String is the last one to be encoded in the symbol. The delimiter shall be a Function 1 Symbol Character in GS1-128 Symbology, GS1 DataBar Expanded Versions and GS1 Composite Symbology and should be a Function 1 Symbol Character in GS1 DataMatrix and GS1 QR Code Symbology.

(*****) An example to illustrate future additional NHRNs. If additional NHRN AIs are required, a request for a new NHRN AI shall be made through the GS1 GSMP (See contact information below).

**********

To request a new GS1 Application Identifier, or a change to an existing one, you should contact your local GS1 Member Organization (MO) for more information. To locate the contact information on your local GS1 MO, please go to: http://www.gs1.org/contact

### The GS1 Subset of International Standard ISO/IEC 646

Table 1 lists all characters allowed for use in GS1 Application Identifier (AI) Element Strings with the exception of the Component and Parts Identifier. Table 1 corresponds to *ISO/IEC 646* Table 1. All other ISO 646 characters that are not listed here are not allowed in GS1 Application Identifier (AI) Element Strings. Table 2 lists all the characters allowed for use in the GS1 Application Identifier for Component and Parts Identifier.

*NOTE: Tables 1 and 2 can be found in the GS1 General Specification version 15, as Figures 7.11-1 and 7.11-2, respectively.*

**Table 1: GS1 AI Encodable Character Set 82**

| GRAPHIC SYMBOL | NAME | CODED REPRESENTATION | GRAPHIC SYMBOL | NAME | CODED REPRESENTATION |
|---|---|---|---|---|---|
| ! | Exclamation mark | 2/1 | M | Capital letter M | 4/13 |
| " | Quotation mark | 2/2 | N | Capital letter N | 4/14 |
| % | Percent sign | 2/5 | O | Capital letter O | 4/15 |
| & | Ampersand | 2/6 | P | Capital letter P | 5/0 |
| ' | Apostrophe | 2/7 | Q | Capital letter Q | 5/1 |
| ( | Left parenthesis | 2/8 | R | Capital letter R | 5/2 |
| ) | Right parenthesis | 2/9 | S | Capital letter S | 5/3 |
| * | Asterisk | 2/10 | T | Capital letter T | 5/4 |
| + | Plus sign | 2/11 | U | Capital letter U | 5/5 |
| , | Comma | 2/12 | V | Capital letter V | 5/6 |
| - | Hyphen/Minus | 2/13 | W | Capital letter W | 5/7 |
| . | Full stop | 2/14 | X | Capital letter X | 5/8 |
| / | Solidus | 2/15 | Y | Capital letter Y | 5/9 |
| 0 | Digit zero | 3/0 | Z | Capital letter Z | 5/10 |
| 1 | Digit one | 3/1 | _ | Low line | 5/15 |
| 2 | Digit two | 3/2 | a | Small letter a | 6/1 |

| GRAPHIC SYMBOL | NAME | CODED REPRESENTATION | GRAPHIC SYMBOL | NAME | CODED REPRESENTATION |
|---|---|---|---|---|---|
| 3 | Digit three | 3/3 | b | Small letter b | 6/2 |
| 4 | Digit four | 3/4 | c | Small letter c | 6/3 |
| 5 | Digit five | 3/5 | d | Small letter d | 6/4 |
| 6 | Digit six | 3/6 | e | Small letter e | 6/5 |
| 7 | Digit seven | 3/7 | f | Small letter f | 6/6 |
| 8 | Digit eight | 3/8 | g | Small letter g | 6/7 |
| 9 | Digit nine | 3/9 | h | Small letter h | 6/8 |
| : | Colon | 3/10 | i | Small letter i | 6/9 |
| ; | Semicolon | 3/11 | j | Small letter j | 6/10 |
| < | Less-than sign | 3/12 | k | Small letter k | 6/11 |
| = | Equals sign | 3/13 | l | Small letter l | 6/12 |
| > | Greater-than sign | 3/14 | m | Small letter m | 6/13 |
| ? | Question mark | 3/15 | n | Small letter n | 6/14 |
| A | Capital letter A | 4/1 | o | Small letter o | 6/15 |
| B | Capital letter B | 4/2 | p | Small letter p | 7/0 |
| C | Capital letter C | 4/3 | q | Small letter q | 7/1 |
| D | Capital letter D | 4/4 | r | Small letter r | 7/2 |
| E | Capital letter E | 4/5 | s | Small letter s | 7/3 |
| F | Capital letter F | 4/6 | t | Small letter t | 7/4 |
| G | Capital letter G | 4/7 | u | Small letter u | 7/5 |

| GRAPHIC SYMBOL | NAME | CODED REPRESENTATION | GRAPHIC SYMBOL | NAME | CODED REPRESENTATION |
|---|---|---|---|---|---|
| H | Capital letter H | 4/8 | v | Small letter v | 7/6 |
| I | Capital letter I | 4/9 | w | Small letter w | 7/7 |
| J | Capital letter J | 4/10 | x | Small letter x | 7/8 |
| K | Capital letter K | 4/11 | y | Small letter y | 7/9 |
| L | Capital letter L | 4/12 | z | Small letter z | 7/10 |

**Table 2: GS1 AI Encodable Character Set 39**

| GRAPHIC SYMBOL | NAME | CODED REPRESENTATION | GRAPHIC SYMBOL | NAME | CODED REPRESENTATION |
|---|---|---|---|---|---|
| # | Number Sign | 2/3 | H | Capital letter H | 4/8 |
| - | Hyphen/Minus | 2/13 | I | Capital letter I | 4/9 |
| / | Solidus | 2/15 | J | Capital letter J | 4/10 |
| 0 | Digit zero | 3/0 | K | Capital letter K | 4/11 |
| 1 | Digit one | 3/1 | L | Capital letter L | 4/12 |
| 2 | Digit two | 3/2 | M | Capital letter M | 4/13 |
| 3 | Digit three | 3/3 | N | Capital letter N | 4/14 |
| 4 | Digit four | 3/4 | O | Capital letter O | 4/15 |
| 5 | Digit five | 3/5 | P | Capital letter P | 5/0 |
| 6 | Digit six | 3/6 | Q | Capital letter Q | 5/1 |
| 7 | Digit seven | 3/7 | R | Capital letter R | 5/2 |
| 8 | Digit eight | 3/8 | S | Capital letter S | 5/3 |
| 9 | Digit nine | 3/9 | T | Capital letter T | 5/4 |
| A | Capital letter A | 4/1 | U | Capital letter U | 5/5 |
| B | Capital letter B | 4/2 | V | Capital letter V | 5/6 |
| C | Capital letter C | 4/3 | W | Capital letter W | 5/7 |
| D | Capital letter D | 4/4 | X | Capital letter X | 5/8 |
| E | Capital letter E | 4/5 | Y | Capital letter Y | 5/9 |
| F | Capital letter F | 4/6 | Z | Capital letter Z | 5/10 |
| G | Capital letter G | 4/7 | Intentionally left blank | | |

# SECTION III
# MAPPING
# ANS MH10.8.2 DIs & GS1 AIs

# DEFINED CATEGORIES

Editor's Note: The usage of the term "number" below is not intended to be restricted to numeric characters only, but to generically refer to a code structure which may contain numeric and/or alphabetic data. The following Application and Data Identifiers are assigned to the usages described. The usage of any alphabetic, numeric, or special character in a leading position (as a "Data Identifier") not defined herein is Reserved for future assignment by the body controlling these guidelines. Unless otherwise specified, leading zeroes (0s) are non-significant and not to be employed (e.g., 0A, 00A, 000A, 01A, 011A). References to other ANSI Standards are to the most current version of that standard.

**"n/e" means no equivalent.**

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| **CATEGORY 1: RESERVED** | | |
| **Reserved** | **A - 999A** | **n/e** |
| | | |
| **CATEGORY 2: CONTAINER INFORMATION** | | |
| Container Type (internally assigned or mutually defined) | **B** | **n/e** |
| Returnable container identification code assigned by the container owner or the appropriate regulatory agency (e.g., a metal tub, basket, reel, unit load device (ULD), trailer, tank, or intermodal container) (excludes gas cylinders *See "2B"*) | **1B** | **8003 or 8004** |
| Gas Cylinder Container Identification Code assigned by the manufacturer in conformance with U.S. Department of Transportation (D.O.T.) standards | **2B** | **n/e** |
| Motor Freight Transport Equipment Identification Code assigned by the manufacturer in conformance with International Organization for Standardization (ISO) standards | **3B** | **n/e** |
| Standard Carrier Alpha Code (SCAC) (an4 - dash "-" filled left) and carrier assigned trailer number | **4B** | **n/e** |
| Receptacle Asset Number – Consisting of two joined parts:<br>• Identification of an organization in accordance with ISO/IEC 15459 and a unique entity identification assigned in accordance with rules established by the issuing agency<br>• A unique serial number assigned by the entity, ending with a 3-character container type code taken from EDIFACT Code List 8053 or UPU standard M82-3. (If the container type code listed is less than three characters in length, the field will be dash "-" filled left to the length of three characters) | **5B** | **8003** |
| Reserved | **6B** | **n/e** |
| Container serial number | **7B** | **n/e** |
| Identification of a returnable container owner assigned in cooperation with BIC | **8B** | **n/e** |
| Container size/type code | **9B** | **n/e** |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| Container Ownership Code. Actual four-character abbreviation marked on the container by the owner. For DOD owned containers see Defense Transportation Regulation App EE-6 | **10B** | **n/e** |
| Van Number (complete number minus check digit) | **11B** | **n/e** |
| Check digit of Van Number identified in 11B | **12B** | **n/e** |
| Container Number Code (last 5 digits of number not counting check digit) | **13B** | **n/e** |
| Tag status | **14B** | **n/e** |
| Dangerous cargo class IMDG | **15B** | **n/e** |
| UN Code for Dangerous Goods | **16B** | **n/e** |
| Name of transportation subject | **17B** | **n/e** |
| Vessel registration number | **18B** | **n/e** |
| Voyage number/Trip number | **19B** | **n/e** |
| Vessel Country | **20B** | **n/e** |
| Seal Numbers | **21B** | **n/e** |
| Entry Number/Type | **22B** | **n/e** |
| Number Surety Number | **23B** | **n/e** |
| Foreign Port of Lading | **24B** | **n/e** |
| Identification of a party to a transaction as identified in 18V, followed by the supplier assigned serial number to a returnable transport item (RTI) | **25B** | **8003** |
| Unique RTI Identifier (format: IAC CIN RTIN + RTISN) | **26B** | **n/e** |
| Reserved | **27B – 54B** | **n/e** |
| Global Unique Returnable Packaging Item (RPI) as defined in ISO 17364 | **55B** | **n/e** |
| Reserved for future assignment | **56B – 999B** | **n/e** |
| | | |
| **CATEGORY 3: FIELD CONTINUATION** | | |
| Continuation of an Item Code (Category 16) assigned by Customer that is too long for a required field size | **C** | **n/e** |
| Continuation of Traceability Code (Category 20) assigned by Supplier | **1C** | **n/e** |
| Continuation of Serial Number (Category 19) assigned by Supplier | **2C** | **n/e** |
| Continuation of Free Text (Category 26) mutually defined between Supplier/Carrier/Customer | **3C** | **n/e** |
| Continuation of Transaction Reference (Category 11) mutually defined between Supplier/Carrier/Customer | **4C** | **n/e** |
| Continuation of Item Code (Category 16) Assigned by Supplier | **5C** | **n/e** |
| Reserved – Prior Assignment (2009) – To be re-released upon publication of AIM IUIDC-1, currently on hold. | **6C** | **n/e** |
| Reserved for future assignment | **7C - 999C** | **n/e** |
| | | |
| **CATEGORY 4: DATE** | | |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| Format YYMMDD[Note 5] | **D** | **n/e** |
| Format DDMMYY[Note 5] | **1D** | **n/e** |
| Format MMDDYY[Note 5] | **2D** | **n/e** |
| Format YDDD (Julian )[Note 5] | **3D** | **n/e** |
| Format YYDDD (Julian )[Note 5] | **4D** | **n/e** |
| ISO format YYMMDD immediately followed by an ANSI X12.3 Data Element Number 374 Qualifier providing a code specifying type of date (e.g., ship date, manufacture date) | **5D** | **n/e** |
| Production Date (YYMMDD) | **5D…405** | **11** |
| Expiration Date (YYMMDD) | **5D…036** | **17** |
| Packaging Date (YYMMDD) | **n/e** | **13** |
| Best Before/Sell By Date (YYMMDD) | **n/e** | **15** |
| ISO format YYYYMMDD immediately followed by an ANSI X12.3 Data Element Number 374 Qualifier providing a code specifying type of date (e.g., ship date, manufacture date) | **6D** | |
| Format MMYY[Note 5] | **7D** | **n/e** |
| Event, date, and time<br>ISO format YYYYMMDDHHMM (24 hour clock - UTC) immediately followed by a UN/EDIFACT Code Qualifier 2005 providing a code specifying type of date) | **8D** | **n/e** |
| Date (structure and significance mutually defined) | **9D** | **n/e** |
| Format YYWW[Note 5] | **10D** | **n/e** |
| Format YYYYWW[Note 5] | **11D** | **n/e** |
| Format YYYYMMDD[Note 5] | **12D** | **n/e** |
| Oldest and Newest Manufacturing Date in the format YYWWYYWW | **13D** | **n/e** |
| Expiration Date (YYYYMMDD) | **14D** | **n/e** |
| Expiration Date (DDMMYYYY) | **15D** | **n/e** |
| Production Date (YYYYMMDD) | **16D** | **n/e** |
| Production Date (DDMMYYYY) | **17D** | **n/e** |
| Date and Time of Production (YYMMMDDHHSS) | **n/e** | **8008** |
| Tag activation time | **18D** | **n/e** |
| Tag deactivation time | **19D** | **n/e** |
| Inspection Date (DDMMMYYYY) | **20D** | **n/e** |
| Required Delivery Date (DDD Julian) or DOD MILSTAMP Code | **21D** | **n/e** |
| Record time | **22D** | **n/e** |
| Date represented in modified UTC compliant form | **23D** | **n/e** |
| Qualified date | **24D** | **n/e** |
| Best before date | **25D** | **15** |
| First freeze date | **26D** | **7006** |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| Harvest date | **27D** | **7007** |
| Harvest date range | **28D** | **7007** |
| Expiration Date and Time (YYMMDDHHMM) | **n/e** | **7003** |
| Reserved for future assignment | **29D – 999D** | **n/e** |
| | | |
| **CATEGORY 5: ENVIRONMENTAL FACTORS** | | |
| Restricted Substance Classification – "Environmental Classification Code" including Lead-Free (Pb-Free) finish categories defined in JESD97 (IPC JEDEC J-STD-609), and future Industry or governmental agency assigned codes related to environmental regulatory compliance and hazardous material content | **E** | **n/e** |
| Air pressure – (altitude) expressed in Pascal's as the standard international measure | **1E** | **n/e** |
| Maximum Allowed Temperature | **2E** | **n/e** |
| Minimum Allowed Temperature | **3E** | **n/e** |
| Maximum Allowed Relative Humidity | **4E** | **n/e** |
| Minimum Allowed Relative Humidity | **5E** | **n/e** |
| Refrigerator container temperature | **6E** | **n/e** |
| Reserved | **7E – 9E** | **n/e** |
| Cumulative Time Temperature index – expressed as the number of measurements or counts | **10E** | **n/e** |
| Time Temperature Index – Next Higher Assembly – expressed as the number of measurements or counts | **11E** | **n/e** |
| Declaration of packaging material category*, type* and weight for a given packaging material used in a given packaging according to the EU packaging and packaging waste directive. (Material category and code defined in Annex M) | **12E** | **n/e** |
| Reserved for future assignment | **13E – 999E** | **n/e** |
| | | |
| **CATEGORY 6: LOOPING** | | |
| Looping Header as defined as Section VI of this document | **F** | **n/e** |
| My "parent" is . . . (for use with returnable packaging – See Annex L). This Data Identifier must immediately follow the field (constructed of a Data Identifier, data and a group separator) with which it is associated. | **1F** | **n/e** |
| Reserved (prior use) | **2F** | **n/e** |
| I have _____ children . . . (for use with returnable packaging, e.g., 3F10 for ten children – See Annex L). This Data Identifier must immediately follow the field (constructed of a Data Identifier, data and a group separator) with which it is associated | **3F** | **n/e** |
| Logical assignment of a page of information within a group of pages that are spread across several data carriers, structured as a sequence of up to three (3) concatenated data elements, separated by a slash ( / ) | **4F** | **n/e** |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| I have _____ children and they are . . . (for use with returnable packaging – See Annex L) This Data Identifier must immediately follow the field (constructed of a Data Identifier, data and a group separator) with which it is associated | **5F** | **n/e** |
| Reserved for future assignment | **6F – 999F** | |
| | | |
| **CATEGORY 7: RESERVED** | | |
| Reserved | **G - 999G** | |
| | | |
| **CATEGORY 8: HUMAN RESOURCES** | | |
| Name of a party followed by a plus (+) character followed by one or more code values from EDIFACT Code List 3035 “Party Qualifier” | **H** | **n/e** |
| Employee Identification Code assigned by employer | **1H** | **n/e** |
| U.S. Social Security Number | **2H** | **n/e** |
| ID Number for non-employee (internally assigned or mutually defined) (e.g., contract workers, vendors, service, and delivery personnel) | **3H** | **n/e** |
| National Social Security Number | **4H** | **n/e** |
| Last Name | **5H** | **n/e** |
| Party Name (Line 2) | **6H** | **n/e** |
| Contact Phone (Country Code, Area Code, Exchange, number [XX YYY ZZZ ZZZZ]) | **7H** | **n/e** |
| Contact Email | **8H** | **n/e** |
| Consignee Number - The unique identifying number can be the IRS, EIN, SSN, or the CBP assigned number | **9H** | **n/e** |
| Personal Identification Code (first initial, Last initial, last four of SSN) | **10H** | **n/e** |
| First name and middle initial | **11H** | **n/e** |
| Military Grade (E1-E9, W1-W5, and O1-O10) | **12H** | **n/e** |
| Reserved | **13H – 14H** | **n/e** |
| A national identification number, national identity number, or national insurance number used as a means of identifying individuals within a country | **15H** | **n/e** |
| Reserved | **16H – 24H** | **n/e** |
| Globally Unique Personal ID | **25H** | **n/e** |
| Reserved for future assignment | **26H – 999H** | **n/e** |
| | | |
| **CATEGORY 9: RESERVED** | | |
| Exclusive Assignment - Vehicle Identification Number (VIN) as defined in the U.S. under 49 CFR, §§ 565 and internationally by ISO 3779. (These are completely compatible data structures) | **I** | **n/e** |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| Reserved | **1I** | **n/e** |
| Abbreviated VIN Code | **2I** | **n/e** |
| Reserved – Prior assignment | **3I** | **n/e** |
| Reserved - Not recommended for use due to similarity of "1" to "I" | **4I - 999I** | **n/e** |
| | | |
| **CATEGORY 10: LICENSE PLATE** | | |
| Unique license plate number* | **J** | **00** |
| Unique license plate number* assigned to a transport unit which is the lowest level of packaging, the unbreakable unit | **1J** | **00** |
| Unique license plate number* assigned to a transport unit which contains multiple packages | **2J** | **00** |
| Unique license plate number* assigned to a transport unit which is the lowest level of packaging, the unbreakable unit and which has EDI data associated with the unit | **3J** | **00** |
| Unique license plate number* assigned to a transport unit which contains multiple packages and which is associated with EDI data | **4J** | **00** |
| Unique license plate number* assigned to a mixed transport unit containing unlike items on a single customer transaction and may or may not have associated EDI data. | **5J** | **n/e** |
| Unique license plate number* assigned to a master transport unit containing like items on a single customer transaction and may or may not have associated EDI data. | **6J** | **n/e** |
| Vehicle Registration License Plate Number (not unique without identification of country and issuing governmental region/authority) | **7J** | **n/e** |
| Maritime Mobile Service Identity (MMSI) | **8J** | **n/e** |
| Reserved for future assignment | **9J– 999J** | **n/e** |
| ***Note: For a license plate number to be unique world-wide requires: 1) A unique number assigned by the trading partner, 2) A unique code assigned to the trading partner by an organization, and 3) A unique code providing global identification of the assigning organization. ISO/IEC 15459-1:1999 describes the format and usage of these Data Identifiers.*** | | |
| | | |
| **CATEGORY 11: TRANSACTION REFERENCE USED IN TRADING RELATIONSHIPS** | | |
| Order number assigned by Customer to identify a Purchasing Transaction (e.g., purchase order number) | **K** | **400** |
| Order number assigned by Supplier to identify a Purchasing Transaction | **1K** | **n/e** |
| Bill of Lading/Waybill/Shipment Identification Code assigned by Supplier/Shipper | **2K** | **402** |
| Bill of Lading/Waybill/Shipment Identification Code assigned by Carrier | **3K** | **n/e** |
| Line number of the order assigned by Customer to identify a Purchasing Transaction (See Annex C.9) | **4K** | **400** |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| Reference number assigned by the Customer to identify a Shipment Authorization (Release) against an established Purchase Order | **5K** | **400** |
| PRO# Assigned by Carrier | **6K** | **n/e** |
| Carrier Mode in Free Text format mutually defined between Customer and Supplier (e.g., Air, Truck, Boat, Rail) | **7K** | **n/e** |
| Contract Number | **8K** | **n/e** |
| Generic Transaction Reference Code (internally assigned or mutually defined) | **9K** | **n/e** |
| Invoice Number | **10K** | **n/e** |
| Packing List Number | **11K** | **n/e** |
| SCAC (Standard Carrier Alpha Code) (an4 - dash "-" filled left) and carrier assigned PROgressive number | **12K** | **95 or 96** |
| Bill of lading number /transport receipt number<br>SCAC + Container cargo's B/L number or waybill number | **13K** | **n/e** |
| Combined Order Number and Line Number in the format nn...nn+nn...n where a plus (+) symbol is used as a delimiter between the Order Number and Line Number | **14K** | **400** |
| KANBAN Number | **15K** | **n/e** |
| DELINS Number: code assigned to identify a document which contains delivery information | **16K** | **n/e** |
| Check Number | **17K** | **n/e** |
| Structured Reference (See Annex C.10) | **18K** | **n/e** |
| Foreign Military Sales Case Number | **19K** | **n/e** |
| License identifier | **20K** | **n/e** |
| Customer data related to item or transaction | **21K** | **n/e** |
| Transaction authentication | **22K** | **n/e** |
| Reserved | **23K – 24K** | **n/e** |
| Carrier assigned unique identification of groupings of transport units | **25K** | **n/e** |
| Shipper assigned unique identification of groupings of transport units | **26K** | **n/e** |
| Supplier Assigned Quotation Number – Number assigned to a quotation by the supplier in response to a request for quote from the customer | **27K** | **n/e** |
| Reserved for future assignment | **28K – 999K** | **n/e** |
| | | |
| **CATEGORY 12: LOCATION REFERENCE** | | |
| Storage Location | **L** | **n/e** |
| Location | **1L** | **n/e** |
| "Ship To:" Location code defined by an industry standard or mutually defined | **2L** | **410** |
| "Ship From:" Location code defined by an industry standard or mutually defined | **3L** | **n/e** |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| GLN Extension component | **n/e** | **254** |
| "Bill To" (Invoice To) - GS1 Global Location Number | **n/e** | **411** |
| "Purchased From" - GS1 Global Location Number | **n/e** | **412** |
| Country of Origin, two-character ISO 3166 country code | **4L** | **422** |
| "Ship For:" Location code defined by an industry standard or mutually defined | **5L** | **413** |
| Route Code assigned by the supplier to designate a specific transportation path | **6L** | **403** |
| 6-digit Department of Defense Activity Code (DoDAAC) | **7L** | **n/e** |
| Port of Embarkation – Mutually defined | **8L** | **n/e** |
| Port of Debarkation – Mutually defined | **9L** | **n/e** |
| Country of Initial Processing | **n/e** | **423** |
| Country of Processing | **n/e** | **424** |
| Country of Disassembly | **n/e** | **425** |
| Country covering full process chain | **n/e** | **426** |
| Reserved | **10L** | **n/e** |
| Location (Latitude/Longitude/Altitude) | **11L** | **n/e** |
| "Ship To:" Location (Latitude/Longitude/Altitude) | **12L** | **n/e** |
| "Ship From:" Location (Latitude/Longitude/Altitude) | **13L** | **n/e** |
| Reserved | **14L** | **n/e** |
| "Ship For:" Location (Latitude/Longitude/Altitude) | **15L** | **n/e** |
| Tag activation location | **16L** | **n/e** |
| Tag deactivation location | **17L** | **n/e** |
| Catch area | **18L** | **7005** |
| Reserved | **19L– 19L** | **n/e** |
| ***The following DIs can be used to provide for Location identification, which is different than or in addition to Location Reference provided by "L".*** | | |
| First Level (internally assigned) | **20L** | **n/e** |
| Second Level (internally assigned) | **21L** | **n/e** |
| Third Level (internally assigned | **22L** | **n/e** |
| Fourth Level (internally assigned) | **23L** | **n/e** |
| Fifth Level (internally assigned) | **24L** | **n/e** |
| Identification of a party to a transaction assigned in accordance with ISO/IEC 15459 (IAC, CIN), followed by an internal physical location of and assigned by the party identified in 18V, e.g., 25L IAC CIN LOC, where the IAC is the issuing agency code assigned by the ISO 15459-2 Registration Authority, the CIN is the company identification code assigned by the IAC, and the LOC is the physical internal location assigned by the CIN. | **25L** | **414** |
| Location code to a related transaction | **26L** | **n/e** |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| Event location UN/LOCODE | **27L** | **n/e** |
| Number and Street Address | **28L** | **n/e** |
| City Name | **29L** | **n/e** |
| Country Sub-entity Details | **30L** | **n/e** |
| Postal Code | **31L** | **n/e** |
| Country Code - ISO 3166-1 Alpha 2 Code | **32L** | **n/e** |
| Uniform Resource Locator (URL).<br>Includes all characters that form a URL, including header data such as e.g., http://. Character set as listed in RFC 1738. | **33L** | **8200** |
| Pointer to Process URL (P2P URL) | **34L** | **n/e** |
| Vessel ID / Farm ID | **35L** | **7030** |
| Producer ID / Farm ID | **36L** | **7031** |
| Reserved | **37L– 50L** | **n/e** |
| ***The following two Data Identifiers are to be used for shipments within the jurisdiction of a single postal authority.*** | | |
| "Ship From:" - Location code defined by a postal authority (e.g., 5-digit and 9-digit ZIP codes identifying U.S. locations or 6-character postal codes identifying Canadian locations) | **51L** | **n/e** |
| "Ship To:" - Location code defined by a postal authority (e.g., 5-digit and 9-digit ZIP codes identifying U.S. locations or 6-character postal codes identifying Canadian locations) | **52L** | **420** |
| Reserved | **53L** | **n/e** |
| ***The following two Data Identifiers are to be used for shipments between locations governed by different postal authorities*** | | |
| "Ship From:" - Location code defined by a postal authority in the format: postal codes (e.g., 5-digit ZIP codes identifying U.S. locations or 6- or 7-character postal codes identifying United Kingdom locations) followed by two character ISO 3166 country code (e.g., US or GB) | **54L** | **n/e** |
| "Ship To:" - Location code defined by a postal authority in the format: postal codes (e.g., 5-digit ZIP codes identifying U.S. locations or 6- or 7-character postal codes identifying United Kingdom locations) followed by two character ISO 3166 country code (e.g., US or GB) | **55L** | **n/e** |
| Ship To (Deliver To) Postal Code With 3-digit ISO Country Code Prefix | **n/e** | **421** |
| Reserved for future assignment | **56L - 999L** | **n/e** |
| | | |
| **CATEGORY 13: MAINTENANCE CODES** | | |
| Reserved | **M** | **n/e** |
| Reserved | **1M – 9M** | **n/e** |
| Army form 2410 data. Format is data value preceded by the block number of the form 2410. Field lengths and acceptable characters can be found at http://www.apd.army.mil/pdffiles/p738_751.pdf | **10M** | **n/e** |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| Army form 2408 data. Format is data value preceded by the block number of the form 2408. field lengths and acceptable characters can be found at http://www.apd.army.mil/pdffiles/p738_751.pdf | **11M** | **n/e** |
| Army form 2407 data. Format is data value preceded by the block number of the form 2407. field lengths and acceptable characters can be found at http://www.apd.army.mil/pdffiles/p738_751.pdf | **12M** | **n/e** |
| Air Force Form 95 data. Format is data value preceded by the block number of the form 95. Field lengths and acceptable characters can be found at http://www.gsa.gov/portal/forms/download/116418 | **13M** | **n/e** |
| Navy Form 4790 data. Format is data value preceded by the block number of the form (OPNAV 4790/60) 2410. Field lengths and acceptable character can be found at http://www.navair.navy.mil/logistics/4790/library/Chapter%2015.pdf | **14M** | **n/e** |
| Reserved for future assignment | **15M – 999M** | **n/e** |
| | | |
| **CATEGORY 14: INDUSTRY ASSIGNED CODES** | | |
| National/NATO Stock Number (NSN) | **N** | **7001** |
| Product Characteristic Data defined by the Chemical Industry Data Exchange (CIDX) | **1N** | **n/e** |
| Reserved | **2N** | **n/e** |
| Coding Structure in Accordance with Format Defined by Electronic Industries Association Japan (EIAJ) | **3N** | **n/e** |
| Coding Structure and Formats in Accordance with GS1 Application Identifiers (AI plus data) (GS1) | **4N** | **n/e** |
| Coding Structure and Formats in Accordance with AIAG Recommendations. The full code list can be found at list http://www.mhi/standards - see under “MH10 Data Identifiers (Continuous Maintenance Version)” | **5N** | **n/e** |
| U.S. DOD Requisition and Issue Procedure Codes. The format is the MILSTRIP code the appropriate followed by the data value associated with that code. (The full list of codes is available at http://www2.dla.mil/j-6/dlmso/elibrary/Manuals/DLM/MILSTRIP/MILSTRIP.pdf | **6N** | **n/e** |
| U.S. Defense Transportation Regulation codes. The format is the DTR code followed by the appropriate data value associated with that code. (The full list of codes is available at http://www.transcom.mil/dtr/part-ii/dtr_part_ii_toc.pdf) | **7N** | **n/e** |
| Production Animal Identification Codes. The format is the production animal code followed by the appropriate data value associated with that code. The Technical Report and the full list of Extended Data Elements (codes) is maintained at;<br>http://www.aimglobal.org/store/view_product.asp?id=4926441 Extended Data Elements (Codes)<br>http://www.aimglobal.org/store/view_product.asp?id=4926483 Technical Report | **8N** | **n/e** |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| Pharmacy Product Number maintained by IFA (www.ifaffm.de) and structured as follows: Two-digit product registration agency code followed by the registered product number (assigned by product registration agencies) and two PPN check digits. | **9N** | **n/e** |
| Reserved for future assignment | **10N – 999N** | **n/e** |
| UN/ECE Meat Carcasses and Cuts Classification | **n/e** | **7002** |
| Approval number of processor with ISO country code | **n/e** | **703(s)** |
| | | |
| **CATEGORY 15: RESERVED** | | |
| Not recommended for use due to similarity of "0" (zero) to "O" | **O - 999O** | **n/e** |
| | | |
| **CATEGORY 16: ITEM INFORMATION** | | |
| Item Identification Code assigned by Customer | **P** | **241** |
| Item Identification Code assigned by Supplier | **1P** | **01** |
| Code assigned to specify the revision level for an Item (e.g., engineering change level, edition, or revision) | **2P** | **n/e** |
| Combined manufacturer identification code/item code under the 12/13-digit GS1 formats, plus supplemental codes, if any | **3P** | **GS1 GTIN** |
| Roll products - Width, Length, Core Diameter, Direction, & Splices | **n/e** | **8001** |
| Item Code portion of GS1 formats | **4P** | **n/e** |
| Freight Classification Item Number assigned by Carrier for purposes of rating hazardous materials (e.g., Motor Freight, Air, Boat, Rail Classification) | **5P** | **n/e** |
| Combined supplier identification and item code (internally assigned or mutually defined) | **6P** | **n/e** |
| Common Language Equipment Identification (CLEI) assigned by the manufacturer to some telecommunications equipment | **7P** | **n/e** |
| 14-digit GS1 format for SCC-14 code structure | **8P** | **01** |
| Combined manufacturer identification code (9-digit DUNS number assigned by Dun & Bradstreet) and the item code/part number (assigned by the manufacturer). | **9P** | **n/e** |
| Hazardous Material Code as defined by ANSI X12.3 in the format Data Element 208 (1-character code qualifier) followed by Data Element 209 (Hazardous Material Code) | **10P** | **n/e** |
| 10-character CLEI Code for telecommunications equipment | **11P** | **n/e** |
| Document Type (e.g., Pick List, Design Drawing, etc.) (internally assigned or mutually defined) | **12P** | **n/e** |
| VMRS System Code | **13P** | **n/e** |
| VMRS System and Assembly Code | **14P** | **n/e** |
| VMRS System, Assembly, & Part Code | **15P** | **n/e** |
| VMRS System, Assembly, or Part Code (User Modified | **16P** | **n/e** |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| Combined GS1 supplier identification and item code assigned by the supplier | **17P** | **01** |
| Combined VMRS supplier ID and supplier assigned part number | **18P** | **n/e** |
| Component of an Item (One product contained in multiple packages) | **19P** | **8006** |
| Product Variant | **n/e** | **20** |
| HIBCC - Quantity, Date, Batch, and Link | **n/e** | **22** |
| Made-to-Order Variation Number | **n/e** | **242** |
| ***The following five DIs can be used to provide for Item identification (Item ID), which is different than or in addition to Item ID provided by "P".*** | | |
| First Level (Customer Assigned) | **20P** | **n/e** |
| Second Level (Customer Assigned) | **21P** | **n/e** |
| Third Level (Customer Assigned) | **22P** | **n/e** |
| Fourth Level (Customer Assigned) | **23P** | **n/e** |
| Fifth Level (Customer Assigned) | **24P** | **n/e** |
| Identification of a party to a transaction as identified in 18V, followed by the supplier assigned part number. | **25P** | **n/e** |
| Part Number of next higher assembly | **26P** | **n/e** |
| Commodity HTS-6 Code | **27P** | **n/e** |
| Cargo name | **28P** | **n/e** |
| Product classification code as defined with the GMDN (Global Medical Device Nomenclature - http://www.gmdnagency.org) | **29P** | **n/e** |
| ***The following five DIs can be used to provide for Item identification (Item ID), which is different than or in addition to Item ID provided by "1P".*** | | |
| First Level (Supplier Assigned) | **30P** | **240** |
| Second Level (Supplier Assigned) | **31P** | **n/e** |
| Third Level (Supplier Assigned) | **32P** | **n/e** |
| Fourth Level (Supplier Assigned) | **33P** | **n/e** |
| Fifth Level (Supplier Assigned) | **34P** | **n/e** |
| Reserved | **35P – 39P** | **n/e** |
| A code assigned by a customer to the identification number of the manufacturer's Material Safety Data Sheet (MSDS) document that describes the uses, hazards, and chemical composition of a hazardous material. | **40P** | **n/e** |
| Reserved | **41P – 48P** | **n/e** |
| Export controlled item. Subject to export control and or restrictions as identified in the Wassenaar Arrangement.<br>DI followed by the Alpha-2 ISO 3166 Country Code of the country that imposed the restriction followed by Wassenaar Code (http://www.wassenaar.org/controllists/index.html) | **49P** | **n/e** |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| Manufacturer-assigned item identifier - Manufacturer-assigned item identifier comprising an item number assigned by the item manufacturer, followed by a plus (+) sign, followed - if required to uniquely identify the item within the manufacturer's product range - by a manufacturer-assigned item version. | **50P** | **n/e** |
| Globally unique item identifier comprising the Identification of a party to a transaction as identified in 18V, followed by a plus (+) sign, followed by the Manufacturer-assigned item identifier as defined with 50P | **51P** | **n/e** |
| Reserved for future assignment | **52P - 999P** | **n/e** |
| | | |
| **CATEGORY 17: MEASUREMENT** | | |
| Quantity, Number of Pieces, or Amount (numeric only) (unit of measure and significance mutually defined | **Q** | **30** |
| Theoretical Length/Weight (numeric only) | **1Q** | **n/e** |
| Actual Weight (numeric only) | **2Q** | **n/e** |
| Unit of Measure, as defined by the two character ANSI X12.3 Data Element Number 355 Unit of Measurement Code | **3Q** | **n/e** |
| Gross Amount | **4Q** | **n/e** |
| Net Amount | **5Q** | **n/e** |
| Reserved | **6Q** | **n/e** |
| Quantity, Amount, or Number of Pieces in the format: Quantity followed by the two character ANSI X12.3 Data Element Number 355 Unit of Measurement Code | **7Q** | ↓↓↓↓ |
| Net Weight, Kilograms | **7Q...58** | **310** |
| Length or 1st Dimension, Meters | **7Q...MR** | **311 or 331** |
| Width, Diameter, or 2nd Dimension, Meters | **7Q...MR** | **312 or 332** |
| Depth, Height, or Thickness or 3rd Dimension, Meters | **7Q...MR** | **313 or 333** |
| Area, Square Meters | **7Q...SM** | **314 or 334** |
| Volume, Liters | **7Q...LT** | **315 or 335** |
| Volume, Cubic Meters (Net) | **7Q...CO** | **316** |
| Volume, Cubic Meters (Gross) | **7Q...CR** | **336** |
| Net Weight, Pounds | **7Q...PN** | **320** |
| Length or 1st Dimension, Inches | **7Q...ED** | **321 or 341** |
| Length or 1st Dimension, Feet | **7Q...EZ** | **322 or 342** |
| Length or 1st Dimension, Yards | **7Q...YD** | **323** |
| Length or 1st Dimension, Yards (Gross) | **7Q...GY** | **343** |
| Width, Diameter, or 2nd Dimension, Inches | **7Q...ED** | **324 or 344** |
| Width, Diameter, or 2nd Dimension, Feet | **7Q...EZ** | **325 or 345** |
| Width, Diameter, or 2nd Dimension, Yards | **7Q...YD** | **326** |
| Width, Diameter, or 2nd Dimension, Yards (Gross) | **7Q...GY** | **346** |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| Depth, Thickness, Height or 3rd Dimension, Inches | **7Q...ED** | **327 or 347** |
| Depth, Thickness, Height or 3rd Dimension, Feet | **7Q...EZ** | **328 or 348** |
| Depth, Thickness, Height or 3rd Dimension, Yards | **7Q...YD** | **329** |
| Depth, Thickness, Height or 3rd Dimension, Yards | **7Q...GY** | **349** |
| Gross Weight, Kilograms | **7Q...GT** | **330** |
| Kilograms per Square Meter | **7Q...KM** | **337** |
| Gross Weight, Pounds | **7Q...PG** | **340** |
| Area, Square Inches | **7Q...SI** | **350 or 353** |
| Area, Square Feet | **7Q...SF** | **351 or 354** |
| Area, Square Yards | **7Q...SY** | **352 or 355** |
| Net Weight, Troy Ounces | **7Q...TO** | **356** |
| Net Weight, Ounces | **7Q...OZ** | **357** |
| Volume, Quarts | **7Q...QT** | **360 or 362** |
| Volume, Gallons | **7Q...GA** | **361** |
| Volume, Gallons (Gross) | **7Q...GN** | **363** |
| Volume, Cubic Inches | **7Q...CI** | **364 or 367** |
| Volume, Cubic Feet | **7Q...CF** | **365 or 368** |
| Volume, Cubic Yards | **7Q...CY** | **366 or 369** |
| Container rated weight. Unit of measure is kg | **8Q** | **n/e** |
| Piece Weight: weight of a single item | **9Q** | **n/e** |
| Reserved | **10Q** | **n/e** |
| Tare Weight: weight of an empty container<br>Container body weight. Unit of measure is kg. (Tare weight) | **11Q** | **n/e** |
| Monetary Value/ Entry Value established by the Supplier in the format of: the value followed by an ISO 4217 data element code for representing unit of value of currencies and funds (e.g., 12Q2.50USD) (2.50 Monetary Value in USA Dollars) significance mutually defined | **12Q** | **n/e** |
| # of # ("this is the *nth* piece of *x* pieces in this shipment") Presented in the format "*n/x*", where the "/" (slash) is used as a delimiter between two values. See Annex C.6.3 for further information | **13Q** | **n/e** |
| Beginning Secondary Quantity | **14Q** | **n/e** |
| Ending Secondary Quantity | **15Q** | **n/e** |
| Number of pieces in Van | **16Q** | **n/e** |
| Number of shipments in van | **17Q** | **n/e** |
| Cube expressed in cubic meters or cubic feet as indicated by the ANSI X12.3 data element number 355 unit of measure code (CR or CF). No implied decimal point. | **18Q** | **n/e** |
| Width expressed in linear meters or linear feet as indicated by the ANSI X12.3 data element number 355 unit of measure (LC or LF). No implied decimal point. | **19Q** | **n/e** |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| Height expressed in linear meters or linear feet as indicated by the ANSI X12.3 data element number 355 unit of measure (LC or LF). No implied decimal point. | **20Q** | **n/e** |
| Length expressed in linear meters or linear feet as indicated by the ANSI X12.3 data element number 355 unit of measure (LC or LF). No implied decimal point. | **21Q** | **n/e** |
| Net weight of shipment expressed in pounds or kilograms (kilos) as indicated by the ANSI X12.3 data element number 355 unit of measure (LB or KG). No implied decimal point. | **22Q** | **n/e** |
| Van length expressed in linear meters or linear feet as indicated by the ANSI X12.3 data element number 355 unit of measure (LC or LF). No implied decimal point. | **23Q** | **n/e** |
| Inside cube of a van expressed in cubic meters or cubic feet as indicated by the ANSI X12.3 data element number 355 unit of measure code (CR or CF). No implied decimal point. | **24Q** | **n/e** |
| Net explosive weight (a computed value of explosive equivalent expressed in pounds of TNT). The measure of NEW, is used internationally for explosive safety quantity distance arc computations. No implied decimal point. | **25Q** | **n/e** |
| Packaging Level, specifying the hierarchical level of packaging in accordance with HIBC (Health Industry Bar Code) specifications. | **26Q** | **n/e** |
| Single Product Price Value, Net, "." (dot) used as decimal point (e.g., 27Q1000.5 for the price value of 1000.50). | **27Q** | **n/e** |
| Single Price Charge Value For Postage And Packaging, "." (dot) represents the position of a comma (e.g., 30Q100.50 for the value of 100,50). | **28Q** | **n/e** |
| Discount Percentage, "." (dot) represents the position of a comma (e.g., 31Q8.5 for a discount value of 8,5%). | **29Q** | **n/e** |
| VAT Percentage, "." (dot) represents the position of a comma (e.g., 27Q8.5 for the VAT value of 8,5%). | **30Q** | **n/e** |
| Currency, ISO 4217 currency code. | **31Q** | **n/e** |
| Reserved for future assignment | **32Q – 999Q** | **n/e** |
| | | |
| **CATEGORY 18: MISCELLANEOUS** | | |
| Reserved | **R** | **n/e** |
| Return Authorization Code (RMA) assigned by the Supplier | **1R** | **n/e** |
| Return Code assigned by the Customer | **2R** | **n/e** |
| Reserved | **3R** | **n/e** |
| U.S. Department of Defense Identification Code (DoDIC) | **4R** | **n/e** |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| Data in the format and using semantics defined by the holder of a Company Identification Number (CIN) that has been issued by an Issuing Agency Code (IAC) in accordance with ISO/IEC 15459, defined as a sequence of concatenated data elements: IAC, followed by CIN, followed by the separator character ":" (colon) followed by the data in the format and using semantics as defined by the CIN holder | **5R** | **n/e** |
| ISO/IEC 20248 digital signature data construct. If the underlying data carrier encoding is 7 bits, then only the ISO/IEC 20248 raw format may be used. | **6R** | **n/e** |
| Aquatic species | **7R** | **7008** |
| Fishing gear type | **8R** | **7009** |
| Production method | **9R** | **7010** |
| Reserved for future assignment | **10R- 999R** | **n/e** |
| | | |
| **CATEGORY 19: TRACEABILITY NUMBER FOR AN ENTITY** | | |
| Serial number or code assigned by the Supplier to an entity for its lifetime, (e.g., computer serial number, traceability number, contract tool identification) | **S** | **21** |
| Additional code assigned by the Supplier to an entity for its lifetime (e.g., traceability number, computer serial number) | **1S** | **n/e** |
| Advance Shipment Notification (ASN) Shipment ID (SID) corresponds to ANSI ASC X12 Data Element 396 | **2S** | **n/e** |
| Unique Package Identification assigned by Supplier (lowest level of packaging which has a package ID code; shall contain like items) | **3S** | **n/e** |
| Package Identification assigned by Supplier to master packaging containing like items on a single customer order (See Annex C.7) | **4S** | **n/e** |
| Package Identification assigned by Supplier to master packaging containing unlike items on a single customer order (See Annex C.7) | **5S** | **n/e** |
| Package Identification assigned by Supplier to master packaging containing like items over multiple customer orders (See Annex C.7) | **6S** | **n/e** |
| Package Identification assigned by Supplier to master packaging containing unlike items over multiple customer orders (See Annex C.7) | **7S** | **n/e** |
| Supplier ID/Unique Container ID presented in the data format specified by the GS1 SSCC-18 | **8S** | **00** |
| Package Identification, Generic (mutually defined) | **9S** | **n/e** |
| Machine, cell, or tool ID code | **10S** | **n/e** |
| Fixed asset ID code | **11S** | **n/e** |
| Document Number (internally assigned or mutually defined) | **12S** | **n/e** |
| Container Security Seal | **13S** | **n/e** |
| 4th Class Non-identical parcel post manifesting | **14S** | **n/e** |
| Serial Number Assigned by the Vendor Entity, that can only be used in conjunction with "13V" | **15S** | **n/e** |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| Version Number, e.g., Software Version | **16S** | **n/e** |
| Combined 6-digit GS1 supplier identification and unique package identification assigned by the supplier | **17S** | **n/e** |
| Reserved (CAGE Code & Serial Number unique within CAGE) | **18S** | **n/e** |
| Combined Dun & Bradstreet company identification of the supplier followed by a unique package identification assigned by the supplier, | **19S** | **n/e** |
| Traceability code for an entity assigned by the customer | **20S** | **n/e** |
| Tire Identification Number as defined by the U.S. Department of Transportation (D.O.T) under U.S. Code 49 CFR 574. | **21S** | **n/e** |
| Electronic Serial Number for Cellular Mobile Telephones | **22S** | **8002** |
| Media Access Control (MAC) Address conforming with IEEE 802.11 | **23S** | **n/e** |
| Reserved | **24S** | **n/e** |
| Identification of a party to a transaction as identified in 18V, followed by the supplier assigned serial number. | **25S** | **n/e** |
| Reader ID<br>Equipment identifier, being a globally unique identifier for a device | **26S** | **n/e** |
| Reserved | **27S - 29S** | **n/e** |
| Global Identifier Serialized for Trade (GIST) | **n/e** | **252** |
| Additional traceability code for an entity assigned by the supplier in addition to or different from the traceability code(s) provided by "S" or "1S" | **30S** | **250** |
| Beginning Serial Number for serial numbers in sequence | **31S** | **n/e** |
| Ending Serial Number for serial numbers in sequence | **32S** | **n/e** |
| Serial number of Next higher assembly | **33S** | **n/e** |
| Serial number or Part number of End Item | **34S** | **n/e** |
| Bumper Number (Used in Unit DOD Move) | **35S** | **n/e** |
| Pallet Identifier (Used for loaded 463L air pallets) | **36S** | **n/e** |
| Unique Item Identifier (format IAC CIN PN + PSN) | **37S** | **n/e** |
| Reserved | **38S – 41S** | **n/e** |
| Unique item identifier (UII) in 25S format preceded by numeric value indicating serial number element length for use by systems that require the “serial number” component of a concatenated Serial Number element (IAC+CIN+SN) | **42S** | **n/e** |
| Integrated Circuit Card Identifier (ICCID) in accordance with ITU-T Recommendation E.118 and ETSI Recommendation GSM 11.11 | **43S** | **n/e** |
| Reserved | **44S – 49S** | **n/e** |
| ***The following five DIs can be used to provide for identification of entities within a single unit that is different than or in addition to identification provided by "S".*** | | |
| First Level (Supplier Assigned) | **50S** | **n/e** |
| Second Level (Supplier Assigned) | **51S** | **n/e** |
| Third Level (Supplier Assigned) | **52S** | **n/e** |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| Fourth Level (Supplier Assigned) | **53S** | **n/e** |
| Fifth Level (Supplier Assigned) | **54S** | **n/e** |
| Reserved | **55S - 95S** | **n/e** |
| EPC number (Typically Serialized Global Trade Identification Number - SGTIN) | **96S** | **n/e** |
| Encrypted serial number | **97S** | **n/e** |
| Reserved for future assignment | **98S – 999S** | **n/e** |
| | | |
| **CATEGORY 20: TRACEABILITY NUMBER FOR GROUPS OF ENTITIES** | | |
| Traceability Number assigned by the Customer to identify/trace a unique group of entities (e.g., lot , batch , heat) | **T** | **n/e** |
| Traceability Number assigned by the Supplier to identify/trace a unique group of entities (e.g., lot , batch , heat) | **1T** | **10** |
| Reserved | **2T** | **n/e** |
| Exclusive Assignment (U.S. EPA vehicle identification for emissions testing) | **3T** | **n/e** |
| Reserved | **4T - 19T** | **n/e** |
| ***The following five DIs can be used to provide for identification of a group of entities, which is different than or in addition to identification provided by "T".*** | | |
| First Level (Customer Assigned) | **20T** | **n/e** |
| Second Level (Customer Assigned) | **21T** | **n/e** |
| Third Level (Customer Assigned) | **22T** | **n/e** |
| Fourth Level (Customer Assigned) | **23T** | **n/e** |
| Fifth Level (Customer Assigned) | **24T** | **n/e** |
| Supplier assigned traceability number (format CIN IAC Trace#) | **25T** | **n/e** |
| Batch identifier comprising the concatenation of either:<br>— a data identifier 26S mail processing equipment identifier, or<br>— a data identifier 20K license identifier, or<br>— a data identifier 18V party identifier that:<br>  — is distinct from any other ISO/IEC 15459 compliant identifier within the domain of the issuing agency concerned[6];<br>  — cannot be derived from another party identifier or any other ISO/IEC 15459 compliant identifier, issued under the same issuing agency, by the simple addition of characters to, or their removal from, its end[6];<br>with a data identifier 27T batch number, the two being separated by a dash (-) character | **26T** | **n/e** |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| Batch number, issued under the control of an identified party or unit of processing equipment, or under the provisions of an identified license, that:<br>— uniquely distinguishes one batch of related items from all other batches to which a batch number is assigned by the party or equipment, or under the license, concerned;<br>comprises a string of maximum length 10 characters, of which the first (numeric) character indicates the number of following characters, each of which is taken from the set {0-9; A-Z} | **27T** | **n/e** |
| Reserved | **28T - 29T** | **n/e** |
| ***The following five DIs can be used to provide for identification of a group of entities, which is different than or in addition to identification provided by "1T".*** | | |
| First Level (Supplier Assigned) | **30T** | **n/e** |
| Second Level (Supplier Assigned) | **31T** | **n/e** |
| Third Level (Supplier Assigned) | **32T** | **n/e** |
| Fourth Level (Supplier Assigned) | **33T** | **n/e** |
| Fifth Level (Supplier Assigned) | **34T** | **n/e** |
| Reserved for future assignment | **35T - 999T** | **n/e** |
| | | |
| **CATEGORY 21: UPU/MH 10/SC8 AGREED UPON CODES** | | |
| Reserved | **U-4U** | **n/e** |
| Specification of a postal service and associated process data in accordance with UPU standard S25 data construct “Service Data” | **5U** | **n/e** |
| Licensing post data, in accordance with the specification in UPU standard S25. | **6U** | **n/e** |
| Reserved for Assignment for UPU needs in collaboration with ASC MH 10/SC 8 | **7U – 14U** | **n/e** |
| Specification of supplementary postal service and associated process data in accordance with UPU standard S25 data construct | **15U** | **n/e** |
| Postal administration identifications, being the identification, expressed in accordance with the specification in UPU standard S25, of one or more postal administrations involved in the processing of a mail item or batch. | **16U** | **n/e** |
| UPU location code | **17U** | **n/e** |
| Qualified UPU location code, concatenation of:<br>— a location category drawn from UPU code list 139;<br>— a data identifier 17U UPU location code | **18U** | **n/e** |
| License plate with service data and location code is a compound data construct, compliant with the specification in UPU standard S25 | **19U** | **n/e** |
| Reserved for Assignment for UPU needs in collaboration with ASC MH 10/SC 8 | **20U – 54U** | **n/e** |
| OCR Data Locator | **55U** | **n/e** |
| Reserved for future assignment | **56U – 999U** | **n/e** |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| | | |
| **CATEGORY 22: PARTY TO THE TRANSACTION** | | |
| Supplier Code assigned by Customer | **V** | **n/e** |
| Supplier Code assigned by Supplier | **1V** | **n/e** |
| U.P.C. Company Prefix | **2V** | **n/e** |
| GS1 Company Prefix | **3V** | **n/e** |
| Carrier Identification Code assigned by an industry standard mutually defined by the Supplier, Carrier, and Customer | **4V** | **n/e** |
| Financial Institution Identification Code (mutually defined) | **5V** | **n/e** |
| Manufacturer's identification code (mutually defined) | **6V** | **n/e** |
| Code assigned to a party which has financial liability for an entity or group of entities (e.g., owner of inventory) (mutually defined) | **7V** | **n/e** |
| Customer code assigned by the customer | **8V** | **n/e** |
| Customer code assigned by the supplier | **9V** | **n/e** |
| Manufacturer ID (See Appendix 2, CBP 7501 Instructions) | **10V** | **n/e** |
| Organization with budget responsibility for an entity, process, or procedure (e.g., shop, division, department)(internally assigned) | **11V** | **n/e** |
| DUNS number identifying manufacturer | **12V** | **n/e** |
| DUNS number identifying supplier | **13V** | **n/e** |
| DUNS number identifying customer | **14V** | **n/e** |
| Carrier-assigned shipper number | **15V** | **n/e** |
| VMRS Supplier ID | **16V** | **n/e** |
| U.S. DoD CAGE Code | **17V** | **n/e** |
| Identification of a party to a transaction in which the data format consists of two concatenated segments. The first segment is the Issuing Agency Code (IAC) in accordance with ISO/IEC 15459, the second segment is a unique entity identification Company Identification Number (CIN) assigned in accordance with rules established by the issuing agency | **18V** | **n/e** |
| Specification of a party's role(s), in a transaction, consisting of one or more code values from EDIFACT Code List 3035 "Party Qualifier", separated by plus (+) characters (Never to be concatenated with other DIs in a linear symbol or other media where the concatenation character is a plus (+) character) | **19V** | **n/e** |
| Identification of a party to a transaction assigned by a holder of a Company Identification Number (CIN) and including the related Issuing Agency Code (IAC) in accordance with ISO/IEC 15459 and its registry, structured as a sequence of 3 concatenated data elements: IAC, followed by CIN, followed by a plus (+) character followed by one or more code values from EDIFACT Code List 3035 "Party Qualifier", separated by plus (+) characters (Never to be concatenated with other DIs in a linear symbol or other media where the concatenation character is a plus (+) character) | **20V** | **n/e** |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| Identification of a party to a transaction as identified in 18V, followed by the organizational sub-unit of and assigned by the party identified in 18V, e.g., 21V IAC CIN OSU, where the IAC is the issuing agency code assigned by the ISO 15459-2 Registration Authority, the CIN is the company identification code assigned by the IAC, and the OSU is the organizational sub-unit identification assigned by the CIN. | **21V** | **n/e** |
| Carrier SCAC (Standard Carrier Alpha Code) | **22V** | **n/e** |
| SPLR VAT NO | **23V** | **n/e** |
| CUST VAT NO | **24V** | **n/e** |
| Reserved for future assignment | **25V– 999V** | **251** |
| Reference to Source Entity | **n/e** | **251** |
| | | |
| **CATEGORY 23: ACTIVITY REFERENCE** | | |
| Work Order Number (e.g., "Production Paper") (internally assigned) | **W** | **n/e** |
| Operation Sequence Number | **1W** | **n/e** |
| Operation Code/Work Code - the type of work to be performed (internally assigned or mutually defined) | **2W** | **n/e** |
| Combined Work Order Number and Operation Sequence Number in the format nn...n+nn...n where a plus symbol (+) is used as a delimiter between the Work Order Number and the Operation Sequence Number | **3W** | **n/e** |
| Status Code (internally assigned or mutually defined) | **4W** | **n/e** |
| Work Unit Code – identifies system, subsystem, assembly, component etc. on which maintenance is performed | **5W** | **n/e** |
| Nomenclature – (internally assigned or mutually defined) | **6W** | **n/e** |
| Reserved | **7W – 9W** | **n/e** |
| Form Control Number – Preprinted control number on forms | **10W** | **n/e** |
| Quality Assurance Inspector – Last Name | **11W** | **n/e** |
| Telephone number of person completing the form | **12W** | **n/e** |
| Reserved for future assignment | **13W – 999W** | **n/e** |
| | | |
| **CATEGORY 24: RESERVED** | | |
| Reserved | **X - 999X** | **n/e** |
| | | |
| **CATEGORY 25: INTERNAL APPLICATIONS** | | |
| Never to appear on item/document which leaves a closed system environment | **Y - 999Y** | **91-99** |
| | | |
| **CATEGORY 26: MUTUALLY DEFINED** | | |

| CATEGORY/DESCRIPTION | ANS MH10.8.2 DI | GS1 AI |
|---|---|---|
| Mutually Defined between Customer and Supplier | **Z** | **90** |
| Mutually Defined between Carrier and Supplier | **1Z** | **90** |
| Mutually Defined between Customer and Carrier | **2Z** | **90** |
| Free Text | **3Z** | **n/e** |
| Mutually Defined between Carrier and Trading Partner | **4Z** | **90** |
| Reserved | **5Z - 9Z** | **n/e** |
| Structured Free Text (Header Data) | **10Z** | **n/e** |
| Structured Free Text (Line 1-89 Data) | **11Z - 99Z** | **n/e** |
| Reserved for future assignment | **100Z - 999Z** | **n/e** |

# SECTION IV
# MAPPING
# GS1 AIs to ANS MH10.8.2 DIs

# MAPPING GS1 AIs to ANS MH10.8.2 DIs

n/e = no-equivalent Data Identifier for Application Identifier or no equivalent Application Identifier for Data Identifier.

| AI | Data Content | DI |
|---|---|---|
| 00 | Serial Shipping Container Code (SSCC) | J, 1J, 2J, 3J, 4J, 8S |
| 01 | Global Trade Item Number (GTIN) (f.k.a. SCC-14) | 8P |
| 02 | GTIN of trade items contained in a logistic unit (Must be used with AI 37) | n/e |
| 10 | Batch or Lot Number | 1T |
| 11 (*) | Production Date (YYMMDD) | 5D...405 |
| 12 (*) | Due Date (YYMMDD) | 5D...013 |
| 13 (*) | Packaging Date (YYMMDD) | n/e |
| 15 (*) | Best Before Date (YYMMDD) (f.k.a. Best Before / Quality) | 25D |
| 16 (**) | Sell By Date (YYMMDD) | |
| 17 (*) | Expiration Date (YYMMDD) (f.k.a. Use By / Safety) | 5D...036 |
| 20 | Variant Number | n/e |
| 21 | Serial Number | S |
| 240 | Additional Item Identification | 30P |
| 241 | Customer Part Number | P |
| 242 | Made-to-Order Variation Number | n/e |
| 243 | Packaging Component Number | n/e |
| 250 | Secondary Serial Number | 30S |
| 251 | Reference to Source Entity | n/e |
| 253 | Global Document Type Identifier | n/e |
| 254 | GLN Extension component | n/e |
| 255 | Global Coupon Number | n/e |
| 30 | Count of Items (Variable Measure Trade Item) | Q |
| 310 (**) | Net Weight, Kilograms | 7Q...58 |
| 311 (**) | Length or 1st Dimension Trade, Meters | 7Q...MR |
| 312 (**) | Width, Diameter, or 2nd Dimension, Trade, Meters | 7Q...MR |
| 313 (**) | Depth, Thickness, Height or 3rd Dimension, Trade, Meters | 7Q...MR |
| 314 (**) | Area, Trade, Square Meters | 7Q...SM |
| 315 (**) | Net Volume, Liters | 7Q...LT |
| 316 (**) | Net Volume, Cubic Meters | 7Q...CR |
| 320 (**) | Net Weight, Pounds | 7Q...PN |
| 321 (**) | Length or 1st Dimension, Trade, Inches | 7Q...ED |
| 322 (**) | Length or 1st Dimension, Trade, Feet | 7Q...EZ |
| 323 (**) | Length or 1st Dimension, Trade, Yards | 7Q...YD |
| 324 (**) | Width, Diameter, or 2nd Dimension, Trade, Inches | 7Q...ED |

| AI | Data Content | DI |
|---|---|---|
| 325 (**) | Width, Diameter, or 2nd Dimension, Trade, Feet | 7Q...EZ |
| 326 (**) | Width, Diameter, or 2nd Dimension, Trade, Yards | 7Q...YD |
| 327 (**) | Depth, Thickness, Height or 3rd Dimension, Trade, Inches | 7Q...ED |
| 328 (**) | Depth, Thickness, Height or 3rd Dimension, Trade, Feet | 7Q...EZ |
| 329 (**) | Depth, Thickness, Height or 3rd Dimension, Trade, Yards | 7Q...YD |
| 330 (**) | Logistic Weight, Kilograms | 7Q...GT |
| 331 (**) | Length or 1st Dimension, Meters Logistics | 7Q...MR |
| 332 (**) | Width, Diameter, or 2nd Dimension, Meters Logistics | 7Q...MR |
| 333 (**) | Depth, Thickness, Height or 3rd Dimension, Meters, Logistics | 7Q…MR |
| 334 (**) | Area, Square Meters Logistics | 7Q...SM |
| 335 (**) | Logistic Volume, Liters | 7Q...LT |
| 336 (**) | Logistic Volume, Cubic Meters | 7Q…CO |
| 337 (**) | Kilograms per Square Meter | 7Q...KM |
| 340 (**) | Logistic Weight, Pounds | 7Q...PG |
| 341 (**) | Length or 1st Dimension, Inches Logistics | 7Q...ED |
| 342 (**) | Length or 1st Dimension, Feet Logistics | 7Q...EZ |
| 343 (**) | Length or 1st Dimension, Yards Logistics | 7Q…GY |
| 344 (**) | Width, Diameter, or 2nd Dimension, Inches Logistics | 7Q...ED |
| 345 (**) | Width, Diameter, or 2nd Dimension, Feet Logistics | 7Q…EZ |
| 346 (**) | Width, Diameter, or 2nd Dimension, Yards Logistics | 7Q…GY |
| 347 (**) | Depth, Thickness, Height or 3rd Dimension, Inches, Logistics | 7Q...ED |
| 348 (**) | Depth, Thickness, Height or 3rd Dimension, Feet, Logistics | 7Q…EZ |
| 349 (**) | Depth, Thickness, Height or 3rd Dimension, Yards, Logistics | 7Q...GY |
| 350 (**) | Area, Trade, Square Inches | 7Q...SI |
| 351 (**) | Area, Trade, Square Feet | 7Q...SF |
| 352 (**) | Area, Trade, Square Yards | 7Q...SY |
| 353 (**) | Area, Square Inches, Logistics | 7Q...SI |
| 354 (**) | Area, Square Feet, Logistics | 7Q...SF |
| 355 (**) | Area, Square Yards, Logistics | 7Q...SY |
| 356 (**) | Net Weight, Trade, Troy Ounces | 7Q...TO |
| 357 (**) | Net Volume, Trade, Ounces (U.S.) | 7Q...OZ |
| 360 (**) | Net Volume, Trade, Quarts | 7Q...QT |
| 361 (**) | Net Volume, Trade, Gallons (U.S.) | 7Q...GA |
| 362 (**) | Logistic Volume, Quarts | 7Q...QT |
| 363 (**) | Logistic Volume, Gallons (U.S.) | 7Q...GN |
| 364 (**) | Net Volume, Trade, Cubic Inches | 7Q...CI |
| 365 (**) | Net Volume, Trade, Cubic Feet | 7Q…CF |
| 366 (**) | Net Volume, Trade, Cubic Yards | 7Q...CY |
| 367 (**) | Logistic Volume, Cubic Inches | 7Q…CI |

| AI | Data Content | DI |
|---|---|---|
| 368 (**) | Logistic Volume, Cubic Feet | 7Q...CF |
| 369 (**) | Logistic Volume, Cubic Yards | 7Q...CY |
| 37 | Count of Trade Items Contained in a Logistics Unit (For Use with AI 02 Only) | n/e |
| 390 (**) | Applicable Amount Payable – local currency | n/e |
| 391 (**) | Applicable Amount Payable – with ISO currency code | n/e |
| 392 (**) | Applicable Amount Payable Variable Measure Trade Item – local currency | n/e |
| 393 (**) | Applicable Amount Payable for a Variable Measure Trade Item – with ISO currency code | n/e |
| 400 (+) | Customer's Purchase Order Number | K |
| 401 | Global Identification Number of Consignment | n/e |
| 402 | Global Shipment Identification Number | 2K |
| 403 | Routing Code | n/e |
| 410 | "Ship To" (Deliver To) - GS1 Global Location Number | 2L/12L |
| 411 | "Bill To" (Invoice To) - GS1 Global Location Number | n/e |
| 412 | "Purchased From" - GS1 Global Location Number | n/e |
| 413 | "Ship For - Deliver For - Forward To" GS1 Global Location Number | 5L/15L |
| 414 | Identification of a Physical Location, GS1 Global Location Number | n/e |
| 415 | GS1 Global Location Number of the Invoicing Party | n/e |
| 420 | Ship To (Deliver To) Postal Code Within a Single Postal Authority | 52L |
| 421 | Ship To (Deliver To) Postal Code With 3-digit ISO Country Code Prefix | 55L |
| 422 | Country of Origin of a Trade Item | 4L |
| 423 | Country of Initial Processing | n/e |
| 424 | Country of Processing | n/e |
| 425 | Country of Disassembly | n/e |
| 426 | Country covering full process chain | n/e |
| 427 | Country subdivision of origin | n/e |
| 7001 | NATO Stock Number (NSN) | N |
| 7002 | UN/ECE Meat Carcasses and Cuts Classification | n/e |
| 7003 | Expiration Date and Time (YYMMDDHHMM) | n/e |
| 7004 | Active Potency | n/e |
| 7005 | Catch Area | 18L |
| 7006 | First Freeze Date | 26D |
| 7007 | Harvest Date | 27D, 28D |
| 7008 | Species for Fishery Purposes | 7R |
| 7009 | Fishing Gear Type | 8R |
| 7010 | Production Method | 9R |
| 703(s) | Approval number of processor with ISO country code | n/e |
| 710 | National Healthcare Reimbursement Number (NHRN) – Germany PZN | n/e |

| AI | Data Content | DI |
|---|---|---|
| 711 | National Healthcare Reimbursement Number (NHRN) – France CIP | n/e |
| 712 | National Healthcare Reimbursement Number (NHRN) – Spain CN | n/e |
| 713 | National Healthcare Reimbursement Number (NHRN) – Brasil DRN | n/e |
| nnn | National Healthcare Reimbursement Number (NHRN) – Country “A” NHRN | n/e |
| 7030 | Vessel ID / Farm ID | 35L |
| 7031 | Producer ID / Farm ID | 36L |
| 8001 | Roll products - Width, Length, Core Diameter, Direction, & Splices | n/e |
| 8002 | Cellular Mobile Telephone Identifier | 22S |
| 8003 | Global Returnable Asset Identifier | 25B |
| 8004 | Global Individual Asset Identifier | 1B, 5B |
| 8005 | Price Per Unit of Measure | n/e |
| 8006 | Identification of the Component of a Trade Item | 19P |
| 8007 | International Bank Account Number | n/e |
| 8008 | Date and Time of Production | n/e |
| 8010 | Component / Part Identifier Serial Number (CPID SERIAL) | n/e |
| 8011 | Global Service Relation Number to identify the relationship between an organisation offering services and the provider of services | n/e |
| 8017 | Global Service Relation Number to identify the relationship between an organization offering services and the provider of services | n/e |
| 8018 | Global Service Relation Number to identify the relationship between an organization offering services and the recipient of services | n/e |
| 8019 | Service Relation Instance Number (SRIN) | n/e |
| 8020 | Payment Slip Reference Number | n/e |
| 8110 | Coupon Code Identification for Use in North America | n/e |
| 8200 | Extended Packaging URL | 33L |
| 90 | Information Mutually Agreed Between Trading Partners | Y, 3K, 6K, 12K, 1Z, 2Z, 4Z |
| 91 to 99 | Company Internal Information | |

(*) : To indicate only year and month, DD can be filled with "00"
(**) : Plus one digit for decimal point indication
(+) : The definition of 400 has been modified to allow order, release, and line numbers, at the discretion of the issuer

**Date Value Representation:**

| | | | |
|---|---|---|---|
| a | alphabetic characters (chars) | n1...3 | from one up to 3 numeric chars |
| n | numeric chars | a1...3 | from one up to 3 alphabetic chars |
| an | alphanumeric chars | an1...3 | from one up to 3 alphanumeric chars |
| n3 | 3 numeric chars, fixed length | s | sequence in the process |
| an3 | 3 alpha-numeric chars, fixed length | | |

# SECTION V
# SHORT TITLES

The Short Titles listed herein are for guidance of developing standards. This list is not comprehensive or mandatory.

# SHORT TITLES

When printing bar codes (or 2D symbols) it is recommended that each bar code have human readable text printed above the bar code (or adjacent to each 2D symbol) to identify what type of data is contained in the bar code (or 2D symbol). This is called a "short title" and should resemble one of the formats shown in Figure V-1.

**Figure V-1**: Examples of recommended formats for printing short titles

| | |
|---|---|
| (S) Serial # **1234567**  Bar code contains: S1234567 | Serial # (S) **1234567**  Bar code contains: S1234567 |
| (13V) DUNS SPLR ID **987654321**  Bar code contains: 13V987654321 | DUNS SPLR ID (13v) **987654321**  Bar code contains: 13V987654321 |

This Section lists the recommended short titles for some of the most common data identifiers.

The Short Titles listed herein are for guidance of developing standards.

This list is not comprehensive or mandatory.

# SECTION V.A

# ANS MH10.8.2 DI SHORT TITLES

**(The following list is not a complete list of all identifiers)**

| DI | SHORT TITLE | Description |
|---|---|---|
| B | CONT TYPE | Container type |
| 1B | CONT ID | Returnable container identification code |
| C | PART # Cont. | Continuation of an Item Code |
| D | DATE | Date |
| 14D | EXP DATE | Expiration Date (YYYYMMDD) |
| 16D | PROD DATE | Production Date (YYYYMMDD) |
| 25D | BEST BEFORE DATE | Best before date (YYYMMDD) |
| 26D | FIRST FREEZE DATE | First freeze date (YYYYMMDD) |
| 27D | HARVEST DATE | Harvest date (YYYYMMDD) |
| J | LIC PLATE | Unique license plate number |
| 1J | LIC PLATE-UNIT | Unique license plate assigned to a transport unit which is the lowest level of packaging, the unbreakable unit. |
| 2J | LIC PLATE-MULTI | Unique license plate assigned to a transport unit which contains multiple packages. |
| 8J | MMSI | Maritime Mobile Service Identity |
| K | CUST PO # | Order number assigned by Customer |
| 1K | SPLR ORDER # | Order number assigned by Supplier |
| 2K | SPLR SHIP ID | Shipment Identification Code assigned by Supplier/Shipper |
| 3K | BOL/WB | Bill of Landing/Waybill Code assigned by Carrier |
| 4K | CUST LINE | Line number of the order assigned by Customer |
| 5K | CUST REL | Reference number assigned by the Customer to identify a Shipment Authorization (Release ) against an established Purchase Order |
| 6K | CARRIER PRO | PRO # Assigned by Carrier |
| 14K | PO = LINE | Combined Order Number and Line Number in the format nn…nn=nn…n where a plus symbol (+) is used as a delimiter between the Order Number and Line Number. |
| 15K | PULL SIG | Pull signal (e.g., KANBAN) Number |
| 16K | DELINS | DELINS Number. Code assigned to identify a document containing delivery information. |
| 1L | LOC | Location |
| 4L | ORIGIN or COO | Country of Origin, two-character ISO 3166 country code |
| 18L | CATCH AREA | FAO fishing area code as defined by the Fisheries and Aquaculture Department of the FAO (http://www.fao.org. Search for Fishing Area Code sub-site) |

| DI | SHORT TITLE | Description |
|---|---|---|
| 35L | VESSEL ID / FARM ID | A government-assigned approval number of vessel / aquaculture site / farm / processor, starting with an ISO 3166-1 alpha-2 country code, followed by the approval number. |
| 36L | PRODUCER ID / FARM ID | A government-assigned approval number of producer or farm or first deboning / cutting hall, starting with an ISO 3166-1 alpha-2 country code, followed by the approval number. |
| 51L | FROM POST CODE | "Ship From;" – Location code defined by a postal authority (e.g., 5-digit and 9 digit ZIP codes identifying U.S. locations or 6-character postal codes identifying Canadian locations. |
| 52L | TO POST CODE | "Ship To;" – Location code defined by a postal authority (e.g., 5-digit and 9 digit ZIP codes identifying U.S. locations or 6-character postal codes identifying Canadian locations. |
| 54L | FROM POST CODE + CTRY | " Ship To;" – Location code defined by a postal authority (e.g., 5-digit and 9 digit ZIP codes identifying U.S. locations or 6-character postal codes identifying United Kingdom locations) followed by two character ISO 3166 country code (e.g., US or GB) |
| 55L | TO POST CODE+CTRY | " Ship From;" – Location code defined by a postal authority (e.g., 5-digit and 9 digit ZIP codes identifying U.S. locations or 6-character postal codes identifying United Kingdom locations) followed by two character ISO 3166 country code (e.g., US or GB) |
| P | CUST PART or CUST ITEM | Item Identification Code assigned by Customer |
| 1P | SPLR PART or SPLR ITEM | Item Identification Code assigned by Supplier` |
| 2P | EC # | Code assigned to specify the revision level for an Item (e.g., engineering change) |
| 10P | HAZMAT CODE | Hazardous Material Code as defined by ANS X12.3 (Version 003000) in the format Data Element 208 (1-character code qualifier) followed by Data Element 209 (Hazardous Material Code) |
| 11P | CLEI | 10-character CLEI Code for telecommunications equipment |
| Q | QTY | Quantity, Number of Pieces or Amount (numeric only) (unit of measure and significance mutually defined) |
| 1Q | THEO LGTH or THEO WT | Theoretical Length/Weight (numeric only) |
| 2Q | ACT WT | Actual Weight (numeric only) |
| 3Q | U/M | Unit of Measure, as defined by the two character ANS X12.3 (Version 003000) Data Element Number 355 Unit of Measurement Code |
| 7Q | QTY + U/M | Quantity, Amount, or Number of Pieces in the format: Quantity followed by the two character ANS X12.3 (Version 003000) Data Element Number 355 Unit of Measurement Code |
| 13Q | N OF X | # of # ("this is the nth piece of x pieces in this shipment"). Presented in the format "n/x:", where the "/"(slash) is used as a delimiter between two values. See Annex C.6.3 for further information. |

| DI | SHORT TITLE | Description |
|---|---|---|
| 7R | AQUATIC SPECIES | Aquatic Sciences and Fisheries Information System (ASFIS) 'Inter-agency 3-alpha species code', maintained by the Food and Agriculture Organization of the United Nations (www.fao.org, then search for "ASFIS") |
| 8R | FISHING GEAR TYPE | Food and Agricultural Organization (FAO) International Standard Classification of Fishing Gears (ISSCFG) code. (www.fao.org) |
| 9R | PRODUCTION METHOD | Production method for fish and seafood as specified by the Fisheries and Aquaculture Department of the Food and Agricultural Organization (FAO) of the United Nations, according to EU Regulation 1379/2013. (www.fao.org) |
| S | SERIAL | Serial number or code assigned by the Supplier to an entity for its lifetime, (e.g.,) computer serial number, tractability number, contract tool identification) |
| 2S | ASN ID | Advance Shipment Notification (ASN) Shipment ID (SOID) corresponds to ANS ASC X12 Data Element 396 |
| 3S | PKG ID | Unique Package Identification assigned by Supplier (lowest level of packaging which has a package ID code shall contain like items) |
| 4S | PKG ID-MASTER-LIKE | Package Identification assigned by Supplier to master packaging containing like items on a single customer order |
| 5S | PKG ID-MASTER MIXED | Package Identification assigned by Supplier to master packaging contain unlike items on a single customer order |
| 6S | PKG ID-MASTER-LIKE MULTI | Package Identification assigned by Supplier to master packaging containing like items on over multiple customer orders |
| 7S | PKG ID-MASTER MIXED MULTI | Package Identification assigned by supplier to master packaging containing unlike items on over multiple customer orders |
| T | CUST LOT or CUST BATCH or CUST HEAT | Tractability Number assigned by the Customer to identity/trace a unique group of entities (e.g., lot, batch, heat) |
| 1T | SPLR LOT<br>or<br>SPLR BATCH<br>or<br>SPLR HEAT | Traceability Number assigned by the Supplier to identify/trace a unique group of entities (e.g., lot, batch, heat) |
| V | CUST ASG SPLR ID | Supplier Code assigned by Customer |
| 1V | SPLR ASG SPLR ID | Supplier Code assigned by Supplier |
| 12V | DUNS MFR ID | DUNS number identifying manufacturer |
| 13V | DUNS SPLR ID | DUNS number identifying supplier |
| 14V | DUNS CUST ID | DUNS number identifying customer |
| 15V | SHIPPER | Carrier assigned shipper number |

| DI | SHORT TITLE | Description |
|---|---|---|
| 23V | SPLR VAT NO | Government-assigned Value Added Tax identification number identifying supplier, starting with an ISO 3166-1 alpha-2 country code (except for Greece, which uses the ISO 639-1 language code EL), followed by the government-assigned VAT number. |
| 24V | CUST VAT NO | Government-assigned Value Added Tax identification number identifying customer, starting with an ISO 3166-1 alpha-2 country code (except for Greece, which uses the ISO 639-1 language code EL), followed by the government-assigned VAT number. |

# SECTION VI

## HIERARCHICAL LEVELS - Data Identifier “F”

When the Data Identifier “F” is used in Data Identifier looping structures the format shall follow the format defined in this Section. See Annex L for usage rules of Data Identifiers 1F, 3F, and 5F for Returnable Packaging Items.

As the application of automatic data capture (ADC) storage media became more sophisticated it became possible to store more item data about more items in a single medium. Data capacities increased from the single data element linear bar code to concatenated symbols to two-dimensional symbols to high capacity RF tags to contact memory buttons to optical memory cards and micro compact disks. It became possible to store information about multiple orders on a shipment, multiple containers or pallets per order, multiple part numbers per order, multiple containers per part number, and multiple serial numbers per part number.

As this sophistication increased so increased the need to provide a structure for such data in order to ensure that there was an unambiguous relationship of a serial number (or lot number / expiration date) all of the way up to the order and shipment level. It would have been possible to create a unique structure for ADC media. However, the world of electronic data interchange (EDI) has faced this issue for many years. After careful analysis ASC MH 10/SC 8 decided to follow the lessons learned from the EDI community, namely the creation of a structured looping of data.

The X12 EDI Ship Notice/Manifest (Transaction 856) is a hierarchical document, that is, the electronic document which can:

- Represent one or several shipments in a single Ship Notice/Manifest,
- Each shipment can consist of one or several orders in a single shipment,
- Each order can consist of one or several pallets (tares) in a single order,
- Each pallet can consist of one or several cartons (packs) in a single pallet,
- Each carton can consist of one or several inner packs (sub-packs) in a single carton,
- Each sub-pack can consist of one or several items in a single sub-pack, and
- Each item can consist of one or several components in a single item.

Data should be encoded at the hierarchical level to which it logically applies. For example, shipment data at the shipment level, order information at the order level, tare (pallet) information at the tare level, carton information at the carton level, etc. To avoid unnecessary data redundancy it may be preferable to encode data at a higher level. For example, if a shipment involves only one order, order information could be transmitted at the shipment level. Also, if the only package information needed is the label serial number (license plate) and there is one per item then the package data can be specified at the item level. As a general rule data can be specified at a higher level as long as it does not create confusion with similar data at the same level. Weights dimensions, quantities, and license plates are examples of data which are used in multiple levels and could create confusion if levels are combined.

The following example depicts the detail area of the Ship Notice/Manifest transaction in the traditional manner.

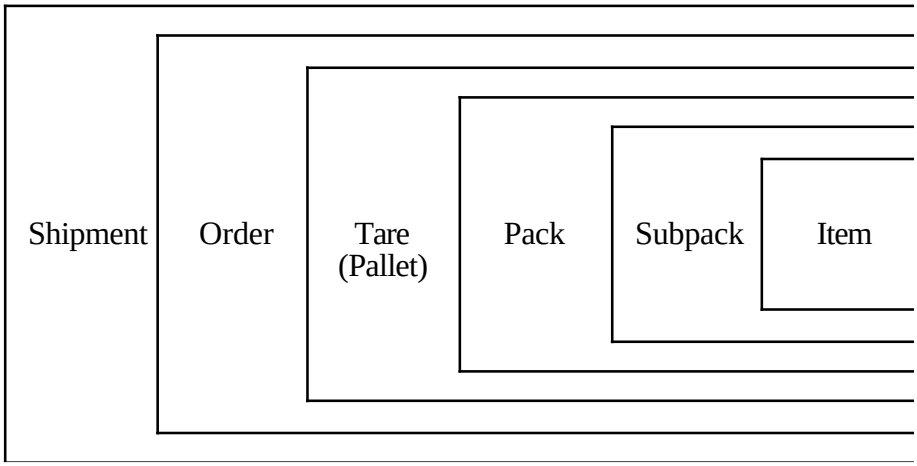


**Figure VI – 1 – Typical X12 856 Nested Packaging Levels**

The purpose of such structure looping is to facilitate the identification of dependencies among the content of related groups of data segments. Several methods existed, however, the SC 8 committee settled on the use of hierarchical structures similar to the ASC X12 EDI 856 Ship Notice/Manifest transaction.

Within the X12 856 transaction set the “HL segment” is comprised of four data elements (DE). These are

**Table VI – 1 – ASC X12 856 “HL Segment”**

| DE Reference | DE Identifier | DE Name | DE Requirement | DE Type | DE Length (Min/Max) |
|---|---|---|---|---|---|
| HL01 | 628 | Hierarchical ID Number | M | AN[1] | 1/12 |
| HL02 | 734 | Hierarchical Parent ID Number | O | AN | 1/12 |
| HL03 | 735 | Hierarchical Level Code | M | ID[2] | 1/2 |
| HL04 | 736 | Hierarchical Child Code | O | ID | 1/1 |

*Note[1] – A string data element is a sequence of any characters from the character set and contains at least one non-space character. The significant characters shall be left justified. Leading spaces, when they occur, are presumed to be significant characters. In the actual data stream, trailing spaces should be suppressed. The representation for this data element is AN.*

*Note[2] – An identifier data element always contains a unique value from a single, predefined list of values that is maintained in ASC X12 or some other body recognized by ASC X12 and identified by a reference in Appendix A of X12.3 Data Element Dictionary. Trailing spaces should be suppressed. The representation for this data element type is ID.*

The X12 856 HL segment is used to identify levels of detail information using a hierarchical structure, such as relating line-item data to shipment data and packaging data to line-item data. The 856 HL segment defines a top-down/left-right ordered structure.

**HL01** shall contain a unique alphanumeric number for each occurrence of the HL segment in the transaction set. For example, HL01 could be used to indicate the number of occurrences of the HL segment in which case the value of HL01 would be "1" for the initial HL segment and would be incremented by one in each subsequent HL segment within the transaction.

**HL02** identifies the hierarchical ID number of the HL segment to which the current HL segment is subordinate.

**HL03** indicates the context of the series of segments following the current HL segment up to the next occurrence of an HL segment in the transaction. For example, HL03 is used to indicate that subsequent segments in the HL loop form a logical grouping of data referring to shipment, order, or item-level information.

**HL04** indicates whether or not there are subordinate (or child) segments related to the current HL segment. ("0" indicates that there are no subordinate segments; "1" indicates that there are subordinate segments)

It would be possible to encode an entire EDI transaction into a machine-readable medium, however there is substantial overhead within EDI to facilitate the routing of the message. Since, in the case of machine-readable media, the medium accompanies the routed item the overhead is unnecessary information. And while the data carrying capacity of machine-readable media has increased substantially, wherever a systems designer can reduce the number of encoded characters, the better is the design.

ASC MH 10/SC 8 took the basic Hierarchical Level (HL) structure and made two modifications. Both involved the variable length nature of the EDI HL with each of the data elements separated by a data element separator versus a machine-readable media requirement for defined lengths and short fields. Since the committee did not wish to use separator characters, because of increasing the length of the field, fixed length data elements were used where ever possible. Further, the length of the Hierarchical ID Number was fixed at two (2). With the character set of 0-9 and A-Z, a length of 2 characters yields 1,296 permutations. Ninety-nine (99) and even thirty-six (36) permutations were considered ample in most cases, however, several real-life examples of different parts with associated serial numbers caused the ASC MH 10/SC 8 to go to a second character position. The Hierarchical Child Code identifier and the Hierarchical Level Code identifier were swapped positionally since the Hierarchical Level Code was variable length. Placing the variable length field at the end of the composite field provided unambiguous meaning to each of the sub-fields.

This yielded the format for the Hierarchical Level Data Identifier “F”. The purpose of Data Identifier “F” is to identify dependencies among the content of hierarchically related groups of data segments. The structure of this DI is as follows with all parts required:

**Table VI – 2 – ANS MH10.8.2 Data Identifier “F” Structure**

| Part | String (AN) or Identifier (ID) | Length |
|---|---|---|
| Hierarchical ID Number | AN | 2[1] |
| Hierarchical Parent ID Number | AN | 2[1] |
| Hierarchical Child Code | ID | 1 |
| Hierarchical Level Code | ID | 1/2 |
| *Note[1] – With the character set of 0-9 and A-Z, a length of 2 characters yields 1,296 permutations* | | |

While the complete set of Hierarchical Level Code identifiers can be found in ANS X12, Data Element 735, the following represent what ASC MH 10/SC 8 considers to be the most commonly used identifiers:

**Table VI – 3 – Commonly Used Hierarchical Level Codes**

| Level | Identifier | Description |
|---|---|---|
| Shipment | S | Data that applies to the whole shipment, such as bill of lading number, lading quantity, supplier code, etc. |
| Order | O | Data related to the sender's order and the associated receiver's original purchase order. |
| Tare | T | The tare level is used to identify pallets. If there are no identifiable pallets, this level may be omitted. |
| Pack | P | The pack level is used to identify the cartons within which the item is shipped, e.g., label serial numbers. In most cases there will be some sort of packs. |
| Sub-pack | Q | Data related to a grouping of identifiable packages within the pack level. Note that this level is only used when the inner pack has identifiable numbers for each inner pack. |
| Item | I | Stock keeping unit (SKU) identification data. |
| Component | F | Data related to the manufacturer’s component |
| Serial # | X | Data related to the manufacturer’s serial number |

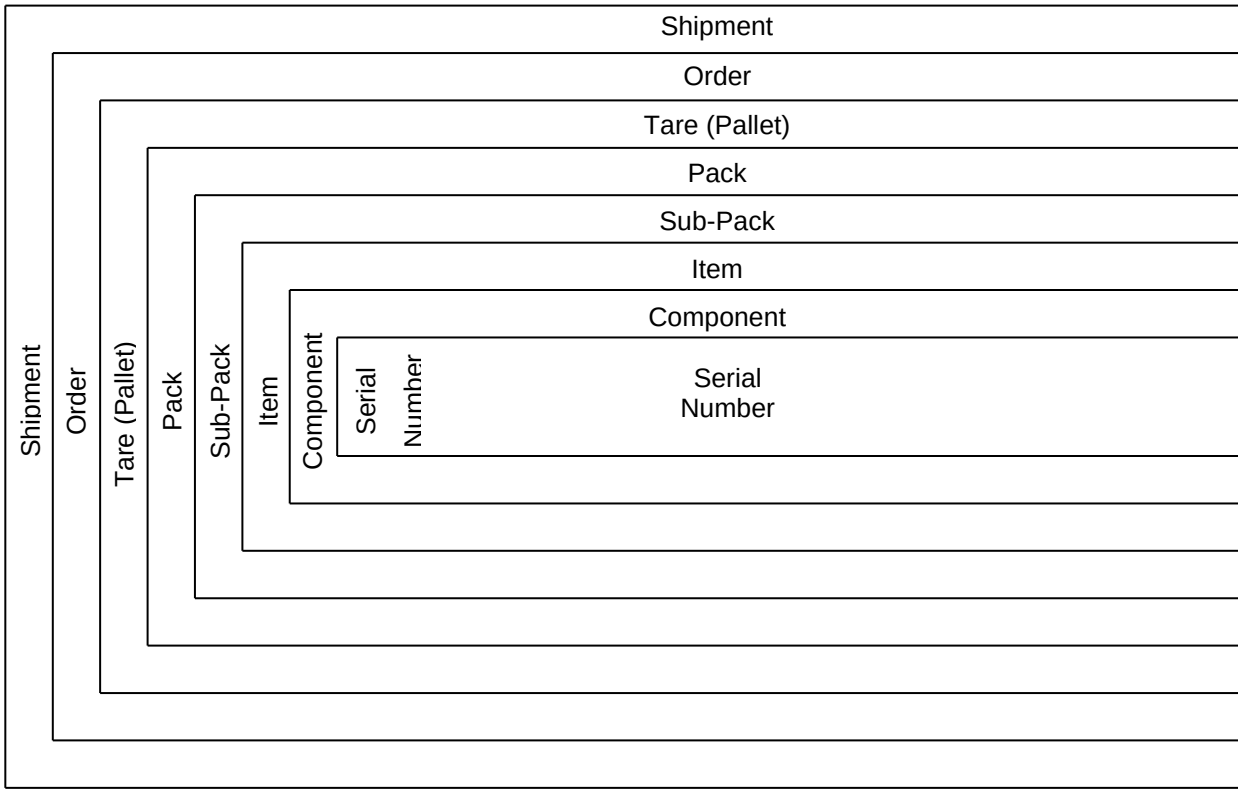


**Figure VI – 2 – Typical MH 10/SC 8 Nested Packaging Levels**

Consequently, for machine-readable media the structure “F08041P” would mean:

F Data Identifier
08 Level of this hierarchy, e.g., a case on a pallet
04 Level of the parent hierarchy, e.g., the pallet
1 Yes, there are children to the case
P Pack

Consider the following structure:

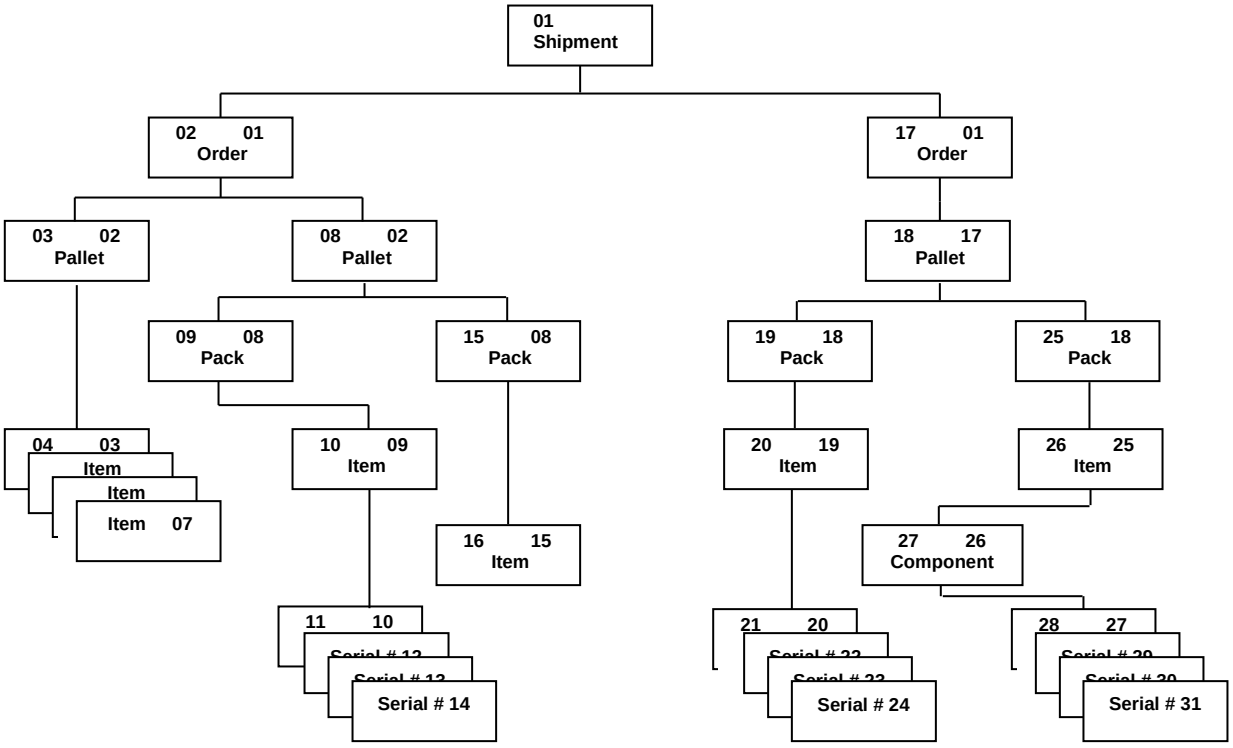


**Figure VI – 3 – Hierarchical Levels**

Using DI “F” the data would be as shown in Table VI – 4, below:

*NOTE: Table VI – 4 has been oriented in a “visual” mode, not a data-transmission-form; the data order is upper left to lower right, left column first. The data transmission form of one contiguous data stream follows the table (Figure VI – 4).*

**Table VI – 4 – Reducing Figure VI – 3 to a Data Stream Using DI "F"**

| | | |
|---|---|---|
| []>$^{R}_{S}$06$^{G}_{S}$ | F11100X$^{G}_{S}$ | 25SUN043325711Serial21$^{G}_{S}$ |
| F01001S$^{G}_{S}$ | 25SUN043325711Serial11$^{G}_{S}$ | 25SUN043325711Serial12$^{G}_{S}$ |
| 2QShipment01$^{G}_{S}$ | 25SUN043325711Serial12$^{G}_{S}$ | 25SUN043325711Serial23$^{G}_{S}$ |
| F02011O$^{G}_{S}$ | 25SUN043325711Serial13$^{G}_{S}$ | 25SUN043325711Serial44$^{G}_{S}$ |
| KOrder02$^{G}_{S}$ | 25SUN043325711Serial14$^{G}_{S}$ | F25181P$^{G}_{S}$ |
| F03021T$^{G}_{S}$ | F15081P$^{G}_{S}$ | JUN043325711Pack25$^{G}_{S}$ |
| JUN043325711Pallet03$^{G}_{S}$ | JUN043325711Pack15$^{G}_{S}$ | F26251I$^{G}_{S}$ |
| F04030I$^{G}_{S}$ | F16150I$^{G}_{S}$ | 25PUN043325711Item26$^{G}_{S}$ |
| 25PUN043325711Item04$^{G}_{S}$ | 25PUN043325711Item16$^{G}_{S}$ | F27261F$^{G}_{S}$ |
| 25PUN043325711Item05$^{G}_{S}$ | F17011O$^{G}_{S}$ | 25PUN043325711Comp27$^{G}_{S}$ |
| 25PUN043325711Item06$^{G}_{S}$ | KOrder17$^{G}_{S}$ | F28270X$^{G}_{S}$ |
| 25PUN043325711Item07$^{G}_{S}$ | F18171T$^{G}_{S}$ | 25SUN043325711Serial28$^{G}_{S}$ |
| F08021T$^{G}_{S}$ | JUN043325711Pallet17$^{G}_{S}$ | 25SUN043325711Serial29$^{G}_{S}$ |
| JUN043325711Pallet08$^{G}_{S}$ | F19181P$^{G}_{S}$ | 25SUN043325711Serial30$^{G}_{S}$ |
| F09081P$^{G}_{S}$ | JUN043325711Pack19$^{G}_{S}$ | 25SUN043325711Serial31$^{R}_{S}E_{OT}$ |
| JUN043325711Pack09$^{G}_{S}$ | F20191I$^{G}_{S}$ | |
| F10091I$^{G}_{S}$ | 25PUN043325711Item20$^{G}_{S}$ | |
| 25PUN043325711Item10$^{G}_{S}$ | F21200X$^{G}_{S}$ | |

The following example shows how the data from Table VI - 4 would be encoded – as one continuous data stream;

[]>$^{R}_{S}$06$^{G}_{S}$F01001S$^{G}_{S}$2QShipment01$^{G}_{S}$F02011O$^{G}_{S}$KOrder02$^{G}_{S}$F03021T$^{G}_{S}$JUN043325711Pallet03$^{G}_{S}$F04030I$^{G}_{S}$25PUN043325711Item04$^{G}_{S}$25PUN043325711Item05$^{G}_{S}$25PUN043325711Item06$^{G}_{S}$25PUN043325711Item07$^{G}_{S}$F08021T$^{G}_{S}$JUN043325711Pallet08$^{G}_{S}$F09081P$^{G}_{S}$JUN043325711Pack09$^{G}_{S}$F10091I$^{G}_{S}$25PUN043325711Item10$^{G}_{S}$F11100X$^{G}_{S}$25SUN043325711Serial11$^{G}_{S}$25SUN043325711Serial12$^{G}_{S}$25SUN043325711Serial13$^{G}_{S}$25SUN043325711Serial14$^{G}_{S}$F15081P$^{G}_{S}$JUN043325711Pack15$^{G}_{S}$F16150I$^{G}_{S}$25PUN043325711Item16$^{G}_{S}$F17011O$^{G}_{S}$KOrder17$^{G}_{S}$F18171T$^{G}_{S}$JUN043325711Pallet17$^{G}_{S}$F19181P$^{G}_{S}$JUN043325711Pack19$^{G}_{S}$F20191I$^{G}_{S}$25PUN043325711Item20$^{G}_{S}$F21200X$^{G}_{S}$25SUN043325711Serial21$^{G}_{S}$25SUN043325711Serial12$^{G}_{S}$25SUN043325711Serial23$^{G}_{S}$25SUN043325711Serial44$^{G}_{S}$F25181P$^{G}_{S}$JUN043325711Pack25$^{G}_{S}$F26251I$^{G}_{S}$25PUN043325711Item26$^{G}_{S}$F27261F$^{G}_{S}$25PUN043325711Comp27$^{G}_{S}$F28270X$^{G}_{S}$25SUN043325711Serial28$^{G}_{S}$25SUN043325711Serial29$^{G}_{S}$25SUN043325711Serial30$^{G}_{S}$25SUN043325711Serial31$^{R}_{S}E_{OT}$

**Figure VI – 4 – Encodeable Data**

The following is another example from the telecommunication industry.

Presume the following EDI data:

| **EDI DATA** | **EXPLANATION.** |
|---|---|
| ST~856~000000001\| | ASN Transaction Set - Transaction Set Control #000000001 |
| BSN~00~000002~20010207~1001\| | Original Ship Notice #000002Created 02/07/01 at 10:01 am |
| DTM~011~20010207\| | Shipped on 2/07/01 |
| HL~001~~S\| | Hierarchical Segment #1 - Shipment Level |
| TD5~~2~HMES | Shipped via USF Holland |
| REF~BM~104462 | Bill of Lading = 104462 |
| REF~CN~6783222 | Carrier Pro # = 6783222 |
| NI~ST~SBC\| | Ship to Name |

| | |
|---|---|
| N3~1700 HAZEL DELL RD\| | Ship to Address |
| N4~SPRINGFIELD~IL~627035258\| | Ship to City, State, Zip Code (9 digits) |
| HL~002~001~O\| | Hierarchical Segment #2- Order Level Subordinate to HL001 |
| PRF~AB~347554 | P.O. Number = AB347554 |
| REF~VN~V11234345 | Supplier's Order No. = V11234345 |
| REF~IV,A00001\| | Invoice No. A00001 |
| REF~PK~B12456\| | Packing List No. B12456 |
| HL~003~002~I\| | Hierarchical Segment #3, Item Level Subordinate to HL002 |
| LIN~0001~IN~102421930\| | SBC's Product Identifier = 102421930 |
| SN1~001~600~FT\| | Total qty. shipped = 600 ft |
| PRF~AB347554~~~~0001\| | P.O. Number = AB34755 - Item = 0001 |
| CLD~02~600\| | Number of reels = 2<br>Number of units shipped on reels = 600 (feet as in SN103), |
| REF~LS~ABCD+40000\| | 3S Bar Code Label = ABCD+40000, |
| REF~SE~AS23D145\| | Cable Reel Serial # = AS23D145, |
| REF~MR~EEE\| | Cable Reel Type = EEE, |
| REF~LS~ABCD+40001\| | 3S Bar Code Label = ABCD+40001, |
| REF~SE~AS23D146\| | Cable Reel Serial # = AS23D146, |
| REF~MR~EEE\| | Cable Reel Type = EEE, |
| HL~004~002~I\| | Hierarchical Segment #4 -<br>Item Level Subordinate to HL002, |
| LIN~0002~VN~TLT395\| | Vendor Part #TLT395, |
| SN1~002~2~EA\| | Total qty. shipped = 2EA, |
| PRF~AB347554~~~~0003\| | P.O. Number = AB34755, Item = 0003, |
| CLD~02~2\| | Number of containers = 2<br>Number of units shipped in containers = 2, |
| REF~LS~ABCD+40002\| | 3S Bar Code Label = ABCD+40002, |
| REF~LS~ABCD+40003\| | 3S Bar Code Label = ABCD+40003, |
| CTT~4~602\| | HL Segments = 4<br>Total Shipped Quantities = 602, |
| SE~35~000000001\| | Segments = 35<br>Transaction Set Control # = 000000001, |

**Figure VI – 5 – EDI Message**

Table VI-6, below, uses the data from Figure VI - 5 and shows DI equivalence.

**Table VI – 6 – Associating Data Identifier Data with X12 EDI Data**

| X12 856 EDI DATA | EXPLANATION | DATA IDENTIFIER DATA |
|---|---|---|
| DTM~011~20010207\| | Shipped on 2/07/01 | 5D010207011 |
| HL~001~~S\| | Hierarchical Segment #1-Shipment Level | F01001S |
| TD5~~2~HMES\| | Shipped via USF Holland | (See Pro #) |
| REF~BM~104462\| | Bill of Lading = 104462 | 3K104462 |
| REF~CN~6783222\| | Carrier Pro # = 6783222 | 12KHMES6783222 |
| NI~ST~SBC\| | Ship to Name | NI~ST~SBC |
| N3~1700 HAZEL DELL RD\| | Ship to Address | N3~1700 HAZEL DELL RD |

| | | |
|---|---|---|
| N4~SPRINGFIELD~IL~ 627035258\| | Ship to City, State, Zip Code (9 digits) | N4~SPRINGFIELD~IL~ 627035258 |
| HL~002~001~O\| | Hierarchical Segment #2- Order Level Subordinate to HL001 | F02011O |
| PRF~AB~347554\| | P.O. Number = AB347554 | KAB347554 |
| REF~VN~V11234345\| | Supplier's Order No. = V11234345 | 1KV11234345 |
| REF~IV~A00001\| | Invoice No. A00001 | 10KA00001 |
| REF~PK~B12456\| | Packing List No. B12456 | 11KB12456 |
| HL~003~002~I\| | Hierarchical Segment #3 - Item Level Subordinate to HL002 | F03020I |
| LIN~0001~IN~102421930\| | SBC's Product Identifier = 102421930 | P102421930 |
| SN1~001~600~FT\| | Total qty. shipped = 600 ft | 7Q600FT |
| PRF~AB347554~~~~0001\| | P.O. Number = AB347554Item = 0001 | 14KAB347554+0001 |
| CLD~02~600\| | Number of reels = 2 - Number of units shipped on reels = 600 (feet as in SN103) | 7Q2RE<br>7Q600FT |
| REF~LS~ABCD+40000\| | 3S Bar Code Label = ABCD+40000 | 3SABCD+40000 |
| REF~SE~AS23D145\| | Cable Reel Serial # = AS23D145 | SAS23D145 |
| REF~MR~EEE\| | Cable Reel Type = EEE | BEEE |
| REF~LS~ABCD+40001\| | 3S Bar Code Label = ABCD+40001 | 3SABCD+40001 |
| REF~SE~AS23D146\| | Cable Reel Serial # = AS23D146 | SAS23D146 |
| REF~MR~EEE\| | Cable Reel Type = EEE | BEEE |
| HL~004~002~I\| | Hierarchical Segment #4 - Item Level Subordinate to HL002 | F04020I |
| LIN~0002~VN~TLT395\| | Vendor Part #TLT395 | 1PTLT395 |
| SN1~002~2~EA\| | Total qty. shipped = 2EA | Q2 |
| PRF~AB347554~~~~0003\| | P.O. Number = AB347554 - Item = 0003 | 14KAB347554+0003 |
| CLD~02~2\| | Number of containers = 2\ - Number of units shipped in containers = 2 | 7Q2CH |
| REF~LS~ABCD+40002\| | 3S Bar Code Label = ABCD+40002 | 3SABCD+40002 |
| REF~LS~ABCD+40003\| | 3S Bar Code Label = ABCD+40003 | 3SABCD+40003 |
| 484 characters (not including address information [N1, N3, N4]) | | 285 characters (not including address information [N1, N3, N4]) |

The telecommunication industry concluded that they do not require the Ship To information encoded in the machine-readable media that would accompany the shipment. If the complete EDI transaction were encoded, including the 71 characters associated with the ST, BSN, CTT, and SE segments and the 161 characters associated with the ISA, GS, GE, and IEA segments the complete EDI message would have been 716 (484+71+161) characters in length as opposed to the 285 when encoded with Data Identifiers.

Encoding this data using the Hierarchical Looping Data Identifier "F", it would appear as follows;

(*NOTE: The example below shows the data stream in a "visual" mode – this is NOT how it will appear when encoded*)

**TABLE VI – 7 – EDI Data using DI "F" – showing data in "visual" mode**

| | | |
|---|---|---|
| []>$^{R}_{S}$06$^{G}_{S}$<br>F01001S$^{G}_{S}$<br>5D010207011$^{G}_{S}$<br>3K104462$^{G}_{S}$<br>12KHMES6783222$^{G}_{S}$<br>F02011O$^{G}_{S}$<br>KAB347554$^{G}_{S}$<br>1KV11234345$^{G}_{S}$<br>10KA00001$^{G}_{S}$<br>11KB12456$^{G}_{S}$ | F03020I$^{G}_{S}$<br>P102421930$^{G}_{S}$<br>7Q600FT$^{G}_{S}$<br>14KAB347554+0001$^{G}_{S}$<br>7Q2RE$^{G}_{S}$<br>7Q600FT$^{G}_{S}$<br>3SABCD+40000$^{G}_{S}$<br>SAS23D145$^{G}_{S}$<br>BEEE$^{G}_{S}$<br>3SABCD+40001$^{G}_{S}$ | SAS23D146$^{G}_{S}$<br>BEEE$^{G}_{S}$<br>F04020I$^{G}_{S}$<br>1PTLT395$^{G}_{S}$<br>Q2$^{G}_{S}$<br>14KAB347554+0003$^{G}_{S}$<br>7Q2CH$^{G}_{S}$<br>3SABCD+40002$^{G}_{S}$<br>3SABCD+40003$^{R}_{S}E_{OT}$ |

Figure VI - 6 shows how the data in Table VI – 7 would be encoded – as one continuous data stream;

[]>$^{R}_{S}$06$^{G}_{S}$F01001S$^{G}_{S}$5D010207011$^{G}_{S}$3K104462$^{G}_{S}$12KHMES6783222$^{G}_{S}$F02011O$^{G}_{S}$KAB347554$^{G}_{S}$1KV11234345$^{G}_{S}$10KA00001$^{G}_{S}$11KB12456$^{G}_{S}$F03020I$^{G}_{S}$P102421930$^{G}_{S}$7Q600FT$^{G}_{S}$14KAB347554+0001$^{G}_{S}$7Q2RE$^{G}_{S}$7Q600FT$^{G}_{S}$3SABCD+40000$^{G}_{S}$SAS23D145$^{G}_{S}$BEEE$^{G}_{S}$3SABCD+40001$^{G}_{S}$SAS23D146$^{G}_{S}$BEEE$^{G}_{S}$F04020I$^{G}_{S}$1PTLT395$^{G}_{S}$Q2$^{G}_{S}$14KAB347554+0003$^{G}_{S}$7Q2CH$^{G}_{S}$3SABCD+40002$^{G}_{S}$3SABCD+40003$^{R}_{S}E_{OT}$

**Figure VI – 6 – EDI Message in Encodeable Form**

# ANNEX A

## Informative

## QUICK REFERENCE TO DATA INDENTIFIER (DI) CATEGORIES

## Outline of Defined Categories

| | |
|---|---|
| CATEGORY 0 | Special Characters Employed as Data Identifiers |
| CATEGORY 1 | Reserved |
| CATEGORY 2 | Container Information |
| CATEGORY 3 | Field Continuation |
| CATEGORY 4 | Date |
| CATEGORY 5 | Environmental Factors |
| CATEGORY 6 | Looping |
| CATEGORY 7 | Reserved |
| CATEGORY 8 | Human Resources |
| CATEGORY 9 | Reserved |
| CATEGORY 10 | License Plate |
| CATEGORY 11 | Transaction Reference |
| CATEGORY 12 | Location Reference |
| CATEGORY 13 | Maintenance Codes |
| CATEGORY 14 | Industry Assigned Codes |
| CATEGORY 15 | Reserved |
| CATEGORY 16 | Item Information |
| CATEGORY 17 | Measurement |
| CATEGORY 18 | Miscellaneous |
| CATEGORY 19 | Traceability Number for an Entity |
| CATEGORY 20 | Traceability Number for Groups of Entities |
| CATEGORY 21 | UPU / MH 10/SC8/WG2 Agreed Upon Codes |
| CATEGORY 22 | Party to the Transaction |
| CATEGORY 23 | Activity Reference |
| CATEGORY 24 | Reserved |
| CATEGORY 25 | Internal Applications |
| CATEGORY 26 | Mutually Defined |

## Alphabetical Listings of Assigned DI Categories

# ANNEX B

## Informative

## ANNOTATED ALPHABETICAL LISTING OF ASSIGNED DATA IDENTIFIER (DI) CATEGORIES

# Annotated Alphabetical Listing of Assigned DI Categories

**ACTIVITY REFERENCE** **CATEGORY 23**

This category relates to work activities, such as Work Order, Operation and Sequence numbers. It should not be confused with Category 11 (Transaction Reference), which relates to purchasing transactions.

**CONTAINER INFORMATION** **CATEGORY 2**

This category relates to identification of returnable containers such as compressed gas cylinders, wire reels, transportation equipment and other returnable-type containers. While many of these numbers are serial numbers, this category exists to provide an easy distinction between container serial number and product or label serial number referenced in
Category 19 (Traceability Number for an Entity).

**DATE** **CATEGORY 4**

This category relates to a variety of date structures, as well as to the significance of the date (e.g., Date of Manufacture or Expiration Date).

**ENVIRONMENTAL FACTORS** **CATEGORY 5**

This category relates to identification of environmental issues such as temperature, air pressure, wind speed, and similar measurements. Where Category 5 defines environmental measurements, Category 17 defines physical measurements.

**FIELD CONTINUATION** **CATEGORY 3**

This category relates to the continuation of data from a defined field which must be broken into two symbols because of space or other constraints. Only some of the assigned DI fields have valid continuation assignments.

**HUMAN RESOURCES** **CATEGORY 8**

This category relates to personnel identification.

**INDUSTRY ASSIGNED CODES** **CATEGORY 14**

This category relates to code or numbering systems that are controlled by and specific to a specific industry or governmental agency (e.g., NATO Stock Number). This allows for unambiguous identification of those code systems within the ANSI MH10.8.2 DI framework without necessitating the assignment of unique ANSI MH10.8.2 DIs for those items that have little or no relevance to those outside that industry or governmental agency.

**INTERNAL APPLICATIONS** **CATEGORY 25**

This category relates to the use of DIs for purposes that will remain within a closed system and for which a valid ANSI MH10.8.2 DI cannot provide unambiguous reference. For use within a single manufacturing facility, for example, the use of the Internal Applications DI (Y) could precede any other ANSI MH10.8.2 DI which could be defined, in that instance, for a purpose which is not in conformance with these guidelines.

**ITEM INFORMATION** **CATEGORY 16**

This category relates to the identification or characteristics of an item (see definitions), such as its Part Number, Manufacturing Revision Level or its Classification as a Hazardous Material. An item is something that is not identified as a unique entity but rather as representative of all other like items (see Definitions for further information). Additional DIs (20P-24P and 30P-34P) are set aside for descriptive information not otherwise provided for and which is defined between trading partners or intended for internal use (but with messages that will leave the system, precluding the use of a Category 25 DI). This category should not be confused with Category 19, Traceability Number for an Entity, nor Category 20, Traceability Number for a Group of Entities, both of which provide for identification of unique entities (see definitions).

**LICENSE PLATE** **CATEGORY 10**

This category relates to a worldwide unique identification of a transport unit or a unitized load (e.g., shipping container or pallet). Each DI is comprised of a unique Issuing Agency Code (IAC) assigned pursuant to ISO/IEC 15459, a world-wide unique organizational/entity/company identification number assigned by the IAC, and a unique transport unit/unitized load number assigned by the organization, entity, or company[13].

**LOCATION** **CATEGORY 12**

This category relates to either a physical location that is used as a reference point (such as a Shelf Location) or to a physical location that is used as a destination reference (such as a Ship To address). Of particular note are the assignments 51L-52L and 54L-55L that relate to postal codes used as shipping addresses. These two sets of DIs provide for both domestic and international use (with an ISO country code suffix).

**LOOPING** **CATEGORY 6**

This category relates to the parent/child relationship between various fields of data, using pre-existing techniques from electronic data interchange. An example is where a shipment contains multiple orders over multiple pallets, multiple packages, multiple items, with multiple serial numbers. Using techniques described within Annex F of this document it is possible to relate a given serial number with a specific order.

**MAINTENANCE CODES** **CATEGORY 13**

This category identifies specific codes used in maintenance functions, including those functions expressed over time such as machine-on time, mean-time-between-failure, and the like.

**MEASUREMENT** **CATEGORY 17**

This category relates to physical dimensions, measures, quantity or monetary value of an item or group of items (may refer to entities as well). Of particular note is the assignment 7Q that is quantity followed by an ANSI Data Element 355 description of unit of measure. To indicate that there are n cartons in the shipment with x items per carton, either two 7Q fields can appear in the same message with appropriate ANSI modifiers or a 7Q can be used with a Q (generic quantity) with the significance mutually defined.

[13] Note: An exception within the License Plate category is the inclusion of “7J” Vehicle Registration License Plate Number (not unique without identification of country and issuing governmental region/authority)

**MISCELLANEOUS** **CATEGORY 18**

This category relates to DIs that cannot otherwise be categorized (currently contains Return Authorization Codes).

**MUTUALLY DEFINED** **CATEGORY 26**

This category relates to data or information which has not been assigned a DI within this document and which trading partners need to include in their automatic identification application. The structure and significance of this information is to be agreed upon by all appropriate parties to the transaction.

**PARTY TO THE TRANSACTION** **CATEGORY 22**

This category relates to codes that identify all business entities that may be a party to a transaction (e.g., Vendor Number, Customer Number or Carrier Number).

**SPECIAL CHARACTERS** **CATEGORY 0**

This category relates to the use of a non-alpha, non-numeric character in the first data position of an automatic identification message (e.g., bar code) to identify the message as being controlled by a specific organization (e.g., Health Industry Business Communications Council, Uniform Code Council).

**TRACEABILITY NUMBER FOR AN ENTITY** **CATEGORY 19**

This category relates to the identification of a specific item (entity) in a unique manner for purposes of tracing that entity. Codes with this category DIs may identify a finished product or they may identify packaging that contains multiple entities if the packaging is what is being tracked. If a DI from this category is used, an identical message on another entity should never be found within the originating system. For example, a television's serial number is a traceability number for an entity, as is a unique number assigned to a carton to identify it in conjunction with an EDI transaction. This category should not be confused with Category 16 (Item Identification), which provides for identification of all like items (where an identical message would certainly the found within the same system), or with Category 20, which provides unique identification for groups of entities (see below).

**TRACEABILITY NUMBER FOR GROUPS OF ENTITIES** **CATEGORY 20**

This category relates to the identification of a lot, batch or other grouping of entities for purposes of tracing that group. Additional DIs (20T-24T and 30T-34T) have been set aside for additional information which is not otherwise provided for and which is mutually defined between trading partners or intended for internal use (but with messages which will leave the system, precluding the use of a Category 25 DI). This should not be confused with Category 19 (Traceability Number for an Entity) or Category 16 (Item Identification).

**TRANSACTION REFERENCE** **CATEGORY 11**

This category relates to the identification of agreements or correspondence that is involved in the sale, purchase or transportation of goods or services. This category is distinct from Category 23 (Activity Reference) that relates to the production of such goods and/or services.

**UPU / MH 10/SC8 AGREED UPON CODES** **CATEGORY 21**

This category relates to a set of identifiers (“5U” to “55U”) that may be unique to the nature of the business of the United Postal Union (UPU) postal authorities that might not otherwise be used within the supply chain. The agreement between the UPU and ANSI MH10/SC 8 is such that the UPU will endeavor to use DIs common to the rest of the marketplace. Only where there is a unique postal requirement for a unique DI, UPU may utilize one or more of the Category 21 DIs with the collaboration of ANSI MH10/SC 8.

# ANNEX C

## Normative

## DATA IDENTIFIER (DI) APPLICATION NOTES

# APPLICATION NOTES

The ANSI MH10.8.2 DI Standard addresses general requirements for Data Identifiers. Industry- or company-wide application standards will further define and regulate the use of any or all Data Identifiers in this document.

The basic structure of a ANSI MH10.8.2 DI is an alphabetic character preceded by 1, 2, 3 or no numeric digits. To decode an ANSI MH10.8.2 DI, software must parse the data up to the first alphabetic character and then evaluate that alphabetic character and the preceding numeric characters, if any.

However, it is recognized that some organizations will face implementation problems that cannot be fully covered in the general guidelines or that additional information on the intended use of certain of the DIs assigned in this document will be needed. The following application notes may be of some assistance.

The following topics are discussed in this Annex.

## C.1 THE USE OF GS1 NUMBERS

A number of industries have mandated that their members secure GS1 numbers in order to provide a common vendor numbering system. However, many of these organizations also employ alphanumeric coding schemes and/or include additional information that is not provided for by any GS1 standard and, therefore, are not in compliance with GS1 specifications. These applications are valid *only* for the respective industries which have issued standards which accept GS1 numbering in addition to other numbering systems which require alpha-numeric symbologies or which have otherwise mandated the use of these numbering systems.

In no case should ANSI MH10.8.2 DIs be used in conjunction with, or in place of, approved GS1 symbols for retail or POS applications for which the GS1 Global Trade Item Number (GTIN) has been mandated. In all such cases, only the appropriate GS1standards and specifications shall be applicable.

Questions on the use of GS1 numbering systems and standards, as well as the use of the GS1 bar code symbologies, can be obtained from the respective agency (address listed in this document).

## C.2 THE USE OF ANSI AND ISO DATA ELEMENT IDENTIFIERS

For some DI assignments, qualifiers (suffixes) are used to provide additional significance to the data in the message. These qualifiers are drawn from ANSI and ISO Electronic Data Interchange (EDI) standards. In all cases the current "Draft Standard Approved for Trial Use" shall be the authoritative document.

In some instances, American National Standards Institute (ANSI) X12.3 Data Element Qualifiers are used. In other instances, International Standards Organization (ISO) codes are used. ANSI MH10.8.2 would prefer to use internationally accepted (ISO) codes for all applications but ISO standards do not exist for all needs.

EDIFACT, the United Nations EDI Standard, does provide codes for applications for which ANSI standards are referenced. However, EDIFACT does not yet have a practical coordination and review body that could assign additional codes as needed.

Insofar as this will be a dynamic document that will evolve new assignments in order to meet the needs of automatic identification users around the world, it was felt that an organization, which did have a professional staff to be responsive to requests, was essential. For this reason, ANSI standards have been used where necessary.

## C.3 DATE SIGNIFICANCE

Provisions are made for various data codings in Category 4. Most DIs pertain to a specific date structure (e.g., DDMMYY) but do not specify the significance of the date.

In many applications, the structure of the date is mandated but the significance of the date is mutually agreed between trading partners and assignments ("D"-"5D") may be used in these cases.

Further, when both the structure and significance of the date is mutually defined, the assignment "9D" may be used.

However, when the significance of the date must be included, the assignments "6D" and "7D" use an ANSI Qualifier following the date to indicate its significance. The following examples show how this might be applied.

**Example: DI/Data/ANSI Qualifier**

| | |
|---|---|
| Date of Manufacture (2-digit year, month, day) | **6D**890420**049** |
| Expiration Date (4-digit year, month, day) | **7D**20051231**036** |

## C.4 LOCATION CODING

The following topics are covered in this note. Location coding is covered in Category 12.

- "Ship From", "Ship To", "Ship For" location codes
- Multiple levels of location, marking.

### C.4.1 Ship From, Ship To, Ship For

In order to facilitate automated sortation and routing of shipments, location codes for shipping locations have been provided. The assignments provides for three possible locations.

- Ship From
- Ship To
- Ship For (mutually defined)

There are two different sets of assignments for "Ship From" and "Ship To" location:

- Mutually defined or industry standard ("3L" & "2L")
- Postal code location ("51L" & "52L" and "54L" & "55L")

The use of mutually defined or industry standards will not be discussed here other than to note that the "Ship For" destination code (5L) will generally be printed by the supplier at the customer's request and used by the customer to facilitate automated internal routing of shipments. The "Ship For" code will, therefore, have significance only to the customer.

The use of postal authority codes (postal codes) does, however, merit some discussion. In this section, only the "open system" ANSI MH10.8.2 DIs will be discussed.

**General Considerations**

When postal codes are used which fall within the jurisdiction of a single postal authority (generally, the same country), there is no ambiguity of the location referred to. These are assignments "51L" ("Ship From") and "52L" ("Ship To").

However, postal coding systems around the world may present ambiguities to computer systems. For example, many European postal codes, as well as others around the world, are 4-digit numeric codes. Thus, the postal code "6300" could exist in more than one country. Without a means for identifying the country that administers that particular postal code, the data is meaningless.

Within Europe there is a postal convention that allows the inclusion of a country code preceding the numeric code. Following this convention, "CH-6300" refers to a Swiss (Confederation Helvetia) postal code.

Most postal authorities do not have such conventions, however, so another means of identifying the postal authority is needed - one that does not conflict with the European convention.

The ANSI MH10.8.2 DI Standard uses 2-character ISO country codes following the postal code for this purpose.

The following protocol is used in the ANSI MH10.8.2 DI Standard.

**"Domestic" Postal Codes**

If the shipment is within a single country or postal authority, use of the appropriate "domestic" DI ("51L" or "52L") preceding the postal code is all that is required. *For the European postal convention countries, the "domestic" postal code DIs may be used with the proper country prefix included in the data portion of the labeling device* (e.g., bar code label, RFID tag).

**"International" Postal Codes**

If the shipment is to move between countries or postal authorities, the appropriate "international" DI ("54L" or "55L") preceding the postal code will indicate that an ISO country code follows the postal code.

**Example 1: "Domestic" shipments (within the same postal authority).**

| Location | City, Country | **DI**/Postal Code |
|---|---|---|
| "Ship From" | Zug, Switzerland | **51L**6300 |
| "Ship To" | Geneva, Switzerland | **52L**1216 |

**Example 2: "Domestic" shipments (within the European postal convention)**

| Location | City, Country | **DI**/*Country*/Postal Code |
|---|---|---|
| "Ship From" | Zug, Switzerland | **51L***CH*6300 |
| "Ship To" | Brussels, Belgium | **52L***B*1150 |

**Example 3: Shipment between postal authorities**

| Location | City, Country | **DI**/Postal Code/**ISO Qualifier** |
|---|---|---|
| "Ship From" | Zug, Switzerland | **54L**6300**CH** |
| "Ship To" | Morley, Western Australia | **55L**6062**AU** |

*NOTE: Italics and bold are used for emphasis and are not used in actual coding.*

It should also be noted that the longest possible bar code (excluding start, stop and symbology check characters) will be 14 characters (3-character DI, 9-digit U.S.A. Zip Code, 2-character ISO country code).

### C.4.2 Multiple Levels of Location Marking

Provision is made in this document for multiple levels of location marking ("1L", "20L"- "24L"). These are considered to be for internal or mutually defined use.

The "Location" assignment is considered to be "generic" and is kept to two characters to reduce symbol length.

For applications that require further differentiation or a hierarchical method of indicating location *and require that information in the DI,* the "First Level" through "Fifth Level" assignments is provided. An example of their use is indicated below.

**Example 1: Hierarchical Location**

| Location Description | DI |
|---|---|
| Building Number | 1L |
| File Storage Room Number | 20L |
| File Cabinet Row Number | 21L |
| File Cabinet Number | 22L |
| File Cabinet Drawer Number | 23L |
| File Number | 24L |

**Example 2: Location Differentiation**

| Location Description | DI |
|---|---|
| Building Number | 1L |
| Machine Tool Location Number | 20L |
| Physical Plant Equipment Location Number | 21L |
| Routing Location Number | 22L |
| Asset Control Room/Location Number | 23L |
| Mail Stop | 24L |

## C.5 ITEM IDENTIFICATION

Product identification DIs are assigned in Category 16, "Item Information." Multiple levels of identification are provided for both supplier ("1P" and "30P"-"34P") and customer ("P" and "20P" - "24P").

The "1P" and "P" assignments are intended to be the most commonly used DIs. However, many business entities have additional requirements that suggest the use of additional DIs for product identification. The following examples show how they might be used.

**Example 1: Multiple Product Characteristics (as assigned by supplier)**

| Description | DI |
|---|---|
| Shoe Style Number | 1P |
| Length | 30P |
| Width | 31P |
| Color | 32P |
| Material | 33P |
| Trim | 34P |

**Example 2: Multiple Product Identifications (as assigned by customer)**

| Description | DI |
|---|---|
| Part Number | P |
| Old Catalog Number | 20P |
| New Catalog Number | 21P |
| *Additional information* | 22P |
| *Additional information* | 23P |
| *Additional information* | 24P |

## C.6 QUANTITY

Quantity, number of pieces, or “amount” DIs are assigned in Category 17, "Measurement." The following topics are covered in this section.

- Quantity followed by a unit of measure
- Monetary value followed by a unit of measure
- Number of cartons within a shipment

### C.6.1 Quantity Followed by Unit of Measure

For applications in which the quantity that will be referred is unambiguous and clearly understood between trading partners, the assignment "Q" should be used. Other assignments exist for other, defined, measures.

However, where there is more than one quantity or where the unit of measure needs to be specified, the assignment "7Q" allows for qualification of the value through the use of an 2-digit ANSI Unit of Measure Code.

The unit of measure code immediately follows the data. Because of the ability to qualify the amount, more than one "7Q" message may be found on a single labeling device.

The following examples show how this could be applied.

**Example: Quantity, Measure**

| Measure | **DI**/Data/**ANSI Qualifier** |
|---|---|
| Number of pieces in box (mutually defined) | **Q**144 (no qualifier) |
| Weight of each piece (in kilograms) | **7Q**21.25**KG** |
| Rated capacity (in kilowatt hours) | **7Q**I2**KH** |
| Overall length (in inches, decimal, nominal) | **7Q**35.6**ED** |

### C.6.2 Value

Provision is made for the definition of unit of value ("12Q") by using an ISO country/currency code following the data. The use of this DI must be mutually defined between trading partners. The following examples show how this could be applied.

**Example: Value of Item**

| Description | **DI**/Data/**ISO Qualifier** |
|---|---|
| Value of each piece in U.S. Dollars ($12.75) | **12Q**12.75**USD** |
| or | |
| Value of shipment in U.S. Dollars ($14,500) | **12Q**\|4500**USD** |

### C.6.3 Number of Carton Within Shipment

A DI has been assigned to allow information concerning the number of a carton within a shipment ("13Q"). The structure of the data follows the format:

*n/x*

where: *n* is the number of the carton within the shipment

/ is the separator between numeric fields (must be encoded)

*x* is the total number of cartons in the shipment.

**Examples:**

| Description | **DI**/Data |
|---|---|
| 5th carton in shipment of 6 cartons | **13Q**5/6 |
| 127th carton in shipment of 127 cartons | **13Q**\|27/127 |

## C.7 PACKAGING IDENTIFICATION

Package Identification DIs are assigned in Category 19, "Traceability Number for an Entity." These identifiers are used on labeling devices (e.g., trading partner bar code transaction labels) attached to packaging.

The following topics are discussed in this section.

- Master packaging identification - customer order reference
- Identification of lowest level of packaging

Packaging identification generally is a unique number that identifies that package from all other packages. This number is usually used in conjunction with a supplier identification to provide a completely unique number.

Master packs (sometimes referred to as "unit loads") are transport units either made up of a number of filled transport packages or items held together by pallet, slip sheet, strapping, etc. or comprised of a single large container expressly designed to make items suitable for transportation, stacking, and storage as a unit.

Many industry standards require lower levels of packaging identification (using a lower level DI) within Master Packs to complete a transaction process. Trading partners are encouraged to utilize the lowest level DI and configure shipments accordingly.

### C.7.1 Master Pack Identification

Provision is made for identification of the following information on the master packaging label ("4S"-"7S").

- Whether items within the package are the same or different.
- Whether items within the package are covered by one customer order or more than one customer order.

**Assignments "4S" and "5S"**

Assignments "4S" and "5S" are used when the items in the shipment are covered under the same customer order. The "4S" DI is used when the items are the same. The "5S" DI is used when the items are not the same.

If there is no interest in identifying whether single or multiple customer orders are contained within the packaging *and there is a strong argument against using all four DIs,* then all shipments should be identified as being "on the same customer order" (i.e., not referenced) and "4S " and "5S " can be used.

**Assignments "6S" and "7S"**

The "6S" and "7S" DIs are used to indicate that the items in the package are covered by multiple customer orders. "6S" is used when the items are the same, "7S" when the items are not the same.

Implicit in the use of "6S" and "7S" is the assumption that "4S" and "5S" DIs will also be encountered by the reading system.

See the next section for information about labels at lower levels within master packaging.

## C.7.2 Lowest Level of Packaging

In some instances, packaging identification labels (other than part number) will be affixed to packaging within a master pack. A DI is provided to indicate that no further levels of packaging identification will be found within the package ("3S").

It is assumed that "3S" will be affixed to packaging which contains like items and that no further scanning will be required for package tracking purposes.

It is assumed that "3S" will usually be placed on packaging that is intended for transport or storage and will contain sub-packs on which only item identification is found. "3S" labels will generally be found on intermediate packaging occurring between the Product Identification and Master Packaging. It is further assumed that the "3S" symbol will generally be found within a master pack which contains a DI from the range "4S - "7S".

## C.8 LOT/BATCH IDENTIFICATION

Lot and batch identification DIs are assigned in Category 20, "Traceability Number for Groups of Entities." Multiple levels of identification are provided for both supplier ("T" and "30T"-"34T") and customer ("IT" and "20T"-"24T").

The "T" and "1T" assignments are intended to be the most commonly-used DIs. However, many business entities have additional requirements that suggest the use of additional DIs for product identification. The following examples show how they might be used.

**Example: Multiple Lot/Batch Information (as assigned by supplier)**

| Description | DI |
|---|---|
| Lot Number | 1T |
| Production Batch Number | 30T |
| Testing Batch Number | 31T |
| Shipment Lot Number | 32T |
| Additional information | 33T |
| Additional information | 34T |

## C.9 ASSIGNMENT "4K"

"Line number of the order assigned by the Customer to identify a Purchasing Transaction." This DI refers to the physical line number of an order on which a large number of items are requested. In some trading relationships, master orders are issued which cover a specified period of time and products are released against the order over time. The process simplifies paperwork for routinely ordered items that are not to be shipped in a single lot.

In such an instance, a simple reference to an order number (e.g., Purchase Order, Work Order, etc.) is not sufficient. For these instances, the "4K" data refers to the specific line of the order in which the product or service is referenced.

The line number and order may refer to electronic or paper transactions.

## C.10 ASSIGNMENT "18K" Structured Reference

Many data identifier allocations correspond to identifiers, (e.g., bar code) representations that are intended to be engraved or printed on, or affixed to, the physical objects they identify. Container identifiers (category B), License Plates (J), Item Identifiers (P), and Traceability Numbers (S) fall into this category.

These identifiers are also commonly used in communications about the objects they identify. Where such communications are purely electronic, it is self evident that what is communicated is a reference to the object identified. However, particularly in the postal world and in logistics applications, there are situations in which it is desirable to communicate such reference information in the form of a bar code (or 2D symbol or RF tag) that is printed on or attached to a physical object other than the object which is identified.

In such cases, the data identifier corresponding to the type of identifier cannot be used to identify the data, since otherwise, an automated system would be unable to distinguish between the physical object identified and the object carrying a reference to it.

For example, in the domain of license plates, a number of items carrying, say, license plates JJ1, JJ5, JJ7 and JJ10 might be grouped, for transport purposes, into an aggregate carrying license plate 2JJ4 (or put into a container with Container Identifier 5BJ7. Bar codes (or 2D symbols) on the aggregate (or container) may need to list the content of the aggregate. They cannot use the license plate DI for this since, otherwise, an automated system might read one of the reference barcodes, interpret it as the license plate attached to the referenced object, and process the aggregate as if it were the particular individual item concerned. A similar scenario may occur in postal processing, where batch cards (which may be physically indistinguishable from postal items) are used to list the identifiers of the items that comprise the batch.

The solution to this problem requires that there be a clear distinction between an identifier that is part of, or attached to, the object identified and an identifier reference. This can only be achieved by use of a different data identifier. For this, three possibilities have been identified:

1. Create a separate DI, in the category concerned, for each case.
2. Create a separate DI, in category K (transaction reference), for each case.
3. Allocate a single category K DI, embedding both the referenced identifier and its original DI value into the data.

Of these, the first two calls for the allocation of many DI's and risk confusion, since it would be impossible to maintain any consistency of correspondence between the numeric prefixes used for references and the prefixes for the original objects. Approach 3 is therefore proposed as being both simple and elegant.

Structure: identification code, license plate or traceability number for an object or entity, prefixed by the data identifier used for encoding that identification code on the object itself.

Example:

> Suppose that a parcel has license plate, issued under the UPU Issuing Agency Code, JGBA123456789.
>
> This will be encoded on the parcel, using Data Identifier J. The parcel label will thus carry a bar code, including the DI, specifically: JJGBA123456789.
>
> The corresponding Structured Reference is thus JJGBA123456789. When encoded in a bar code or other media, it will be prefixed by the DI for a Structured Reference, i.e. as 18KJJGBA123456789.
>
> Similarly, a bar code reference to an aggregate transport unit (DI 2J) with license plate JGBA456789123 would be encoded as 18K2JJGBA456789123.

## C.11 Unique Identification of Items

The intended use of Data Identifier (DI) 25S is to indicate that the data following the DI represents a concatenated data string that uniquely identifies an item.

The 25S data string is formed from three segments, “IAC” followed by “CIN” followed by “Serial Number” (defined in bullets below). The data string making up DI 25S shall be globally unique.

There are three methods for creating unique serialization:

- Serial Number (unique SN within CIN’s domain)
- Part number + serial number (unique for that part number for the CIN)
- Lot/batch number + serial number (unique within the lot/batch for the CIN)
- Part number + lot/batch number + serial number (unique within the part number and its lot/batch for the CIN)

Data strings following 25S should not be parsed to obtain the component data elements.

# ANNEX D

**Informative**

# ANSI X12.3
# DATA ELEMENT NUMBER 355
# UNIT OF MEASURE CODE

# ANSI X12.3 Data Identifier Dictionary
## Code List 355 Unit of Measure

| CODE | DEFINITION |
|---|---|
| 01 | Actual Pounds |
| 02 | Statute Mile |
| 03 | Seconds |
| 04 | Small Spray |
| 05 | Lifts |
| 08 | Heat Lots |
| 10 | Group |
| 11 | Outfit |
| 12 | Packet |
| 13 | Ration |
| 14 | Shot |
| 15 | Stick |
| 24 | Theoretical Pounds |
| 26 | Actual Tons |
| 27 | Theoretical Tons |
| 31 | Catchweight |
| 50 | Actual Kilograms |
| 51 | Actual Tonnes |
| 53 | Theoretical Kilograms |
| 54 | Theoretical Tonnes |
| 56 | Sitas |
| 58 | Net Kilograms |
| 59 | Parts Per Million |
| 60 | Percent Weight |
| 61 | Parts Per Billion |
| 62 | Percent Per 100 Hours |
| 63 | Failure Rate In Time |
| 64 | Pounds Per Square Inch Gauge |
| 65 | Coulomb (A Unit of Charge) |
| 66 | Oersteds |
| 67 | Siemens (A Unit of Admittance) |
| 68 | Ampere |
| 69 | Test Specific Scale |
| 70 | Volt |
| 71 | Volt-Ampere Per Pound |
| 72 | Watts Per Pound |
| 73 | Ampere Turn Per Centimeter |
| 74 | Milli Pascals |
| 75 | Cycles |
| 76 | Gauss |
| 77 | Mil |
| 78 | Kilogauss |
| 79 | Electron Volt |
| 80 | Pounds Per Square Inch (Absolute) |
| 81 | Henry (A Unit of Inductance) |
| 82 | Ohm (A Unit of Resistance) |
| 83 | Farad (A Unit of Capacitance) |
| 84 | Kilo Pounds Per Square Inch (KSI) |
| 85 | Foot Pounds |
| 86 | Joules |
| AA | Ball |
| AC | Acre |
| AM | Ampoule |
| AP | Aluminum Pounds Only |
| AS | Assortment |
| AY | Assembly |
| B2 | Bunks |
| B3 | Batting Pound |
| B4 | Barrel, Imperial |
| B5 | Billet |

| | |
|---|---|
| B6 | Bun |
| B7 | Cycles |
| B8 | Board |
| B9 | Batt |
| BA | Bale |
| BB | Base Box |
| BC | Bucket |
| BD | Bundle |
| BE | Beam |
| BF | Board Feet |
| BG | Bag |
| BH | Brush |
| BI | Bar |
| BJ | Band |
| BK | Book |
| C1 | Composite Product Pounds (total weight) |
| C3 | Centiliter |
| C4 | Carload |
| C5 | Cost |
| C6 | Cell |
| C7 | Centipoise (CPS) |
| C8 | Cubic Decimeter |
| C9 | Coil Group |
| CA | Case |
| CB | Carboy |
| CC | Cubic Centimeter |
| CD | Carat |
| CE | Centigrade, Celsius |
| CF | Cubic Feet |
| CG | Card |
| CH | Container |
| CI | Cubic Inches |
| CJ | Cone |
| CK | Connector |
| CL | Cylinder |
| CM | Centimeter |
| BL | Block |
| BM | Bolt |
| BN | Bulk |
| BO | Bottle |
| BP | 100 Board Feet |
| BQ | Brake horse power |
| BR | Barrel |
| BS | Basket |
| BT | Belt |
| BU | Bushel |
| BV | Bushel, Dry Imperial |
| BW | Base Weight |
| BX | Box |
| BY | British Thermal Unit (BTU) |
| BZ | Million BTUs |
| CN | Can |
| CO | Count |
| CP | Crate |
| CQ | Cartridge |
| CR | Cubic Meter |
| CS | Cassette |
| CT | Carton |
| CU | Cup |
| CV | Cover |
| CW | Hundred Pound (CWT) |
| CX | Coil |
| CY | Cubic Yard |
| CZ | Combo |
| C2 | Carset |
| DA | Days |
| DB | Dry Pound |
| DB | Dry Pounds |
| DC | Disk (Disc) |
| DD | Degree |
| DE | Deal |
| DF | Dram |

| | |
|---|---|
| DG | Decigram |
| DH | Miles |
| DI | Dispenser |
| DK | Kilometers |
| DL | Deciliter |
| DM | Decimeter |
| DP | Dozen Pair |
| DR | Drum |
| DS | Display |
| DT | Dry Ton |
| DZ | Dozen |
| E3 | Inches, Fraction-Average |
| E4 | Inches, Fraction-Minimum |
| E5 | Inches, Fraction-Actual |
| E7 | Inches, Decimal-Average |
| E8 | Inches, Decimal-Actual |
| E9 | English (Feet, Inches) |
| EA | Each |
| ED | Inches, Decimal-Nominal |
| EF | Inches, Fraction-Nominal |
| EM | Inches, Fraction-Minimum |
| EP | Eleven pack |
| EV | Envelope |
| EX | Feet, Inches and Fraction |
| EY | Feet, Inches |
| EZ | Feet and Decimal |
| FA | Fahrenheit |
| FC | 1000 Cubic Feet |
| FM | Million Cubic Feet |
| FO | Fluid Ounce |
| FP | Pounds Per Square Foot |
| FT | Foot |
| GA | Gallon |
| GB | Gallons/Day |
| GG | Great Gross (Dozen Gross) |
| GH | One-half Gallon |
| GI | Imperial Gallons |
| GL | Grams Per Liter |
| GM | Grams Per Square Meter |
| GN | Gross Gallons |
| GR | Gram |
| GS | Gross |
| GY | Gross Yard |
| GZ | Gage Systems |
| HA | Hank (100 feet of rope) |
| HB | Hundred Boxes |
| HC | Hundred Count |
| HD | Half Dozen |
| HE | Hundredth of a Carat |
| HF | Hundred Feet |
| HG | Hectograms |
| HH | Hundred Cubic Feet |
| HI | Hundred Sheets |
| HJ | Horse power |
| HK | Hundred Kilograms |
| HL | Hundred Feet-Linear |
| HO | Hundred Troy Ounces |
| HP | Hundred Pounds |
| HR | Hours |
| HS | Hundred Square Feet |
| HT | Half Hour |
| HU | Hundred |
| HV | Hundred Weight (Short) |
| HW | Hundred Weight (Long) |
| HY | Hundred Yards |
| IN | Inch |
| JB | Jumbo |
| JO | Joint |
| JR | Jar |
| JU | Jug |
| KA | Cake |
| KD | Kilograms Decimal |

| | |
|---|---|
| KE | Keg |
| KG | Kilograms |
| KH | Kilowatt Hour |
| KI | Kilograms/Millimeter Width |
| KK | 100 Kilograms |
| KL | Kilograms/Meter |
| KM | Kilograms/Square Meter, |
| KN | Kilometer |
| KT | Kit |
| KV | Kelvin |
| KW | Kilograms Per Millimeter |
| LA | Pounds Per Cubic Inch |
| LB | Pound |
| LC | Linear Centimeter |
| LE | Lite |
| LF | Linear Foot |
| LG | Long Ton |
| LH | Labor Hours |
| LI | Linear Inch |
| LJ | Large Spray |
| LK | Link |
| LM | Linear Meter |
| LN | Length |
| LO | Lot |
| LP | Liquid Pounds |
| LR | Layer |
| LS | Lump Sum |
| LT | Liter |
| LY | Linear Yard |
| MA | Machine/Unit |
| MB | Millimeter-Nominal |
| MC | Microgram |
| ME | Milligram |
| MF | Milligrams/Square Foot Per Side |
| MG | Metric Gross Tons |
| MH | Microns |
| MI | Metric |
| MJ | Minutes |
| MK | Milligrams Per Square Inch |
| ML | Milliliter |
| MM | Millimeter |
| MN | Metric Net Ton |
| MO | Months |
| MP | Metric Ton |
| MQ | 1000 Meters |
| MR | Meter |
| MS | Square Millimeter |
| MT | Metric Long Ton |
| MU | Millicurie |
| MV | Number of Mults |
| MW | Metric Ton Kilograms |
| MX | Mixed |
| MY | Millimeter-Average |
| MZ | Millimeter-Minimum |
| M1 | Milligrams per Liter |
| M2 | Millimeter-Actual |
| M3 | Mat |
| M4 | Monetary Value |
| M6 | Milligrams/Square Inch |
| NB | Barge |
| NC | Car |
| NL | Load |
| NM | Nautical Mile |
| NN | Train |
| NT | Trailer |
| NV | Vehicle |
| OL | Ounces Liquid |
| OP | Two-pack |
| OT | Overtime Hours |
| OZ | Ounces Avoirdupois |
| P1 | Percent |
| P2 | Pounds Per Foot |

| | |
|---|---|
| P3 | Three-Pack |
| P4 | Four-Pack |
| P5 | Five-Pack |
| P6 | Six-Pack |
| P7 | Seven-Pack |
| P8 | Eight-Pack |
| P9 | Nine-Pack |
| PA | Pail |
| PB | Pair Inches |
| PC | Piece |
| PD | Pad |
| PE | Pounds Equivalent |
| PF | Pallet (Lift) |
| PG | Pounds Gross |
| PH | Pack (Pak) |
| PI | Pitch |
| PJ | Pounds, Decimal-Pounds/Square Foot-Pound Gage |
| PK | Package |
| PL | Pallet/Unit Load |
| PM | Pounds-Percentage |
| PN | Pounds Net |
| PO | Pounds Per Inch of Length |
| PP | Plate |
| PR | Pair |
| PS | Pounds Per Square Inch |
| PT | Pint |
| PV | One-half Pint |
| PW | Pounds Per Inch of Width |
| PX | Pint, Imperial |
| PY | Peck, Dry US |
| PZ | Peck, Dry Imperial |
| Q1 | Quarter (Time) |
| QD | Quarter Dozen |
| QR | Quire |
| QS | Quart, Dry US |
| QT | Quart |
| QU | Quart, Imperial |
| RA | Rack |
| RD | Rod |
| RE | Reel |
| RG | Ring |
| RK | Roll-Metric Measure |
| RL | Roll |
| RM | Ream |
| RN | Ream-Metric Measure |
| RO | Round |
| SA | Sandwich |
| SB | Square Mile |
| SC | Square Centimeter |
| SD | Solid Pounds |
| SE | Section |
| SF | Square Foot |
| SG | Segment |
| SH | Sheet |
| SI | Square Inch |
| SJ | Sack |
| SK | Split Tank Truck |
| SL | Sleeve |
| SM | Square Meter |
| SN | Square Rod |
| SO | Spool |
| SP | Shelf Package |
| SQ | Square |
| SR | Strip |
| SS | Sheet-Metric Measure |
| ST | Set |
| SU | Short Ton |
| SV | Skid |
| SW | Skein |
| SX | Shipment |
| SY | Square Yard |
| T1 | Thousand Pounds gross |

| | | | |
|---|---|---|---|
| TA | Tenth Cubic Foot | TV | Thousand Kilograms |
| TB | Tube | TW | Thousand Pieces of Sheets |
| TC | Truck Load | TX | Troy Pound |
| TD | Therms | TY | Tray |
| TE | Tote | TZ | Thousand Cubic Feet |
| TF | Ten Square Yards | UN | Unit |
| TG | Gross Ton | VI | Vial |
| TH | Thousand | VT | Voltage |
| TI | Thousand Square Inches | WB | Wet Pound |
| TJ | Thousand Square Centimeters | WE | Wet Ton |
| TK | Tank | WH | Wheel |
| TL | Thousand Feet-Linear | WI | Weight Per Square Inch |
| TM | Thousand Feet (Board) | WK | Week |
| TN | Net Ton | WP | Pennyweight |
| TO | Troy Ounce | WR | Wrap |
| TP | Ten Pack | WT | Wattage |
| TQ | Thousand Feet | YD | Yard |
| TR | Ten Square Feet | YL | 100 Linear Yards |
| TS | Thousand Square Feet | YR | Years |
| TT | Thousand Linear Meters | YT | Ten Yards |
| TU | Thousand Linear Yards | ZZ | Mutually Defined |

The list above is not comprehensive, but is representative of codes employed.

A full list of codes representing unit of measurement is available from:

**DATA INTERCHANGE STANDARDS ASSOCIATION (X12 DISA)**
**7600 Leesburg Pike, Suite 430,**
**Falls Church, VA 22043 USA**

**ATTN: Manager, Publications and Standards**

**Voice: 703.970.4480**

**http://www.x12.org/**

**http://www.disa.org/Bookstore/Public/ListProducts.cfm?intCategory=3&intCartID=0&intUserID=0/**

**AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)**

**25 West 43rd Street**
**New York, NY 10036**
**(212) 642-4900**
**http://webstore.ansi.org/default.aspx**

# ANNEX E

**Informative**

# ANSI X12.3
# DATA ELEMENT NUMBER 374
# DATE/TIME CODES

# ANSI X12.3 Data Identifier Dictionary

## Code List 374 Date/Time Codes

| CODE | DEFINITION |
|---|---|
| 001 | Cancel After This Date/Time |
| 002 | Delivery Requested On This Date/Time |
| 003 | Invoice Date/Time |
| 004 | Purchase Order Date/Time |
| 005 | Sailing Date/Time |
| 006 | Solid Date/Time |
| 007 | Effective Date/Time |
| 008 | Purchase Order Received |
| 009 | Process Date/Time |
| 010 | Requested Ship Date/Time |
| 011 | Shipped On This Date/Time |
| 012 | Terms Discount Due Date/Time |
| 013 | Terms Net Due Date/Time |
| 014 | Deferred Payment Date/Time |
| 015 | Promotion Start |
| 016 | Promotion End |
| 017 | Estimated Delivery Date/Time |
| 018 | Date/Time Available/Constructive Placement |
| 019 | Date/Time Unloaded |
| 020 | Check Date/Time |
| 021 | Charge Back Date/Time |
| 022 | Freight Bill Date/Time |
| 023 | Promotion Order Date/Time - Start |
| 024 | Promotion Order Date/Time - End |
| 025 | Promotion Ship Date/Time - Start |
| 026 | Promotion Ship Date/Time - End |
| 027 | Promotion Requested Delivery Date/Time - Start |
| 028 | Promotion Requested Delivery Date/Time - End |
| 029 | Promotion Performance Delivery Date/Time - Start |
| 030 | Promotion Performance Delivery Date/Time - End |
| 031 | Promotion Invoice Performance Delivery Date/Time - Start |
| 032 | Promotion Invoice Performance Delivery Date/Time - End |
| 033 | Promotion Floor Stock Protect Date/Time - Start |
| 034 | Promotion Floor Stock Protect Date/Time - End |
| 035 | Delivered On This Date/Time |
| 036 | Expiration Date/Time |
| 037 | Ship Not Before Date/Time |
| 038 | Ship Not Later Than Date/Time |
| 039 | Ship Week Of Date/Time |
| 040 | Status Date (After And Including) |
| 041 | Status Date (Prior And Including) |
| 042 | Superseded Date |
| 043 | Publication Date |
| 044 | Received On This Date |
| 045 | Cumulative Quantity Start Date |
| 046 | Cumulative Quantity End Date |
| 047 | Buyer's Local Time |
| 048 | Seller's Local Time |
| 049 | Confirmed Date |
| 050 | Received On This Date |
| 051 | Cumulative Quantity Start Date |
| 052 | Cumulative Quantity End Date |
| 053 | Buyer's Local Time |
| 054 | Seller's Local Time |
| 055 | Confirmed Date |
| 056 | Estimated Port Of Entry Date |
| 057 | Actual Port Of Entry Date |
| 058 | Customs Clearance Date |
| 059 | Inland Ship Date |
| 060 | Engineering Change Level Date |
| 061 | Cancel If Not Delivered By This Date |
| 062 | Blueprint Date |

063 Do Not Deliver After This Date
064 Do Not Deliver Before This Date
065 1st Schedule Delivery Date
066 1st Schedule Ship Date
067 Current Schedule Delivery Date
068 Current Schedule Ship Date
069 Promised For Delivery (Date/Time)
070 Scheduled For Delivery (After And Including)
071 Requested For Delivery (After And Including)
072 Promised For Delivery (After And Including)
073 Scheduled For Delivery (Prior To And Including)
074 Requested For Delivery (Prior To And Including)
075 Promised For Delivery (Prior To And Including)
076 Scheduled For Delivery (Week Of)
077 Requested For Delivery (Week Of)
078 Promised For Delivery (Week Of)
079 Promised For Shipment (Date/Time)
080 Scheduled For Shipment (After And Including)
081 Requested For Shipment (After And Including)
082 Promised For Shipment (After And Including)
083 Scheduled For Shipment (Prior To And Including)
084 Requested For Shipment (Prior To And Including)
085 Promised For Shipment (Prior To And Including)
086 Scheduled For Shipment (Week Of)
087 Requested For Shipment (Week Of)
088 Promised For Shipment (Week Of)
089 Inquiry Date
090 Report Start Date
091 Report End Date
092 Contract Effective Date
093 Contract Expiration Date
094 Manufacturing Date
095 Bill of Lading Date
096 Date/Time Of Discharge
097 Transaction Creation Date
098 Bid (Effective) Date
099 Bid-Open Date (Date Bids Will Be Opened)
100 No Shipping Schedule Established As Of Date/Time
101 No Production Schedule Established As Of Date/Time
102 Expect To Ship By Date
103 Expect To Ship By Week Of Date
104 Revised Expect To Ship By Date
105 Revised Expect To Ship By Week Of Date
106 Required By Date
107 Deposit Date/Time
108 Postmark Date
109 Date/Time Received At Lockbox
110 Agreed Upon Scheduled Ship
116 Scheduled Interchange Delivery
214 Date of Repair/Service

The list above is not comprehensive, but is representative of codes employed. A full list of codes representing time is available from:

**DATA INTERCHANGE STANDARDS ASSOCIATION**
**(X12 DISA)**

**7600 Leesburg Pike, Suite 430,**
**Falls Church, VA 22043 USA**

**ATTN: Manager, Publications and Standards**

**Voice: 703.970.4480**

**http://www.x12.org/**
**http://www.disa.org/Bookstore/Public/ListProducts.cfm?intCategory=3&intCartID=0&intUserID=0/**

**AMERICAN NATIONAL STANDARDS INSTITUTE**
**(ANSI)**

**25 West 43rd Street**
**New York, NY 10036**
**(212) 642-4900**

**http://webstore.ansi.org/default.aspx**

# ANNEX F

**Informative**

# ANSI X12.3
# DATA ELEMENT NUMBERS 208 & 209
# HAZARDOUS MATERIAL CODES

# ANSI X12.3 Data Identifier Dictionary

# Code List 208 and 209 Hazardous Material Codes

## 208 Hazardous Material Code Qualifier

| CODE | DEFINITION |
|---|---|
| 4 | 46 Level DOT Code[1] |
| 6 | Airline Tariff 6D[2] |
| 9 | Title 49, Code of Federal Regulations (CFR)[3] |
| A | International Civil Aviation Organization (ICAO) Code[4] |
| B | Uniform Fire Code (UFC)[5] |
| C | Storage Compatibility Group[6] |
| D | Hazardous Material ID, DOT[7] |
| E | Endorsement |
| F | Air Force Joint Manual 24-204[8] |
| I | Intergovernmental Maritime Organization (IMO)[9] |
| R | Bureau of Explosives (BOE) 6000 Tariff[10] |
| T | International Air Transport Association Dangerous Code List[11] |
| U | United Nations[12] |
| X | Hazardous Class or Division[13] |

The list above is not comprehensive, but is representative of codes employed. A full list of Hazardous Material Code Qualifiers is available from:

**1 Code of Federal Regulations CFR Title 46**

Available from:
Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20402
Abstract: Hazardous materials codes for domestic water shipments

2 **Tariff 6D - Official Regulations on Restricted Articles**

Available from:
Airline Tariff Publishing Co.
Dulles Airport
Washington, DC
Abstract: Hazardous materials codes for domestic air shipments

3 **Hazardous Material Code (49 Level)**

Available from:
Standard Transportation Commodity Code (STCC)/Hazardous Materials Shipping Description
Railinc/Association of American Railroads
7001 Weston Parkway – Suite 200
Cary, NC 27513

Abstract: The hazardous materials section (Group 49) of the STCC is organized according to the kind and degree of hazard associated with hazardous materials or hazardous substances, with special provisions to relate the identified commodity to its product class with the established commodity code structure.

4 **IATA Restricted Articles Regulation**

Available from:
International Air Transport Association (IATA)
Publications Department
800 Place Victoria - PO Box 113
Montreal, Quebec H4Z 1M1 Canada
Voice: +1 514 874 0202

Abstract: Hazardous materials codes for international air shipments

5 **Uniform Fire Code (UFC)**

Available from:
International Fire Code Institute (IFCI)
5360 Workman Mill Road
Whittier, CA 90601-2298

6 **Storage Compatibility Group Designator**
**Code of Federal Regulations**
**Transportation, Title 49, Section 172**
**October 1, 1992, pages 328-329**
Available from:
Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

Abstract: Provides storage group designators, as established by the U.S. Department of Transportation, which specify special storage provisions for hazardous materials for the purpose of transportation in commerce.

7 **Hazardous Materials ID, DOT**
**Code of Federal Regulations**
**Transportation, Title 49, parts 100 to 177**
**revised as of November 1, 1983, pages 75-170**
Available from:
Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

Abstract: Provides codes, names, and hazard classes for materials designated by the U.S. Department of Transportation as hazardous for purposes of transportation in commerce. The identifier of the materials listed is alphanumeric of the form: “AAdddd”. The numeric (“d”) portion of the identifier has no significance. The alphabetic prefix may be “UN” for materials appropriate for both international and

domestic shipments; or “NA” for materials appropriate only for domestic shipments and shipments to and from Canada.

8 **Air Force Joint Manual 24-204**:
**Preparing Hazardous Materials for Military Air Shipments**
**United States Air Force Material Command**
Available from:
Defense Automated Printing Service
Bldg. 4D, 700 Robins Avenue
Philadelphia, PA 19111-5094
URL: http://www.wpafb.af.mil/shared/media/document/AFD-121204-014.pdf
Abstract: This manual provides guidance and procedures for preparing hazardous materials for shipment aboard military aircraft to ensure that such materials are packaged, marked, labeled, and prepared properly for transportation

9 **Intergovernmental Maritime Organization (IMO)**
**Dangerous Goods Code**
Available from:
Intergovernmental Maritime Consultative Organization (IMCO)
101-104 Piccadilly
London W1 VOAE England
Abstract: Dangerous materials codes for international ocean shipments.

10 **Bureau of Explosives (BOE) 6000 Tariff**
**Hazardous Materials Regulations of the Department of Transportation by Air, Rail, Highway, and Water**
Available from:
Association of American Railroads
Publications
P.O. Box 1265
Evans City, PA 16033
Abstract: Regulations and restrictions covering the acceptance and transportation of explosives and other dangerous articles by carriers.

11 **International Air Transport Association (IATA) Dangerous Goods Code**
**Dangerous Goods Regulations**
Available from:
International Air Transport Association (IATA)
Publications Department
800 Place Victoria - PO Box 113
Montreal, Quebec H4Z 1M1 Canada
Voice: +1 514 874 0202
Abstract: Air courier regulations for the shipping and acceptance handling of dangerous goods. Based on the International Civil Aviation Organization (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air.

12 **United Nations Number (Dangerous Goods)** ***Transportation of Dangerous Goods,***
**Recommendations of the Committee of Experts of the Transport of Dangerous Goods, Third Revised Edition United Nations ST/SG/AC10/1REV.3, 1983, SALES NO.E.83 VIII.1**
Available from:
United Nations Publications
Polaris des Nations

CH – 1211 Geneva 10 Switzerland

Abstract: Provides codes, names and hazard classes for materials designated as dangerous for purposes of transport in commerce. The identifier of the dangerous goods listed is numeric of the form “dddd”.

13 **Hazardous Class or Division**
**Code of Federal Regulations, Transportation, Title 49,**
**Subchapter C, Subpart B, Table of Hazardous Materials and Special Provisions**
**October 1, 1992 Version, pages 120-238**
Available from:
Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

Abstract: Provides classes and divisions for Hazardous Materials as established by the U.S. Department of Transportation for the purpose of transportation in commerce.

# ANNEX G

## Informative

# ISO 4217
# CURRENCIES AND FUNDS CODES

# ISO 4217
## Currencies and Funds Codes

| DEFINITION | ALPHABETIC CODE | NUMERIC CODE |
|---|---|---|
| Algerian Dinar | DZD | 012 |
| Argentine Peso | ARS | 032 |
| Australian Dollar | AUD | 036 |
| Brazilian Real | BRL | 986 |
| Canadian Dollar | CAD | 124 |
| Chinese Yuan | CNY | 156 |
| Danish Krone | DKK | 208 |
| Egyptian Pound | EGP | 818 |
| European Euro | EUR | 978 |
| Hong Kong Dollar | HKD | 344 |
| Iceland Kronur | ISK | 352 |
| Indian Rupee | INR | 356 |
| International Monetary Fund (SDR) | XDR | 960 |
| Israeli Shekel | ILS | 376 |
| Japanese Yen | JPY | 392 |
| Korean (South) Won | KRW | 410 |
| Mexican Peso | MXN | 484 |
| New Zealand Dollar | NZD | 554 |
| Norwegian Krone | NOK | 578 |
| Paraguayan Guarani | PYG | 600 |
| Polish Zloty | PLN | 985 |
| Romanian Leu | RON | 946 |
| Russian Rouble | RUB | 643 |
| Saudi Riyal | SAR | 682 |
| Singapore Dollar | SGD | 702 |
| South African Rand | ZAR | 710 |
| Swedish Kronor | SEK | 752 |
| Swiss Franc | CHF | 756 |
| Syrian Pound | SYP | 760 |
| Thailand Baht | THB | 764 |
| Turkish Lira | TRY | 949 |

| | | |
|---|---|---|
| United Arab Emirates Dirham | AED | 784 |
| United Kingdom Pound Sterling | GBP | 826 |
| United States Dollar | USD | 840 |
| Uruguayan Peso | UYU | 858 |
| Venezuelan Bolivar | VEF | 937 |
| Vietnamese Dong | VND | 704 |
| Gold | XAU | 959 |

The list above is not comprehensive, but is representative of codes employed. A full list of codes is given in Currency and funds name and code elements (ISO 4217) that is available from:

**AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)**

**25 West 43rd Street**
**New York, NY 10036**
**(212) 642-4900**
**http://webstore.ansi.org/default.aspx**

# ANNEX H

## Informative

# ISO 3166-1
# COUNTRY CODES

# ISO 3166-1

## Country Codes

| DEFINITION | ALPHA-2 CODE | ALPHA-3 CODE | NUMERIC CODE |
|---|---|---|---|
| Non-specific Country | AA | AAA | 000 |
| Argentina | AR | ARG | 032 |
| Australia | AU | AUS | 036 |
| Austria | AT | AUT | 040 |
| Belgium | BE | BEL | 056 |
| Brazil | BR | BRA | 076 |
| Canada | CA | CAN | 124 |
| Denmark | DK | DNK | 208 |
| Finland | FI | FIN | 246 |
| France | FR | FRA | 250 |
| Germany | DE | DEU | 276 |
| Greece | GR | GRC | 300 |
| Holy See (Vatican City State) | VA | VAT | 336 |
| Iceland | IS | ISL | 352 |
| India | IN | IND | 356 |
| Ireland | IE | IRL | 372 |
| Israel | IL | ISR | 376 |
| Italy | IT | ITA | 380 |
| Japan | JP | JPN | 392 |
| Luxembourg | LU | LUX | 442 |
| Mexico | MX | MEX | 484 |
| Netherlands | NL | NLD | 528 |
| New Zealand | NZ | NZL | 554 |
| Norway | NO | NOR | 578 |
| Paraguay | PY | PRY | 600 |
| Poland | PL | POL | 616 |
| Portugal | PT | PRT | 620 |
| Romania | RO | ROM | 642 |
| Saudi Arabia | SA | SAU | 682 |
| Singapore | SG | SGP | 702 |
| South Africa | ZA | ZAF | 710 |

| | | | |
|---|---|---|---|
| Spain | ES | ESP | 724 |
| Sweden | SE | SWE | 752 |
| Switzerland | CH | CHE | 756 |
| Turkey | TR | TUR | 792 |
| United Kingdom | GB | GBR | 826 |
| United States of America | US | USA | 840 |
| Uruguay | UY | URY | 858 |
| Venezuela | VE | VEN | 862 |

The list above is not comprehensive, but is representative of codes employed. A full list of Codes for the representation of names of countries and their subdivisions -- Part 1: Country codes (ISO 3166-1), except "Non-specific Country" defined in N664 from ISO 3166/MA, is available from:

**AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)**
**25 West 43rd Street**
**New York, NY 10036**
**(212) 642-4900**
**http://webstore.ansi.org/default.aspx**

# ANNEX I

**Normative**

# DATA IDENTIFIER REQUEST FORM

Following is a request form for new Data Identifiers. Where the end user finds that the identifiers described in this document are insufficient, this request form should be used as appropriate.

**Rev. ANS MH10.8.2-7262 (DI)**

Reference: _____
Date: _____

## ANS MH10.8.2 DATA IDENTIFIER REQUEST FORM

**Complete all parts. Submit to:**

**EMAIL:** DIRequests@MHI.org

**MAIL:** DIMC
c/o MHI
8720 Red Oak Blvd – Suite #201
Charlotte, NC 28007-3992
USA

**PHONE:** +1 704.676.1190
Ask For Data Identifier Request Desk

Incomplete forms or those with inadequate support for the change requested will be returned to the submitter. The ANS MH10.8.2 DI Maintenance Committee will notify submitters of the status of the work request following their review.

URL for Publicly Available Continuous Maintenance version of ASC MH10.8.2 Data Identifiers and Application Identifiers for current version of ANSI MH10.8.2: http://www.mhi.org/standards/di

**NOTE:** Please save the document in ".doc" format (Word 2003-compatible), not ".docx" format (Word 2007 and above).

**REQUEST FOR:** ___ New Data Identifier
___ Data Identifier Interpretation

**ORGANIZATION:** _____

**CONTACT PERSON:** _____

**ADDRESS:** _____

_____

**TELEPHONE:** _____

**EMAIL ADDRESS:** _____

**1. PROPOSED DATA IDENTIFIER**

*Provide a short description (20 words or less) which would be included as a description for the proposed Data Identifier. For an interpretation, provide a comprehensive description of the aspect of the identifier that needs interpretation.*

**PAGE 2 (DATA IDENTIFIER REQUEST)**

## 2. BUSINESS CASE

*Explain why you need the proposed assignment. Provide a complete scenario that tells what the business function, operation, or problem is that will be satisfied by a new assignment to the ANS MH10.8.2 Data Identifier Standard. If the proposed DI is already in use by your organization, please identify how long this identifier has been in use and other organizations you are aware of who employ the same identifier. The ANS MH10.8.2 DI Maintenance Committee requires enough information to be able to propose an alternate solution if necessary. Be specific because this will also appear in the ANS MH10.8.2 Voting Package and will be the only information that voters have on which to base their vote.*

**PAGE 3 (DATA IDENTIFIER REQUEST)**

## 3. DEFINITIONS

*Definitions for new assignments and for industry-specific terms must be complete. For new ANS MH10.8.2 DI, provide a proposed assignment and a DI definition. RULES: (1) Acronyms/abbreviations cannot be added to the standards - they must be spelled out. (2) Provide an expanded assignment definition for each DI which is not completely self-explanatory, that is, terms that are not in general business use or that are industry specific. (3) Provide code source references for all externally published (non-ANS MH10.8.2) code lists cited (use the Form for New or Revised Code Source Reference). If one exists, provide a precise description of the structure of the data as foreseen by your organization for this application. Indicate data elements involved and their formal (numeric, alphanumeric, fixed or variable length, number of decimals). Indicate the business function of each data element in the application.*

*NOTE: MH10.8.2 restricts the character set – UNLESS OTHERWISE STATED WITHIN THE DI – to upper-case alphanumeric letters and 0 through 9 numbers. If other than these characters are needed for use, THEY MUST BE SO STATED WITHIN THIS REQUEST, otherwise they cannot be used.*

**PAGE 4 (DATA IDENTIFIER REQUEST)**

**4. MEDIA AND APPLICATION USE**

- *With what media (e.g., bar code, 2D symbol, RF tag, etc.) do you intend to use the proposed Data Identifier?*

- *At what stage will the Data Identifier and data be created and applied?*

- *On to what and when will the media be applied (package, label, tag, document, . . .)?*

- *Why does the information need to be machine-readable?*

- *When and where is the media read?*

- *Describe the use of the Data Identifier by other users than the originator:*

- *What is the number of potential users?*

**5. Justification**

*Describe the benefits (hard and soft savings) expected from the application.*

**6. Additional Information**

*Feel free to attach any addition information related to your organization and the application.*

Date: _____ Signature:_____

**PAGE 5 (DATA IDENTIFIER REQUEST)**

## Data Identifier Data Dictionary Record

**NOTE:** When multiple options follow a heading, choose one and remove the others.

Example:

As currently listed: **Class:** Numeric / Alpha / Alphanumeric / Binary

After selection: **Class:** Alpha

| **DATA DICTIONARY DETAILED ENTRY** | | |
|---|---|---|
| **Name:** | **Version:** | **Key:** |
| **XML Tag:** | | **Proposed DI:** |
| **Definition:** | | |
| **Class:** Numeric / Alpha / Alphanumeric / Binary **Remarks:**<br>**Decimals:** Yes **/** No<br>**Min_Length:**<br>**Max_Length:**<br>**Case Sensitive:** Yes / No<br>**Characters other than upper-case alpha and 0-9 numbers needed:** Yes / No<br>If Yes – list the characters required. | | |
| **Business Rules:** | | |
| **Data Element Source / Authority:** | | |

| **APPLICATION AREAS** | | | |
|---|---|---|---|
| **Area** | **Application** | **Category** | **Remarks** |
| | | | |

| **USES** | | | |
|---|---|---|---|
| **Application Area** | **Usage** | **Type** | **Specific Use** |
| | | | |

| **ALIAS: Production Date** |
|---|
| [a] **Table footnote.** |

# ANNEX J

## Informative

# SYSTEM IDENTIFIERS

# Annex J
# (Informative)
# System Identifiers

## *General*

Section I, Data Identifiers, lists a Category "0" as Special Characters Not Assigned or Control by ASC MH 10/SC 8. These characters, in a leading position of the data structure, are sometimes referred to as system identifiers, denoting a data structure maintained by the organization claiming this system identifier.

**Table J.1: Category "0" - System Identifiers**

| System Identifier (See Notes) | Data Structure Usage |
|---|---|
| **+** | Plus sign. Health Industry Business Communications Council (HIBCC) |
| **&** | Ampersand. ICCBBA |
| **=** | Equal sign. ICCBBA |
| **FNC1** | Function 1. Appears in the first position following the symbology start character of a Code 128, Code 49, or Code 16K Symbol to signify a GS1-controlled symbol |
| **[)>$^{R}_{S}$** | Left square bracket, right parenthesis, greater than sign, record separator character. Data structure compliant to ISO/IEC 15434, *Information technology — Automatic Identification and Data Capture Techniques — Syntax for High Capacity ADC Media* |
| **-** | Hyphen – Minus. Pharmaceutical Central Number (PZN), controlled by IFA-ABDATA, Germany (Registration of this system identifier expires on 2016-07-01). Replaced by "9N". |
| **!** | Exclamation mark. Eurocode-IBLS |

*Notes:*

*Certain characters, e.g., FNC 1, have no ISO/IEC 646 (ASCII) equivalent and require special processing for human-readable and universal AIDC media encoding.*

*Certain characters, e.g., the $^{R}_{S}$ in [)>$^{R}_{S}$, are difficult to represent in human-readable and may require mutually agreed upon dingbats for the representation in human-readable text.*

*Certain characters, e.g., the exclamation mark, are not universally encodable in the basic character set of all symbologies, e.g., Code 39.*

## *Controlling authority*

None of these character uses are covered or controlled by this standard, ANS MH10.8.2. Neither does this standard recommend the use of these system identifiers.

## *Minimum requirements for inclusion within this Annex*

For a system identifier to be listed in this annex requires two basic principles:

1. The system identifier must be integral in a specification approved by the governing organization of which the system identifier refers.
2. The specification within which the system identifier is integral must have a maintained URL, permitting open ordering of the specification. Ideally, the specification would be available at no charge.

## *Specification availability*

Specifications for the system identifier contained within this informative annex can be accessed at the following URLs.

**Table J.2: URLs for additional information on System Identifier**

| System Identifier | Controlling Specification | URL |
|---|---|---|
| **+** | *ANSI HIBC 2.4 Supplier Labeling Standard* | http://www.hibcc.org |
| **&** | *ISBT 128 Standard Technical Specification* | http://www.iccbba.org |
| **=** | *ISBT 128 Standard Technical Specification* | http://www.iccbba.org |
| **FNC1** | *GS 1 General Specifications* | http://www.gs1.org/barcodes-epcrfid-id-keys/gs1-general-specifications |
| **[)>$^{R}_{S}$** | ISO/IEC 15434, *Information technology — Automatic Identification and Data Capture Techniques — Syntax for High Capacity ADC Media* | http://www.iso.org |
| **-** (Minus sign) | *Pharmaceutical Central Number (PZN)* | Organization: http://www.ifaffm.de Document: http://www.ifaffm.de/en/ifa-codingsystem.html (temporarily, text is available only in German) (**Registration of this system identifier expires on 2016-07-01). Replaced by "9N".** |
| **!** (Exclamation mark) | *Eurocode-IBLS* | Organization: http://www.eurocode.org Document: http://www.eurocode.org/guides/index.html |

The on-line listing of the continuous maintenance version of ANS MH10.8.2, Data Application Identifiers can be found at:

- http://www.mhi.org/standards/request

# ANNEX K

**Normative**

# DATA IDENTIFIERS FOR RETURNABLE PACKAGING ITEMS (RPIs)

# Annex K
# (Normative)
# Data Identifiers for Returnable Packaging Items (RPIs)

## K.1 General

The concepts of returnable, reusable, and recyclable are frequently used interchangeably, though conceptually they are quite different. A key underlying concept of difference is ownership, whereby returnable items maintain the original ownership, while the ownership of reusable and recyclable items is transferred between parties. Figure K.1 shows a consumer lifecycle explaining the differences.

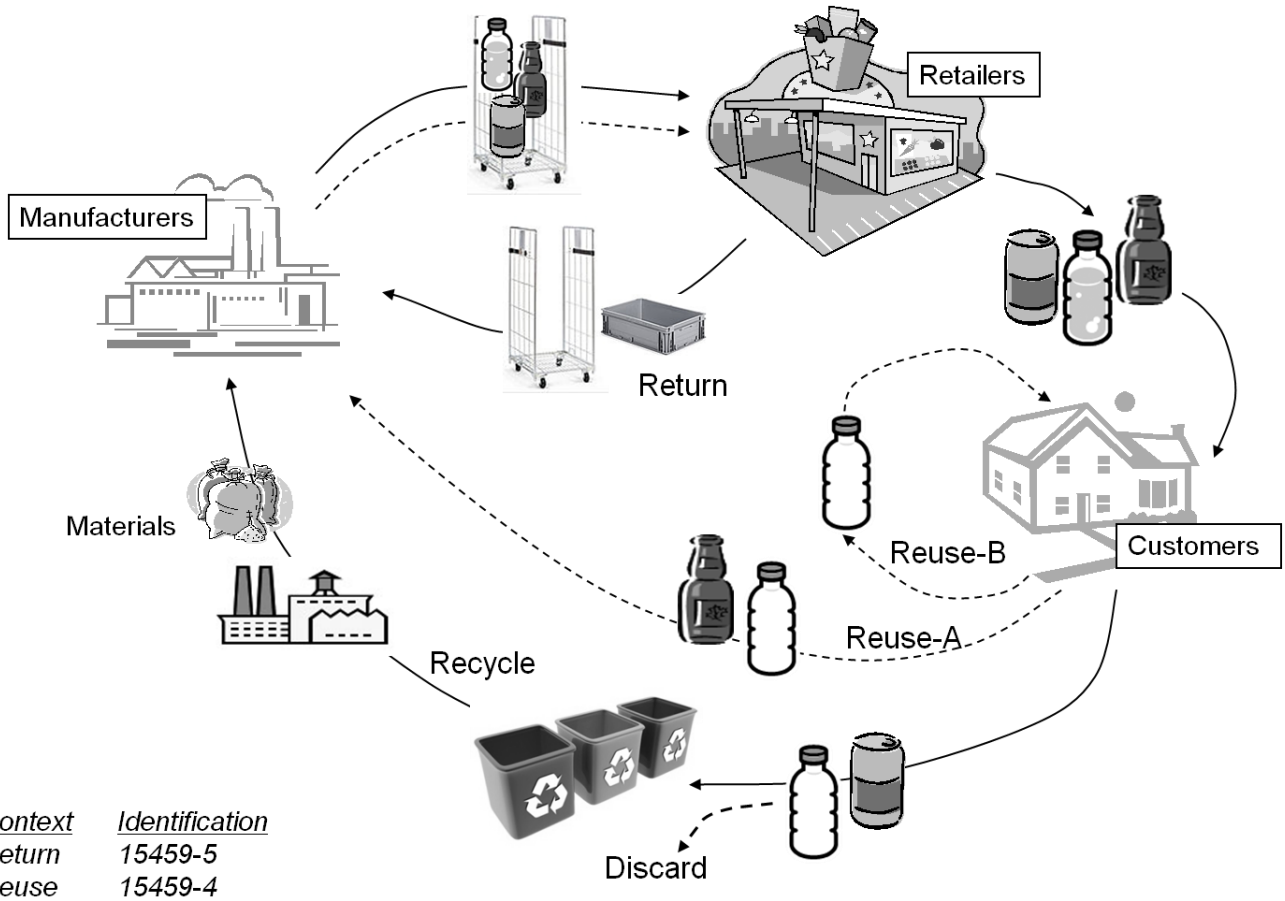


**Figure K.1 – Returnable, reusable, and recyclable lifecycle**

## K.2 Recyclable item

With a recyclable item, the ownership of the item is transferred when the item is sold. A typical use recyclable item is a battery, which can be disposed at a recycling station and parts of the content can be recycled and used for manufacturing of new batteries.

## K.3 Identification

ISO/IEC 15459-4 addresses unique identification for individual recyclable items (products).

## K.4 Reusable item

With a reusable item the ownership of the item is transferred when the item is sold. In some jurisdictions an incentive to return the reusable packaging is provided at the time of purchase, a deposit, which can be recovered when the item is returned to the location from which the item was purchased.

A typical use recyclable item is a hard plastic bottle, which can either be reused by the user (i.e. filling the bottle with new content after cleaning it) or disposed at a recycling station and depending on whether its constituents parts can be reused (i.e. cleaned and refilled) or recycled and used for “manufacturing” of new bottles.

## K.5 Identification

ISO/IEC 15459-4 addresses unique identification for individual reusable items (products).

## K.6 Returnable items

With a returnable item the ownership of the item remains with the party providing the item, even though the item is sent to a customer. The supplier retains ownership of the asset with the anticipation that the customer will return the asset once it has served its original purpose

A typical use of a returnable item is for transportation of goods where the item can be reused in terms of that the content and carrier can change but the owner is still the same.

## K.7 Identification

ISO/IEC 15459-5 addresses unique identification for returnable items.

## K.8 Returnable Transport Items and Returnable Packaging Items

## K.9 Overview

Some pallets and returnable boxes are equipped with shock absorbing material to protect them from potential damage occurring during in the transportation and handling process. An effective solution is the use of partitions or sorting boards for separating the contents into appropriate groups, making it possible to place many items on a single pallet or returnable box. This kind of accessory for a pallet or returnable box is defined as a “partition”. The typical example of this is a post-type partition used with the post pallet. Also included in this group is packing material used to place or arrange the contents between the posts, or a packaging material for dividing the inside of the returnable box into several smaller sections.

## K.10 Partitions

Some pallets and returnable boxes are equipped with shock absorbing material to protect them from potential damage occurring during in the transportation and handling process. An effective solution is the use of partitions or sorting boards for separating the contents into appropriate groups, making it possible to place many items on a single pallet or returnable box. This kind of accessory for a pallet or returnable box is defined as a “partition”. The typical example of this is a post-type partition used with the post pallet. Also included in this group is packing material used to place or arrange the contents between the posts, or a packaging material for dividing the inside of the returnable box into several smaller sections.

## K.11 Posts

Figure K.2 shows a post that is normally used to securely fix packing materials or returnable box on the pallet. Most of these posts are made of high durable substances like plastic or metal.

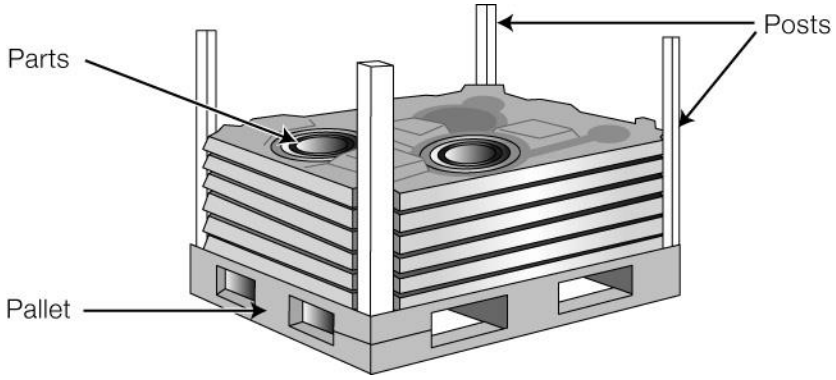


**Figure K.2 – Post**

## K.12 Packing materials

Some kind of packing materials should be provided to protect the items from a shock or vibration that may be encountered during transportation, or protect them from being touched or hit by the pallet or returnable box in which they are placed. Most of the packing materials are made of high resilient flexible substances like plastic, urethane, and polystyrene foam. This guideline is applicable to these kinds of packing materials (see Figure K.3 and Figure K.4).

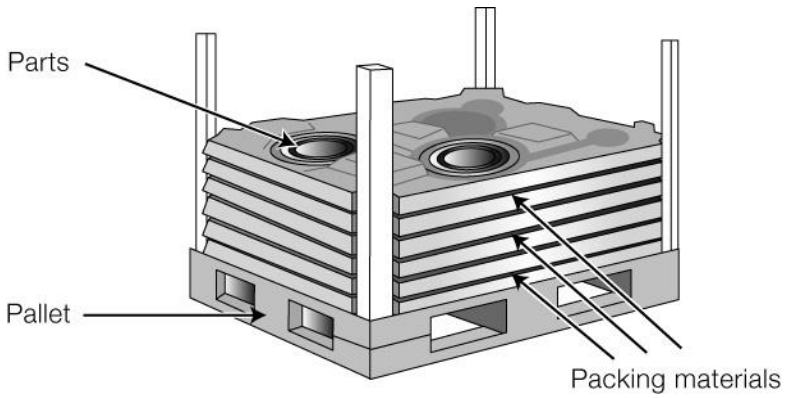


**Figure K.3 – Packing material**

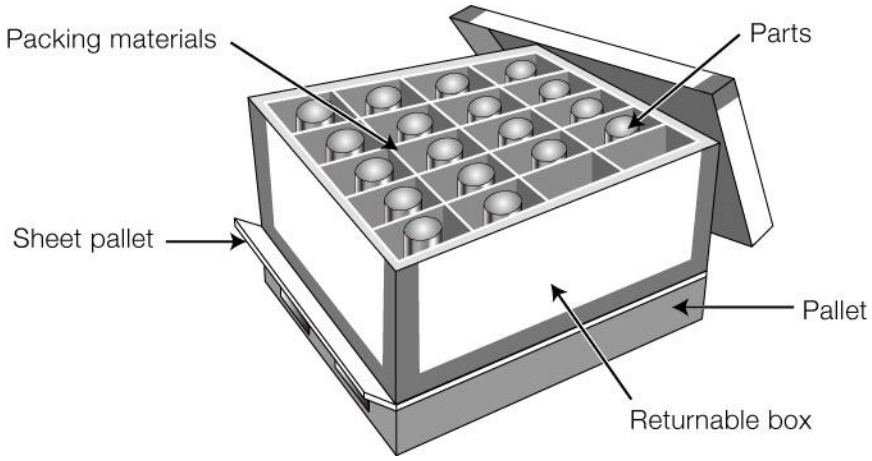


**Figure K.4 – Packing material**

## K.13 Identification

In Figure K.3, the base pallet is the actual RTI and the moulded plastic layers and posts are the RPIs. If each is serialized, it may be important to associate the RPIs with the parent RTI. In this example, the RTI may have a unique identity of "25BUN0433257110000001". The four posts might have a unique identity of

"55BUN043325711P000001"

"55BUN043325711P000002"

"55BUN043325711P000003"

"55BUN043325711P000004"

. . . and the six plastic layers might have a unique identity of

"55BUN043325711L000001"

"55BUN043325711L000002"

"55BUN043325711L000003"

"55BUN043325711L000004"

"55BUN043325711L000005"

"55BUN043325711L000006"

## K.14 My parent is . . .

One possibility to associate the RPIs with the parent RTI is with the use of the Data Identifier "1F" which declares, "My parent is . . . " Using this example the 3rd plastic layer would be encoded 55BUN043325711L000003<GS>1F25BUN0433257110000001.

The other layers and posts would be similarly encoded.

## K.15 I have _____ children.

Yet another possibility is to simply identify the number of RPIs associated with the parent RTI using the Data Identifier “3F” which declares, “I have ____ children“. Using the same example the base pallet would be encoded

25BUN0433257110000001<GS>3F10

## K.16 I have __children and they are…

Yet another possibility is to simply identify the number of RPIs associated with the parent RTI using the Data Identifier “5F” which declares, “I have ____ children and they are…“. Using the same example the base pallet would be encoded

25BUN0433257110000001<GS>5F10<GS>55BUN043325711L000001<GS>55BUN043325711L000002<GS>55BUN043325711L000003<GS>55BUN043325711L000004<GS>55BUN043325711L000005<GS>55BUN043325711L000006<GS>55BUN043325711P000001<GS>55BUN043325711P000002<GS>55BUN043325711P000003<GS>55BUN043325711P000004

# ANNEX L

**Normative**

# MATERIAL CATEGORIES AND MATERIAL CODES

# Annex L
# (Normative)
# Material categories and material codes

Material categories and material codes are used to identify the material from which an item is made, to facilitate easier recycling or other reprocessing. Such symbols have been defined for batteries, biomaterial/organic material, glass, metals, paper, and plastics.

## L.1 Material categories

The code shall be used in relation to the product identification of the actual product, when categorization of material is to be declared.

**Table L.1 — Material categories**

| Code | Description |
|---|---|
| 10 | Plastic |
| 20 | Paper and cardboard |
| 40 | Metal |
| 50 | Wood |
| 60 | Textile |
| 70 | Glass |
| 80 | Composite of packaging materials |
| 00 | Other |

## L.2 Material types and coding

It is recommended that the codes in the tables below be placed below the Recycling Symbol for a recyclable material, i.e., where it is most suitable.

(Reference: http://en.wikipedia.org/wiki/Recycling_codes)

### L.2.1 Plastics (10)

**Table L.2 — Coding of plastic**

| Code | Description | Examples |
|---|---|---|
| PET | Polyethylene terephthalate | Polyester fibers, soft drink bottles |
| HD-PE | High-density polyethylene | Plastic bottles, plastic bags, trash HDPE cans, imitation wood |
| LD-PE | Low-density polyethylene | Plastic bags, buckets, soap dispenser bottles, plastic tubes |

### L.2.2 Paper (20)

**Table L.3 — Coding of paper**

| Code | Description | Examples |
|---|---|---|
| CPAP | Cardboard | Transport packaging, moving boxes |
| PAP | Paper | Mixed paper magazines, mail, newspapers |
| PBD | Paperboard | Greeting cards, food boxes, shoe boxes |

### L.2.3 Metals (40)

**Table L.4 — Coding of metals**

| Code | Description | Examples |
|---|---|---|
| FE | Steel | - - - |
| ALU | Aluminum | - - - |

### L.2.4 Wood (50)

**Table L.5 — Coding of wood**

| Code | Common name | Genus |
|---|---|---|
| FOR | Wood | - - - |
| NTR | Impregnated Wood | - - - |

### L.2.5 Textile (60)

**Table L.6 — Coding of textiles**

| Code | Description | Examples |
|---|---|---|
| TEX | Textile | - - - |

### L.2.6 Glass (70)

**Table L.7 — Coding of glass**

| Code | Description | Examples |
|---|---|---|
| GL1 | Clear Sort Glass | - - - |
| GL2 | Dark Sort Glass | - - - |

### L.2.7 Composite (80)

**Table L.8 — Coding of composite**

| Code | Description | Examples |
|---|---|---|
| PAPALU | Cardboard + Aluminum | Liquid storage containers, juice boxes, cardboard cans, Cigarette pack liners, gum wrappers, cartage shells for blanks, fireworks coloring material. |
| PAPPET | Cardboard + Plastic | Consumer packaging, pet food bags, cold store grocery bags, ice cream containers, cardboard cans, disposable plates |


**Figure L.1 — Examples of encoding recyclable materials**