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Specification of Bar-coded Identification Labels for Packaged Raw and Semi-Finished Materials

Overview

This specification defines the bar-coded identification labels which are applied to containers of raw and semi-finished hardware parts which are supplied to Oracle factories. These labels are used throughout Oracle's manufacturing, distribution and warehousing network to identify the contents, purchase order, source, lot or date of manufacture.

Audience

Oracle supply management, supplier engineers and suppliers of bulk, raw and semi-finished goods to a hub, Oracle factory or Oracle contract manufacturer.

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SCOPE

This specification applies to the container labels that identify the contents of shipping containers of bulk, raw or semi-finished goods purchased from all suppliers that ship to a hub, Oracle contract manufacturer, or Oracle factory. Applicable parts are identified as a Hardware Buy (HW BUY) item type in Oracle's ERP/EBS system.

This specification does not define the following kinds of identification labels:

Regulatory-compliance labels - Requirements for these labels are defined by regulatory engineering. These labels are usually product specific and fully defined by an engineering drawings and/or artwork file.

Packaged finished-goods labels - Requirements for labeling Oracle's packaged, finished systems, spares (FRUs) and after-market options (X-options) are defined in *Specification of Identification Labels for Packaged Finished Goods, 950-1419-xx*.

Unpackaged hardware assembly labels - Requirements for labeling unpackaged systems and sub-assemblies are defined in *Identification, Labeling and Bar-coding Standards for Assemblies, 950-4477-xx*.

SPARC CPUs container labels - Requirements for these carton labels specified in *7042937* and *7063648.*

1 FORMATTING AND QUALITY OF PRINTED INFORMATION ON IDENTIFICATION LABELS

The size, spacing and other characteristics of the human-readable and bar-coded information are defined in *Tables 1-1* and *1-2*.

Table 1-1 Characteristics of Human-readable Characters

Characteristic of Human-readable Characters	***Requirement***
Minimum Height of Titles and Addresses	0.10 in. (2.5 mm)
Minimum Height of Data Values	0.12 in. (3.0 mm)
Character Set	0 to 9; A to Z; * - . $ % +
Typeface/Font	one without serifs (sans serif)
Character Compression	up to 50%
Print Color	black

Table 1-2 Characteristics of Bar Codes

Characteristic of Bar Code	***Requirement***
Linear Symbology	Code 39: ISO/IEC 16388; or Code 128: ISO/IEC 15417
Data Identifiers	optional left-most characters as required in Table 2-1
Symbol Height	minimum 0.25 inch (6.3 mm); recommended 0.40 - 0.50 inch (10.0 mm - 12.7 mm)
Print Quality	minimum Grade 1.5 (C) using aperture 0.010 in.(0.254 mm) and wavelength 660 nm =/- 10 nm per *ISO 15415, International Conformance Specification - Linear Bar Code Symbol Print Quality*
X Dimension	0.010 inch (0.254 mm) to 0.017 inch (0.432 mm)
Quiet Zone	0.25 inch (6.4 mm)

Characteristic of Bar Code	*Requirement*
Print Color	black

2 PRINTED CONTENT ON IDENTIFICATION LABELS

Print the data elements on the labels in human-readable and bar-coded characters as indicated in *Table 2-1.* The preferred order of information is as listed from top to bottom in *Table 2-1.* Data elements may appear on separate labels to fit the space available or to accommodate the distribution processes. For example, suppliers can separate item-related data elements, such as part numbers, from order-related data elements, such as purchase order number.

If an element is bar-coded, print the bar-code directly below or to the right of the human-readable information. Separate data elements by thin horizontal and vertical lines. Justify all printed information to the left-hand side of the label or boxed data field. Additional data elements not defined in *Table 2-1* may be printed on the label to meet specific needs. Bar-coded elements can optionally include data identifiers specified in ANSI MH10.8.2.

Inner boxes must contain only one part number.

Table 2-1 Printed Data Elements

Data Element	*Outer Boxes*	*Inner Boxes*	**Bar Code** if human-readable value printed	**Preferred Data Identifier** (optional)	**Example**
Ship-from Name and Address[1]	Required	Optional	none	n/a	SHIP FROM ABC COMPANY 1234 MAIN STREET NEW YORK, NY 01234
Ship-to Name and Address[1]	Required	Optional	none	n/a	SHIP TO **ORACLE AMERICA, INC.** **4200 NETWORK CIRCLE** **SANTA CLARA, CA 95054** **ATTN: JOHN SMITH**
License Plate[1]	Optional	Optional	Required	J	(J) LIC PLATE **EAA123454321** *JEAA123454321*
Packing Slip Number[1]	Optional	Optional	Required	11K	PACK SLIP # **2495** *11K2495*
Purchase Order Number(s)	Required	Optional	Required	K	(K) CUST PO # **39284023** *K39284023*
Purchase Order Line Number	Optional	Optional	Optional	4K	PO LINE **4**
Oracle Part Number	Required	Required	Required	P	(P) CUST PART **7064958** *P7064958*
Manufacturer's Part Number	Required if different than Oracle Part No.	Required if different than Oracle Part No.	Optional	1P	(1P) SPLR PART **28-297839-02** *1P28-297839-02*

Data Element	*Outer Boxes*	*Inner Boxes*	**Bar Code** if human-readable value printed	**Preferred Data Identifier** (optional)	**Example**
Quantity	Required	Required	Required	Q or 7Q	(Q) QTY **10** *Q10*
Serial Number(s)[2]	Required if contained item(s) is(are) serialized	Required if contained item(s) is(are) serialized	Required	S	(S) SERIAL # **0123456789** *S0123456789*
Date of Packing or Production: YYWW, YYYYMMDD or YYYY-MM-DD	Required	Required	Optional	9D, 10D or 16D	PROD DATE **1452**
Lot ID	Optional	Optional	Optional	1T	SPLR LOT **WGT9D815**
Package ID	Optional	Optional	Required	Inner: 3S Outer: 3S, 4S, 5S 6S, or 7S	(3S) PKG ID **82947837** *3S82947837*
Oracle-issued Supplier Code	Required	Required	Optional	V	SPLR ID **593756**
COO	Required	Required	Required. Encode 2-character ISO 3166 country code.	4L	ASSEMBLED IN **UNITED STATES**
Package Count	Required if more than 1	Optional	Optional	13Q	PKG COUNT **1 OF 4**
Weight and UOM[1]	Required	Optional	none	none	WEIGHT **40 KG**

- Ship-to Name and Address, Ship-from Name and Address, License Plate, and Weight can to be printed on a separate label that is applied to the largest transport unit.

1. Serial numbers and COO can be printed on separate labels.

3 ELEMENT DEFINITIONS

The data elements specified within *Table 2-1* are defined in *Table 3-1* below. Refer to ANSI MH 10.8.2 for further definition of elements, usage and appropriate data identifiers to use when bar-coding the element.

Table 3-1 Definition of Data Elements

Data Element	*Definition*
Ship-from Name and Address	Name and address of Supplier.
Ship-to Name and Address	Name and address of Customer (Oracle or external manufacturer).
License Plate	Unique license plate assigned to a transport unit which is the lowest level of packaging, the unbreakable unit.
Packing Slip Number	Packing list number assigned by Supplier (11K).
Purchase Order Number(s)	Order number(s) assigned by the Customer
Purchase Order Line Number	Line number of the order asigned by the Customer

Data Element	*Definition*
Oracle Part Number	Oracle's manufacturing part number.
Manufacturer's Part Number	Supplier's manufacturing part number.
Quantity	Quantity, number of pieces or amount (numeric only) . The unit of measure and significance is mutually defined by Supplier and Customer.
Serial Number(s)	Unique identification number(s) or code(s) assigned by the Supplier to an entity for its lifetime.
Date of Packing or Production	Date item(s) completed production or are/were placed in a shipping container(packaging). Preferred formats are: • (9D or 10D) YYWW • (16D) YYYYMMDD • (9D) YYYY-MM-DD
Lot ID	Traceability number assigned by the Supplier to identify/trace a unique group of entities (e.g., lot, batch or shift).
Package ID	Package identification assigned by the Supplier. • (3S) Lowest level of packaging which has a Package ID shall contain like items. • (4S) Outer (master) packs containing like items on a single Customer order. • (5S) Outer(master) packs conaining unlike items on a single Customer order. • (6S) Outer (master) packs conaining like items over multiple Customer orders. • (7S) Outer (master) packs conaining unlike items over multiple Customer orders.
Oracle-issued Supplier Code	Supplier code assigned by the Customer (V). Code appears on the Oracle purchase order.
COO	Country of Origin and, when bar-coded, the two-character ISO 3166 country code.
Package Count	The Nth of X total packages or transport units in the shipment.
Weight and UOM	Weight of the package or transport unit and its unit of measure.

4 ADDITIONAL AND CONFLICTING REQUIREMENTS

Oracle's contract manufacturers may expect suppliers to provide additional or conflicting information on the labels. Oracle approval is not required to print additional information on the labels. However, when conflicting requirements arise, the Oracle buyer or Supply Program Manager (SPM) should be contacted to provide resolution.

5 PACKING LISTS

All shipments to Oracle and its contract manufacturers must be accompanied by a packing list. Minimum information required on the packing list is provided in *WWOPS Business Process Architecture and Training: Supplier Specification - Supply to Oracle Manufacturing, 923-7041022*.

6 LABEL LAYOUT, SIZE, PLACEMENT AND ORIENTATION

6.1 Layout and Size

As allowed by EIA-556-B, the supplier may use any size label and any layout for the printed information which best fits the required data elements. Choose a size that allows for the human-readable and bar-coded information to be printed at the minimum sizes and to allow for minimum quiet zones at the ends of the bar codes as specified in *Tables 1-1* and *1-2*.

6.2 Placement and Orientation

As stated in EIA-556-B, the supplier should adhere the labels:

- where there is a minimal risk of damage during shipping and handling
- where they can be easily scanned and read

- on the side of the transport unit in an orientation such that the human-readable information is parallel to the natural bottom of the transport unit.

As cautioned in EIA-556-B:

CAUTION: Care must be exercised to ensure that printed symbols are able to be used by all points of the distribution chain... Obsolete labels should be removed or covered. When covering obsolete labels, the print quality of the new label applied over the obsolete label shall meet [Grade C of ISO 15415].

6.3 Physical Material Requirements and Performance

Labels must conform to the requirements of Annex A of EIA-556-B which are intended to ensure that labels and marks can withstand extended long-term exposure to a variety of indoor environments, remain affixed to products and are scanable and readable for the intended life of the product.

All materials used in the construction of the labels, including substrate, coatings, inks and adhesives, must comply with the content restrictions specified in the latest revision of *WWOPS Supplier Engineering: Environmental Specification - Product Compliance, 914-1742-xx*.

To improve recyclability, it is recommended that paper labels be used on corrugated shipping cartons.

References

This specification is based upon the Electronic Industries Alliance standard EIA-556-B in conjunction with the other industry standards listed in the table below.

Standard	***Title***	***Use / Description***
ANSI[1] MH10.8.2	*Data Application Identifier Standard*	Defines both FACT Data Identifiers and UCC[7]/EAN[3] Application Identifiers which are embedded at the beginning of bar codes to identify the kind of information encoded. It also provides a mapping between the two approaches.
EIA[2] 556B	*Outer Shipping Container Label Standard*	Provides instructions for producing and applying labels containing bar code symbols or labels containing two-dimensional symbols onto shipping containers.
ISO[4]/IEC[3] 16388	*Automatic Identification and Data Capture Techniques - International Bar Code Symbology Specification - Code 39*	Defines the Code 39 bar code symbology, which is a linear (one-dimensional) symbology suitable for encoding general purpose alphanumeric data. It is a reference symbology for many industry standards and can be used to encode a standard set of characters or full ASCII.
ISO[4]/IEC[3] 15417	*Automatic Identification and Data Capture Techniques - International Bar Code Symbology Specification - Code 128*	Defines the Code 128 bar code symbology, which is a linear (one-dimensional) symbology which can encode upper- and lower-case characters, control characters and numeric values in double density.
ISO[4] 3166	*Codes for the representation of names of countries and their subdivisions*	Defines three sets of country codes, alpha-2, alpha-3, and numeric-3, listed by full English and French country names. This specification utilizes the alpha-2 codes.
ISO[4]/IEC[3] 15416	*Automatic Identification and Data Capture Techniques - International Conformance Specification - Linear Bar Code Symbol Print Quality*	Provides a standardized method of measuring and grading one-dimensional bar codes on first-pass readability. It is applicable to Code 39 and 128 symbologies.

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1. ANSI is the American National Standards Institute
2. EIA is the Electronic Industries Alliance
3. IEC is the International Intertechnical Commission
4. ISO is the International Organization for Standardization

Document History

Dash	*Rev*	*ECO No.*	*Description of Change*	*Responsible Engineer*	*Date*
01	A	n/a (See WebDocs)	Initial Release.	N/A	1992-11-16
01	B	n/a (See WebDocs)	Added data-identifier requirement, including: • Removed references to: 905-0872-xx, 905-0513-xx, 917-1009-xx • Added Materials Mgmt to notify suppliers of document changes. • Expanded the data-identifiers subsection. Removed the figure showing the removal of unacceptable data identifiers. • Added data identifiers to all other figures. • Added information about labeling multiple orders on one pallet. • Removed the Sun PO# from POU intermediate labels. • Added a print-quality subsection. • Added a label-placement subsection. Requirements apply to all suppliers (except in Scotland).	N/A	1993-12-21
02	A	n/a (See WebDocs)	Added country-of-origin requirements. Removed note that Scotland labeling requirements are for components only.	N/A	1996-03-20
03	A	n/a (See WebDocs)	Changed: • Audience • Sun organizational names • Component Engineering to Supply Management in "Responsibility" subsection. • Approvers Applied the most up-to-date template.	N/A	1999-01-29
n/a	04	E0021243	Completely revised document. Updated references to industry standards. Updated requirements to match EIA-556-B and ANSI MH10.8.2. Made Data Identifiers optional in barcodes. Require Oracle mfg part no., serial number(s), quantity, purchase order no. and packing slip no. be included and barcoded. Require ship-to and ship-from addresses, date of manufacture, COO, vendor code and weight be included in human-readable form only.	N/A	2014-07-10
n/a	05	E0023686	In Table 2-1, changed: 1) printing of human-readable Serial Number from 'Optional' to 'Required if item(s) is(are) serialized'; 2) printing of human-readable COO to from 'Optional' to 'Required' on inner boxes; 3) barcoding of COO from 'Optional' to 'Required. Encode 2-character ISO 3166 country code.'	N/A	2015-01-08
n/a	06	E57073	Updated to comply with current corporate template.	N/A	20-04-2022
n/a	07	E57093	Fix history	N/A	21-04-2022

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