

Technical Guide for Logistics

Document ID:	Tatmeen_WKI-0064_Technical Logistics_v2.0	Guide for
Version:	2.0	

1 Document Control

1.1 Version History

Version	Date	Description of Change	Author / Company
1.0	13-Dec-2021	Initial Release.	Movilitas
2.0	17-Mar-2022	Minor updates after MoHAP and 3PL review.	Movilitas

Table 1 Version History

Table of Contents

1	Document Control	2
1.1	Version History.....	2
2	Introduction	6
2.1	Scope of Document.....	6
2.1.1	In Scope	7
2.1.2	Out of Scope.....	7
2.2	Document Structure	7
2.3	Target Participants	8
2.4	Prerequisites	8
3	Message Guidelines.....	10
3.1	Importation to UAE - Initial Receipt of Goods.....	10
3.1.1	Business Process Outline	11
3.1.2	Constraints and Validations	12
3.2	Sampling for Customs Release / Market Release.....	13
3.2.1	Business Process Outline	13
3.2.2	Constraints and Validations	13
3.3	Product Transfer Between Locations	14
3.3.1	Business Process Outline	14
3.3.2	Constraints and Validations	15
3.4	Product Hierarchy Update Within UAE.....	16
3.4.1	Pack New SSCC	17
3.4.2	Unpack Existing Hierarchy.....	18
3.5	Product status update within the UAE.....	19
3.5.1	Business Process Outline	20
3.5.2	Constraints and Validations	20
3.6	Destruction of product within the UAE.....	21
3.6.1	Business Process Outline	22
3.6.2	Constraints and Validations	22

4	API Specification	24
4.1	API Subscription.....	24
4.2	API Authentication.....	24
4.2.1	Staging Authentication Endpoints.....	25
4.2.2	Live Authentication Endpoints	25
4.3	Service APIs.....	25
4.3.1	Staging Service Endpoints.....	25
4.3.2	Live Service Endpoints	26
4.4	Message Formats	26
5	EPCIS Message Format	27
5.1	EPCIS: Custom Tatmeen Namespace	27
5.2	EPCIS: Header Attributes	27
5.3	EPCIS Commissioning Attributes.....	28
5.4	EPCIS Hierarchy Update Attributes	29
5.4.1	Aggregation Event: Packing	29
5.4.2	Aggregation Event: Unpacking	30
5.5	EPCIS Shipping Attributes	31
5.6	EPCIS Receiving Attributes	34
5.7	EPCIS Status and Destruction Attributes	35
5.7.1	Sampled Product Event.....	36
5.7.2	Destroyed Goods Event.....	37
5.7.3	Damaged Goods Event	38
5.7.4	Stolen Goods Event.....	39
5.7.5	Exportation Event	40
5.7.6	Lost/Missing Goods Event.....	41
5.8	EPCIS Message Technical Response	41
5.9	EPCIS: Examples.....	42
5.9.1	Packing New SSCC Example.....	43
5.9.2	Shipping Example.....	44

5.9.3	Receiving Example	46
5.9.4	Sampling Example.....	47
5.9.5	Destruction Example	48
5.9.6	Damaged Example	49
5.9.7	Stolen Example	51
5.9.8	Exported Example	52
5.9.9	Lost Example.....	53
5.10	EPCIS Message Technical Response Examples	55
5.10.1	Success.....	55
5.10.2	Connectivity Error	55
5.10.3	System Error	55
5.10.4	Mapping Error.....	56
5.11	EPCIS Message Query Status.....	56
5.11.1	Message Status Query	57
5.11.2	Message Status Query Response.....	57
6	EPCIS Message Summary	59
7	Glossary	61

2 Introduction

The UAE's Governmental department for healthcare and prevention - MoHAP has published legislation that defines the Serialisation and Track and Trace (T&T) requirements for all participants involved in manufacturing, distributing and dispensing pharmaceutical products. This legislation:

- Defines the specific categories of products relevant to the legislation.
- Applies to the entirety of the UAE territory.
- It becomes effective:
 - Immediately prior to foreign product importation into the UAE.
 - Immediately prior to domestic manufacture release into the UAE.
- Concludes with dispensing to patients/consumers.
- Manages exceptions such as product recalls.

This legislation is driven by the need to maintain and improve patient safety whilst at the same time reduce counterfeits within the UAE.

Tatmeen is the Information Technology (IT) regulatory system that will support the UAE T&T legislation to the pharmaceutical industry. All products placed on the UAE market need to display a serialised unique identifier on the product secondary packaging. Also aggregated packaging (aggregated homogenous products or logistics unit) must display a serialised unique identifier. The appropriate serialised identifiers must be used to record the operational and transactional movements of the products throughout the supply chain and during dispensing to the patient / consumer.

The information recorded by the participants must be transmitted to the Tatmeen traceability system where it is stored. The stored data is made available for regulatory purposes to the authorities of the UAE MoHAP departments.

2.1 Scope of Document

The purpose of this document is to define the information that must be sent under the MoHAP regulations to the Tatmeen traceability system by logistics supply chain participants involved in the movement of medical products for the following processes:

1. Importation Into UAE: Initial Receipt of Goods for import clearance and customs release.
2. Sampling for Import Clearance and Customs Release / Market Release

3. Domestic Manufacturing for UAE, staging for release.
4. Product transfer between stock holding owners and locations within the UAE
5. Product hierarchy update within the UAE
6. Product status update within the UAE
7. Export of product from the UAE
8. Destruction of product within the UAE

These processes are the first draft of this technical guide and it is expected that additional processes will be added in future versions of this document, as appropriate.

2.1.1 In Scope

This guide covers the technical onboarding of organizations to the Tatmeen solution.

2.1.2 Out of Scope

The guide makes reference to systems external to the Tatmeen system and the onboarding to those external systems is not included in this guide.

Automatic processes within the Tatmeen solution are not covered within this guide.

2.2 Document Structure

The document follows the outline in Table 2.

Section	Content
Section 2	Introduction and Context.
Section 3	Message guidelines and specifications: <ul style="list-style-type: none">• EPCIS message events.• EPCIS message status.
Section 4	Technical API Guidelines, providing usage guidelines for the technical API to submit data to the Tatmeen traceability system.
Section 5	Message Formats and examples of messages.

Table 2 Document Structure

2.3 Target Participants

The following stakeholders / participants for the Section 2.1 in scope processes are responsible for collecting serialised product item traceability records during the storing and moving of pharmaceutical products within the UAE market.

Participant	Description
3PL	<p>The Third Party Logistics (3PL) participant is a logistics partner that is:</p> <ul style="list-style-type: none"> Physically located outside the UAE, and/or Located in the UAE Free Trade Zone, and/or Registered with GS1 as a 3PL partner. <p>Similar to a Distributor, they may participate with handling and storing imported products immediately prior to the customs clearance process. This is based on the product delivery Incoterms.</p>
Dispenser	A partner providing pharmacy services to provide accurate, timely and qualitative medical product dispensing services to registered patients.
Distributor	The Distributor is a supply chain partner representing a location for storing medical product and can have a MoHAP license for medical product importation; distribution storage.
Domestic Manufacturer	A domestic manufacture is a manufacturing entity located in the UAE supplying goods to the UAE market. A domestic manufacturer may also be the MAH.
MAH	Marketing Authorisation Holder is the company or other legal entity that has the authorization granted by MoHAP to market a medicine in the UAE.

Table 3 Document Stakeholders

2.4 Prerequisites

Please refer to the Technical Onboarding Guide to ensure the following prerequisites are met:

- Product Registration:**

All products subject to the UAE MoHAP legislation (registered drugs; unregistered drugs) should be known in the appropriate MoHAP / Federal system and these should also be known in the GS1 BrandSync master data system. This product's information is synchronised between the BrandSync system and the Tatmeen solution.

- Entity Registration:
 - All Distributors (and relevant 3PL's) involved in the storage or distribution of medical products should be known as supply chain partners and should be allocated a GS1 Global Location Number (GLN).

3 Message Guidelines

This section describes the messaging responsibilities of the participants for the processes in Section 2.1 according to the following scenarios.

- Importation to UAE, Initial Receipt of Goods.
- Sampling for Customs Release / Market Release
- Product transfer between stock holding owners and locations within the UAE
- Product hierarchy update within the UAE
- Product status update within the UAE
- Destruction of product within the UAE

The following general principles for stakeholders in Section 2.3 reporting to the Tatmeen solution to meet the MoHAP legislation are:

- Logistics supply chain partners (Distributors) must report the relevant event serialisation information immediately the physical event is completed
- Messages that are sent to the Tatmeen platform must be constructed according to the GS1 EPCIS standards defined in this technical guide.
- A single event activity is represented by a single GS1 event document with the exception of scenario of packing into a new SSCC parent.

3.1 Importation to UAE - Initial Receipt of Goods

This section describes the reporting scenario for UAE Distributors that participate in the importation of foreign goods into the UAE market. The Distributor is the partner entity that must report the initial receipt of the goods into the UAE prior to import clearance and customs release by MoHAP and Federal Customs. All serialised pharmaceutical products subject to MoHAP legislation must not physically enter the UAE market without having completed this reporting.

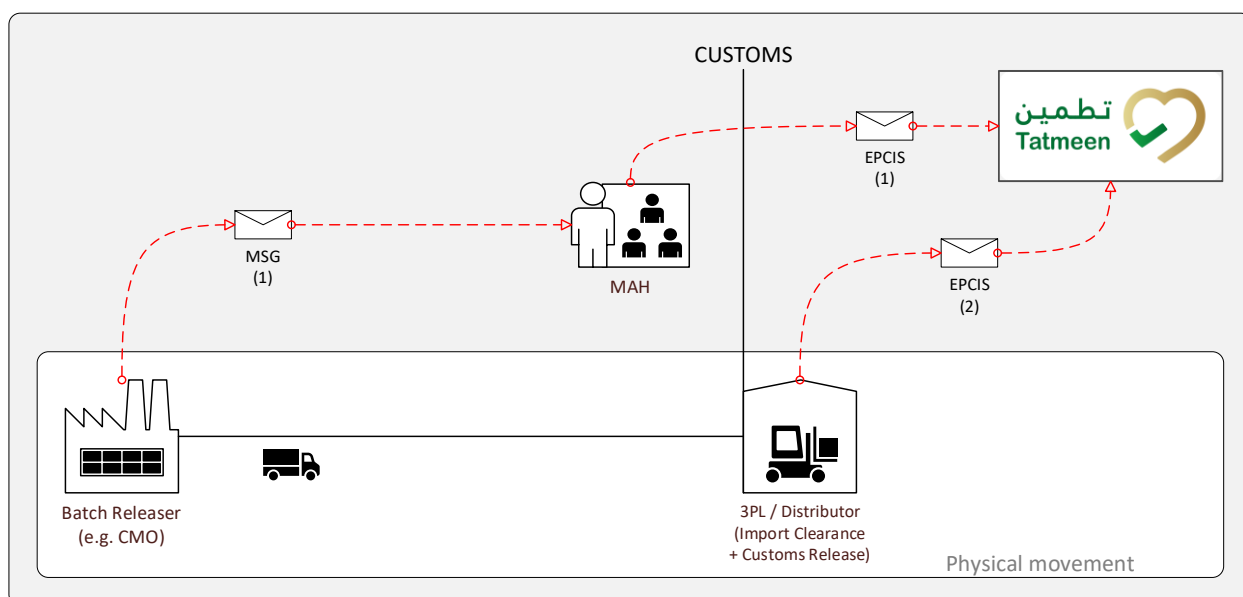


Figure 1 Importing Registered Drugs, Initial Receipt

3.1.1 Business Process Outline

This outline refers to Figure 1, above.

1. The MAH or their delegated technical representative must notify the UAE located Distributor (or where Incoterms dictate, the 3PL) once the importation EPCIS message(s) ("EPCIS (1)" in Figure 1) is successfully sent to the Tatmeen solution. The description of this messaging is described in the Tatmeen Technical Guide for Manufacturers and is not described in this document.
2. On subsequent receipt of the physical goods and the confirmation in the previous step, the UAE located Distributor (or where Incoterms dictate, the 3PL) must send an EPCIS message ("EPCIS (2)" in Figure 1) to the Tatmeen solution to receive the goods into the UAE market location in preparation of import clearance and customs release.
3. Once the imported product is successfully receipted into the Distributor (or where Incoterms dictate, the 3PL) location and reported to the Tatmeen solution, then the goods are sampled and inspected as appropriate at the Distributor (or where Incoterms dictate, the 3PL) location.
4. The Distributor (or where Incoterms dictate, the 3PL) must send any events for activities such as sampling and inspecting, that are conducted on behalf of the MoHAP and Federal Customs inspectors during the import clearance and customs release processes.

5. Note the import clearance and customs release events are not recorded by the Distributor (or where Incoterms dictate, the 3PL) but instead are recorded by the relevant MoHAP and/or Federal Customs inspector.

3.1.2 Constraints and Validations

Failure to report this critical event means the goods are blocked to the UAE market therefore the Tatmeen solution expects to receive from the Distributor:

1. A single EPCIS message for a full / partial delivery receipt that defines the serialised product items for importation.
2. Each EPCIS message must contain an EPCIS Header, that specifies:
 - a. A unique message identifier that is generated by the Distributor and is used to identify each EPCIS message.
 - b. The message creation date and time.
 - c. The message sender information, i.e., the Distributor GLN.
 - d. The identifier for the relevant Tatmeen system that will receive the EPCIS message.
3. Each EPCIS message must consist of a single GS1 “receiving” EPCIS event recorded in the message and follows the structure below.

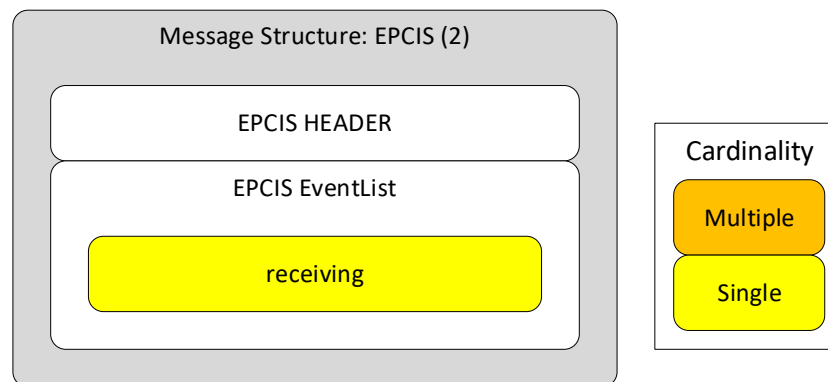


Figure 2 Importation Receipt EPCIS Message Structure

4. Only the top level hierarchy serialisation ID's are included in the receipt message.

3.2 Sampling for Customs Release / Market Release

There are numerous situations during operational logistics where a Distributor selects a small number of products items as samples for inspection purposes. These include (but not limited to):

- Import clearance sampling for product verification.
- Customs release sampling for product verification.
- Quality control.

3.2.1 Business Process Outline

The following steps outline the process for sampling at the Distributor location in the UAE.

1. During the sampling process the Distributor must capture the individual unique top level serialised tracking identifiers for the samples pharmaceutical product items.
 - a. Item SGTIN
 - b. Product Lot/Batch
 - c. Serial Shipping Container Codes (SSCCs)
2. The Distributor must send an EPCIS document to the Tatmeen solution containing the serialised identifiers captured in the previous step. This document consists of the EPCIS event that then registers the specific items as sampled items so they are not available for dispensing in the UAE market.

3.2.2 Constraints and Validations

1. The Distributor must hold the pharmaceutical stock at their location immediately prior to changing the status.
2. A single EPCIS message must be sent that defines the sampling activity.
3. Each EPCIS message must contain an EPCIS Header, that specifies:
 - a. A unique message identifier that is generated by the Distributor and is used to identify each EPCIS message.
 - b. The message creation date and time.
 - c. The message sender information, i.e., the Distributor.

- d. The identifier for the relevant Tatmeen system that will receive the EPCIS message.
4. Each EPCIS message must consist of a single GS1 “inspecting” EPCIS event recorded in the message and follows the structure below.

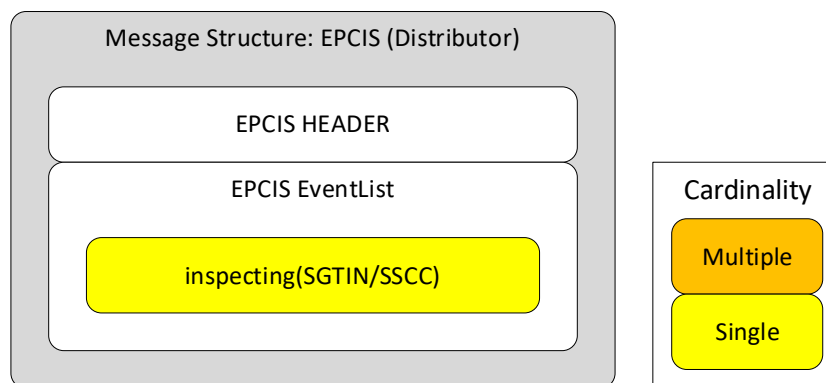


Figure 3 Sampling EPCIS Message Structure

5. Only the top level hierarchy ID's (SGTIN/SSCC) are included in the sample inspecting message.

3.3 Product Transfer Between Locations

Product transfers between locations registers the fundamental shipment and receipt of serialised products between those locations including any change of ownership. This transfer registration of the top level serialised product items or logistics unit must be reported to the Tatmeen system by both the sending and receiving parties.

Product Transfer process covers the following processes:

- Shipment
- Return - when shipment is rejected by the receiver, the receiver should receive the shipment and then use Return to ship back

3.3.1 Business Process Outline

The following steps outline the process for transfer between locations in the UAE.

1. The Distributor initiating the product transfer (SENDER) must capture the individual unique top level serialised tracking identifiers for the pharmaceutical product items to be transferred.

- a. Item SGTIN
 - b. Serial Shipping Container Codes (SSCCs)
2. The SENDER must send an EPCIS document to the Tatmeen solution containing the serialised identifiers captured in the previous step. This document contains the single EPCIS event that then registers the specific items as shipped items so they are no longer located at the SENDER location.
3. When the physical product items arrive at the intended destination, the receiving Distributor (RECEIVER) must capture the same top level tracking identifiers.
4. The RECEIVER must send an EPCIS document to the Tatmeen solution containing the serialised identifiers captured in the previous step. This document contains the single EPCIS event that then registers the specific items as received into stock at the RECEIVER location.

3.3.2 Constraints and Validations

The Tatmeen solution expects to receive a message firstly from the SENDER distributor and then at some later time the corresponding RECEIVER message. Failure to receive both messages will block the product items from being dispensed.

1. A single EPCIS message for a full / partial shipment that defines the serialised product items for transfer to another location.
2. A single EPCIS message for a full / partial receipt that defines the arrival of the serialised product items at the destination location.
3. Each EPCIS message must contain an EPCIS Header, that specifies:
 - a. A unique message identifier that is generated by the Distributor and is used to identify each EPCIS message.
 - b. The message creation date and time.
 - c. The message sender information, i.e., the SENDER/RECEIVER GLN.
 - d. The identifier for the relevant Tatmeen system that will receive the EPCIS message.
4. Each EPCIS message must consist of either:
 - a. A single GS1 “shipping” EPCIS event recorded in the message and follows the structure below.

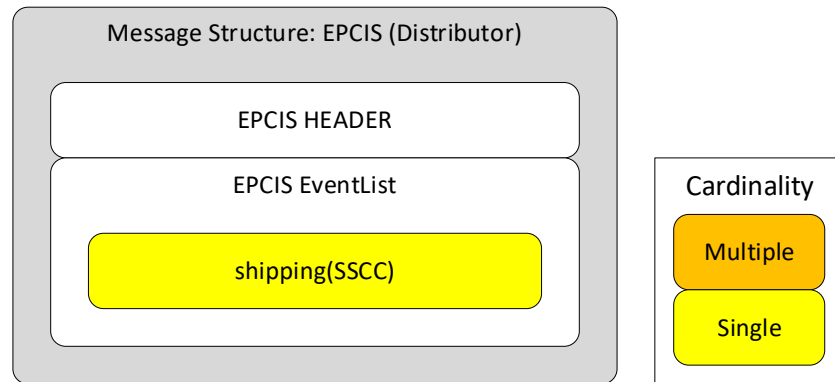


Figure 4 SENDER EPCIS Message Format

- b. A single GS1 “receiving” EPCIS event recorded in the message and follows the structure below.

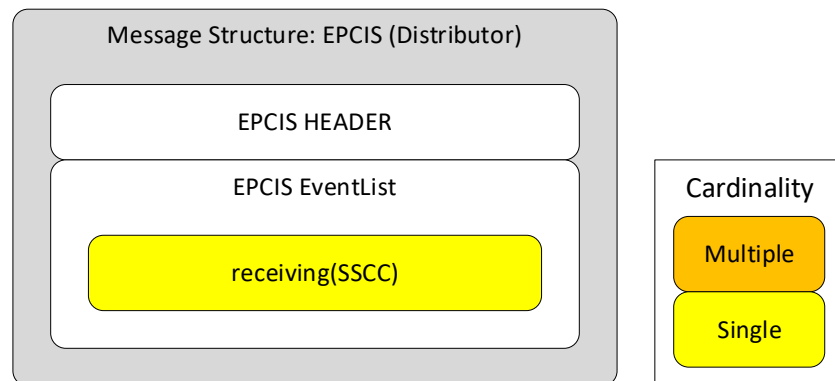


Figure 5 RECEIVER EPCIS Message Structure

5. Only the top level hierarchy serialisation ID's are included in each of the shipping and receiving messages.

3.4 Product Hierarchy Update Within UAE

A product hierarchy update consists of one of two operations at a Distributor location.

- Pack (consolidation of new aggregation structure)
- Unpack (deconsolidation of existing aggregation structure)

Aggregation is defined by relation between parent item and children item(s). The Distributor must note that defining a new parent that has not been previously registered in the Tatmeen solution requires that the top level (parent) identifier must first be

registered before the aggregation activity is recorded. At a Distributor location this is only allowed for logistics units (SSCC).

Pack and Unpack activities with the supply chain must trigger reporting to inform the Tatmeen solution of the product hierarchy relationship changes.

3.4.1 Pack New SSCC

3.4.1.1 Business Process Outline

The following steps outline the process for packing product items into a new logistics unit (SSCC).

1. During the supply chain logistics process to pack serialised product items into a new logistics units the SSCC label for the serialised logistics unit is generated. The new SSCC serialised identifier is captured to register the new identifier.
2. During the physical packing activities, the Distributor must capture the serialised product item serialised items (SGTIN / SSCC) that are associated with the top level identifier.
3. The Distributor must send an EPCIS document to the Tatmeen solution containing the serialised identifiers captured in the previous step. This document contains:
 - a. The EPCIS commissioning event that then registers the new SSCC parent so it is known to the Tatmeen solution.
 - b. The EPCIS packing event that then registers the parent/child relationship between the new SSCC and the captured child identifiers.

3.4.1.2 Constraints and Validations

1. The Distributor must hold the pharmaceutical stock at their location immediately prior to changing the hierarchy.
2. A pair of EPCIS messages must be sent that defines:
 - a. The creation of the SSCC identifier.
 - b. The new parent/child association with the new SSCC as parent.
3. Each EPCIS message must contain an EPCIS Header, that specifies:
 - a. A unique message identifier that is generated by the Distributor and is used to identify each EPCIS message.

- b. The message creation date and time.
 - c. The message sender information, i.e., the logistics Distributor GLN.
 - d. The identifier for the relevant Tatmeen system that will receive the EPCIS message.
4. Each EPCIS document must consist of the pair of EPCIS events recorded according to the structure below.

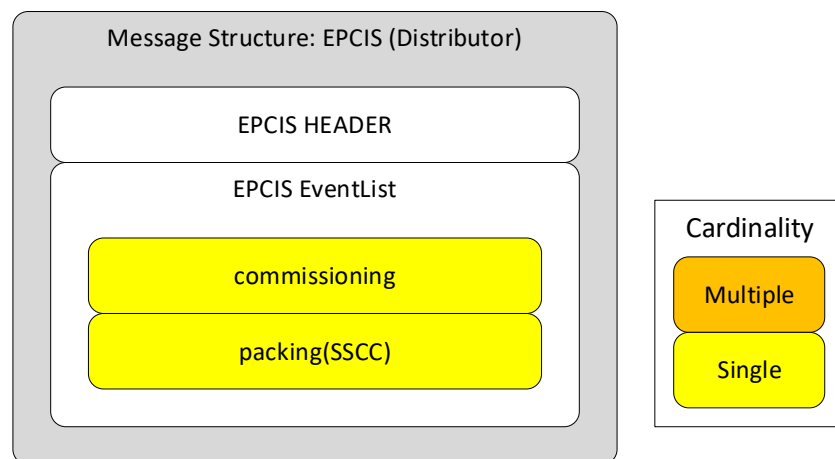


Figure 6 Pack to New SSCC - EPCIS Document Structure

3.4.2 Unpack Existing Hierarchy

3.4.2.1 Business Process Outline

The following steps outline the process for unpacking product items from an existing logistics unit (SSCC) or aggregated level SGTIN product item.

1. During the supply chain logistics process to unpack serialised product items from an existing structure the Distributor must capture the serialised product item identifier of the top level item.
2. The Distributor must send an EPCIS document to the Tatmeen solution containing the serialised identifiers captured in the previous step. This document contains a single EPCIS message that then registers the disassociation of the next level child items from the parent identifier. The parent identifier may no longer be used.

3.4.2.2 Constraints and Validations

1. The Distributor must hold the pharmaceutical stock at their location immediately prior to changing the hierarchy.
2. Each EPCIS message must contain an EPCIS Header, that specifies:
 - a. A unique message identifier that is generated by the Distributor and is used to identify each EPCIS message.
 - b. The message creation date and time.
 - c. The message sender information, i.e., the logistics Distributor GLN.
 - d. The identifier for the relevant Tatmeen system that will receive the EPCIS message.
3. Each EPCIS document must consist of a single GS1 “unpacking” EPCIS event recorded in the message and follows the structure below.

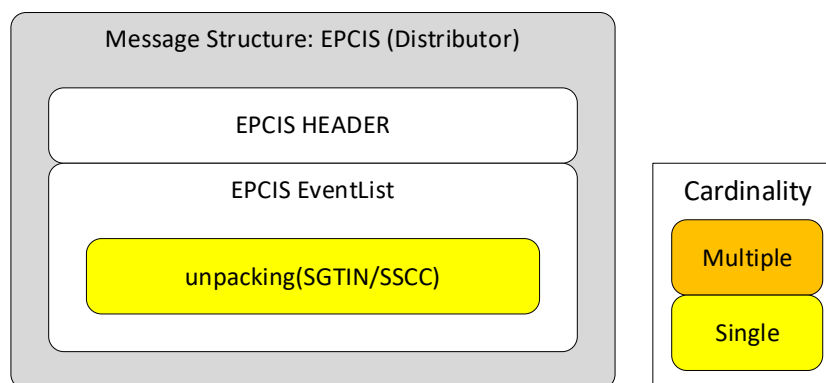


Figure 7 Unpack EPCIS Document Structure

3.5 Product status update within the UAE

Serialised product items can have the item status changed if they are:

- Known to the Tatmeen solution.
- Located at a licensed UAE Distributor.

3.5.1 Business Process Outline

The following steps outline the process for product item status change to restrict unsuitable product items from dispensing.

1. During the logistics process to change the status of any serialised product item, the Distributor must capture the individual unique top level tracking identification
 - a. Item SGTIN
 - b. Product Lot/Batch
 - c. Serial Shipping Container Codes (SSCCs)
2. The Distributor must send an EPCIS document to the Tatmeen solution containing the serialised identifiers captured in the previous step. This document contains a single EPCIS message that then registers the specific items for status change so they are not available for dispensing in the UAE market.

3.5.2 Constraints and Validations

1. The Distributor must hold the pharmaceutical stock at their location immediately prior to changing the status.
2. A single EPCIS message must be sent that defines the status change.
3. Each EPCIS message must contain an EPCIS Header, that specifies:
 - a. A unique message identifier that is generated by the Distributor and is used to identify each EPCIS message.
 - b. The message creation date and time.
 - c. The message sender information, i.e., the exporting Distributor GLN.
 - d. The identifier for the relevant Tatmeen system that will receive the EPCIS message.
4. Each EPCIS message must consist of a single GS1 status change EPCIS event recorded in the message and follows the structure below using the Business Step and Disposition identified in Table 4.

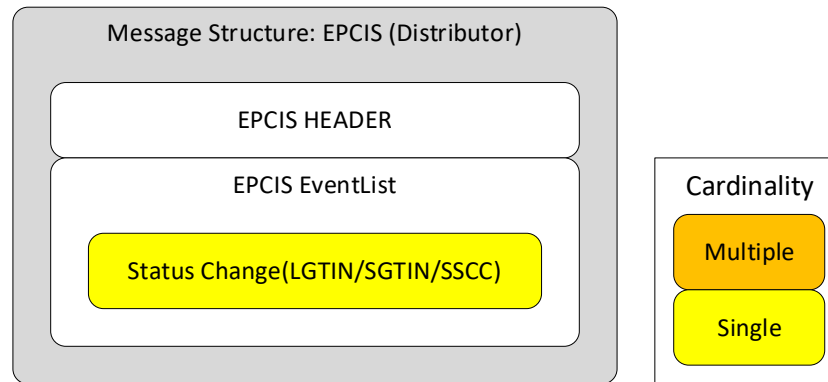


Figure 8 Status Change EPCIS Message Structure

Case	Business Step	Disposition
Block	UPDATING	BLOCKED
Unblock	UPDATING	UNBLOCKED
Recalled	UPDATING	RECALLED
Export	DECOMMISSIONING	NON_SELLABLE_OTHER

Table 4 Status Change Parameters

- Only the top level hierarchy ID's (LGTIN/SGTIN/SSCC) are included in the status change message.

3.6 Destruction of product within the UAE

Destruction is a logistics operation that removes previously valid and authentic products from the market for a variety of situations.

- No dispensing of any destroyed products is possible
- Also, no transfer is possible when blocked for destruction.

The following destruction scenarios are included for Distributors:

- Destruction: product is identified for destruction for any number of reasons.
- Damaged: product is identified as damaged and unfit for further distribution.
- Stolen: missing product is identified as stolen and must be reported accordingly.
- Lost / Missing: previously known items can no longer be located and therefore missing.

3.6.1 Business Process Outline

The following steps outline the process for exporting from the UAE.

1. During the process to record the destruction/removal of product item identifiers from record, the Distributor must capture the individual unique top level tracking identifiers either by scanning or from internal records.
2. The Distributor must send an EPCIS document to the Tatmeen solution containing the serialised identifiers captured in the previous step. This document contains a single EPCIS message for the appropriate destruction activity that then registers the specific items destruction in the Tatmeen system and further blocking the items for dispensing in the UAE market.

3.6.2 Constraints and Validations

1. The last known location of the serialised product items must be the Distributor reporting the destruction activity.
2. A single EPCIS document must be sent that reports the relevant destruction scenario of the identified serialised IDs.
3. Each EPCIS message must contain an EPCIS Header, that specifies:
 - a. A unique message identifier that is generated by the Distributor and is used to identify each EPCIS message.
 - b. The message creation date and time.
 - c. The message sender information, i.e., the reporting Distributor GLN.
 - d. The identifier for the relevant Tatmeen system that will receive the EPCIS message.
4. Each EPCIS message must consist of a single GS1 destruction EPCIS event (see Table 5 for event context) recorded in the document and follows the structure below.

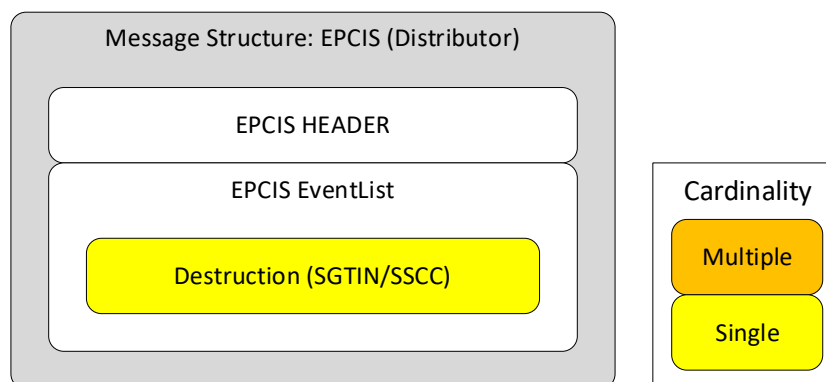


Figure 9 Destruction EPCIS Message Structure

Case	Business Step	Disposition
Destruction	DESTROYING	DESTROYED
Damaged	DECOMMISSIONING	DESTROYED
Stolen	DECOMMISSIONING	STOLEN
Lost	DECOMMISSIONING	INACTIVE

Table 5 Destruction Parameters

- Only the top level hierarchy ID's (SGTIN/SSCC) are included in the destruction message.

4 API Specification

During the business partner onboarding process, the Single Point of Contact (SPOC) will be registered and the SPOC then manages the API subscription to enable electronic submission of messages to the Tatmeen solution. This section describes the following:

- API Subscription
- Service APIs
- Message Formats
- Message Status Formats
- Message Acknowledgements

4.1 API Subscription

To be able to subscribe to the Tatmeen solution APIs, the following steps must be followed.

1. The business partner (Distributor) SPOC must register a single technical user following the user registration process in the Tatmeen Technical Onboarding Guide.
2. Once approval for the user is given, the technical user credentials (sign-on ID and password) are created in the Tatmeen solution and authorised for messages that reference the business partner GLN.
3. The SPOC provides these credentials to their technical team to subscribe to the Tatmeen APIs. During subscription the Tatmeen API Application Key and Application Secret are issued. These must be saved for use during technical messaging with the Tatmeen system.

4.2 API Authentication

Prior to connecting to any specific API services, the API connection must be authenticated using OpenID Connect. OpenID Connect is an identity layer that allows the business partner technical user to be verified against the Tatmeen identity service. The following considerations are required.

1. The API calls must use OpenID authentication to communicate with the Tatmeen system.

- Each API technical user must send messages by calling the designated API Authentication endpoints and must include the Tatmeen API Application Key and Tatmeen API Application Secret.

4.2.1 Staging Authentication Endpoints

The table below contains the current expected test endpoint. This section shall be updated once this detail is available for publication. Actual URL's will be part of onboarding kit.

IP Range	Service URL	Operations	Description
x.x.x.x	https://stg-api.url/v1	/auth	Authorization Service

Table 6 Authentication Test Endpoints

4.2.2 Live Authentication Endpoints

The table below contains the current expected live endpoint. This section shall be updated once this detail is available for publication. Actual URL's will be part of onboarding kit.

IP Range	Service URL	Operations	Description
x.x.x.x	https://api.url/v1	/auth	Authorization Service

Table 7 Authentication Live Endpoints

4.3 Service APIs

The tables below (Table 8 and Table 9) provide the list of service URLs for the Dispensing partner activities. Actual URL's will be part of onboarding kit.

4.3.1 Staging Service Endpoints

IP Range	Service URL	Operations	Description
x.x.x.x	https://stg-api.url/v1	/epcisMsgAsync	EPCIS Message Events
x.x.x.x	https://stg-api.url/v1	/epcisMsgStatus	Check EPCIS Message Status

Table 8 Service Test Endpoints

4.3.2 Live Service Endpoints

IP Range	Service URL	Operations	Description
x.x.x.x	https://api.url/v1	/epcisMsgAsync	EPCIS Message Events
x.x.x.x	https://api.url/v1	/epcisMsgStatus	Check EPCIS Message Status

Table 9 Service Live Endpoints

4.4 Message Formats

The following message formats are to be used.

Data	Content-Type	Standards
EPCIS Event Messages	Application/xml	GS1 EPCIS 1.2
EPCIS Message Status Query	Application/xml	Tatmeen xml

Table 10 Message Formats

For further details about the message formats, please refer to:

- GS1 EPCIS and CBV Implementation guide document
(https://www.gs1.org/docs/epc/EPCIS_Guideline.pdf)
- GS1 Common Business Vocabulary Standard
(<https://www.gs1.org/sites/default/files/docs/epc/CBV-Standard-1-2-2-r-2017-10-12.pdf>)
- GS1 Standard Business Document Header (SBDH) Version 1.3
(https://www.gs1.org/sites/default/files/docs/xml/SBDH_v1_3_Technical_Implementation_Guide.pdf)
- ISO 8601: Representation of dates and times “Data elements and interchange formats – Information interchange.”

These documents form the basis for the EPCIS Message Formats described in the next section.

5 EPCIS Message Format

This section provides detailed information about the format of the EPCIS documents and message events that must be sent by the Distributor participant to the Tatmeen system.

It is assumed that the recipient of this document is familiar with the GS1 EPCIS standards and the technical xml formats described in the subsequent sections.

Current messaging is defined in the section although there are additional messages anticipated for future scenarios. These shall be updated in future revisions of this document.

5.1 EPCIS: Custom Tatmeen Namespace

To allow custom Tatmeen vocabulary within the EPCIS messages, some EPCIS messages contain a custom xml namespace definition at the start of the message envelope.

This namespace definition is:

`xmlns:tatmeen="http://tatmeen.ae/epcis/"`

Although not used in the dispensing request event, this section is retained for general reference.

5.2 EPCIS: Header Attributes

All EPCIS messages originating from a Distributor must present a standard GS1 EPCIS header at the start of the message that is structured according to the UN/CEFACT V1.3: 2004 standard business document header (SBDH) specification as described in the GS1 Standard Business Document Header (SBDH) Version 1.3 Technical Implementation Guide.

This header contains information to uniquely identify:

- Which registered Distributor sent the message.
- The intended destination for the message.
- A unique message identifier identifying a specific message.

Element	Occurrence & Format	Description	Example
<HeaderVersion>	Mandatory	Constant value representing the header version, being v1.3: (2004).	<sbdh:HeaderVersion> 1.3 </sbdh:HeaderVersion>
<Sender><Identifier>	Mandatory	The Authority is always "GLN", followed by the GLN representing the Sender Application or the GLN for the Distributor business partner in standard 13-digit format.	<sbdh:Sender> <sbdh:Identifier Authority="GS1"> Sender GLN </sbdh:Identifier> </sbdh:Sender>
<Receiver><Identifier>	Mandatory	The Authority is always "GLN", followed by the Receiver GLN. This is always the Tatmeen system GLN. Please note: This GLN value will be provided at a later stage.	<sbdh:Receiver> <sbdh:Identifier Authority="GS1"> Tatmeen GLN </sbdh:Identifier> </sbdh:Receiver>
<DocumentIdentification><sbdh:Standard>	Mandatory	Constant Value "EPCGlobal".	<sbdh:Standard> EPCglobal </sbdh:Standard>
<sbdh:TypeVersion>	Mandatory	Constant Value "1.0" that matches the 'xsd:schema' version for ATP.	<sbdh:TypeVersion> 1.0 </sbdh:TypeVersion>
<InstanceIdentifier>	Mandatory	A unique message identifier issued by the Distributor. This is limited to a maximum of 40 alphanumeric characters.	<sbdh:InstanceIdentifier> e999f82e7828a9633d977c64016a8f81 </sbdh:InstanceIdentifier>
<sbdh:Type>	Mandatory	Constant Value "Events" from GS1 standard.	<sbdh:Type> Events </sbdh:Type>
<CreationDateAndTime>	Mandatory	Creation timestamp of this message according to ISO 8601 standard UTC format; indicated by the suffix "Z".	<sbdh:CreationDateAndTime>2020-05-05T10:04:17Z</sbdh:CreationDateAndTime>

Table 11 EPCIS: Header Attributes

5.3 EPCIS Commissioning Attributes

The EPCIS message attributes for the commissioning event for a logistics unit (SSCC) at a Distributor's location are listed below. The most common example of a logistics unit is a pallet. There are several constant values in the definition below that are explained in the GS1 EPCIS Common Business Vocabulary standard. The assumption of this technical guide is that this is read in conjunction with the standards on which message formats are defined.

	Element	Occurrence & Format	Description	Example
Standard Fields	<eventTime>	Mandatory	The date and time, in ISO 8601 standard UTC format, at which the EPCIS Capturing Applications asserts the event occurred.	<eventTime>2021-05-31T12:02:11.000Z</eventTime>
	<eventTimeZoneOffset>	Mandatory	The UTC time zone offset, including daylight saving considerations, in effect at the time and place the event occurred.	<eventTimeZoneOffset>+01:00</eventTimeZoneOffset>
	<epcList>	Mandatory	A list of one or more SSCC EPCs naming specific objects to which the event pertained.	<epcList> <epc>urn:epc:id:sscc:123456.02029914567</epc> </epcList>
	<action>	Mandatory	Constant Value from "xsd:schema" for the event type action.	<action>ADD</action>
	<bizStep>	Mandatory	Constant value. The business step representing the event activity (see Section 6 for overview).	<bizStep>urn:epcglobal:cbv:bizstep:commissioning</bizStep>
	<disposition>	Mandatory	Constant Value.	<disposition>urn:epcglobal:cbv:disposition:active</disposition>
	<readPoint>	Mandatory	The read point must be the GLN in SGLN format of the Distributor.	<readPoint> <id>urn:epc:id:sgln:123456.789101.0</id> </readPoint>
	<bizLocation>	Mandatory	The business location must be the same GLN as the <readpoint>.	<bizLocation> <id>urn:epc:id:sgln:123456.789101.0</id> </bizLocation>

Table 12 Commissioning – SSCC

5.4 EPCIS Hierarchy Update Attributes

5.4.1 Aggregation Event: Packing

This section provides detailed information about the parent / child relationship between packaged product items as they progress through logistics preparation of being shipped to meet demand from customers or supply chain partners.

	Element	Occurrence & Format	Description	Example
Standard Fields	<eventTime>	Mandatory	The date and time, in ISO 8601 standard UTC format, at which the	<eventTime>2021-05-31T12:02:11.000Z</eventTime>

Element	Occurrence & Format	Description	Example
		EPCIS Capturing Applications asserts the event occurred.	
<eventTimeZoneOffset>	Mandatory	The UTC time zone offset, including daylight saving considerations, in effect at the time and place the event occurred.	<eventTimeZoneOffset>+01:00</eventTimeZoneOffset>
<parentID>	Mandatory	The parent element to capture the UID of parent SGTIN/SSCC for the following packed items.	<parentID>urn:epc:id:sscc:0123456.0001000516</parentID>
<childEPCs>	Mandatory	A list of one or more EPCs of contained objects identified by instance-level identifiers.	<childEPCs> <epc>urn:epc:id:sgtin:0123456.305513.NN2P266YLXPC</epc> <epc>urn:epc:id:sgtin:0123456.305513.NN2P266YYXX2</epc> </childEPCs>
<action>	Mandatory	Constant Value from “xsd:schema” for the event type action (see Section 6 for overview).	<action> ADD </action>
<bizStep>	Mandatory	Constant value. The business step representing the event activity (see Section 6 for overview).	<bizStep>urn:epcglobal:cbv:bizstep: packing </bizStep>
<readpoint>	Mandatory	The read point must be the GLN in SGLN format of the Distributor.	<readPoint> <id>urn:epc:id:sgln:123456.789101.0</id> </readPoint>
<bizLocation>	Mandatory	The business location must be the same GLN as the <readpoint>.	<bizLocation> <id>urn:epc:id:sgln:123456.789101.0</id> </bizLocation>

Table 13 Aggregation Attributes

5.4.2 Aggregation Event: Unpacking

This section provides detailed information about the disaggregation of the parent / child relationship between packaged product items.

	Element	Occurrence & Format	Description	Example
Standard Fields	<eventTime>	Mandatory	The date and time, in ISO 8601 standard UTC format, at which the EPCIS Capturing Applications asserts the event occurred.	<eventTime>2021-05-31T12:02:11.000Z</eventTime>
	<eventTimeZoneOffset>	Mandatory	The UTC time zone offset, including daylight saving considerations, in effect at the time and place the event occurred.	<eventTimeZoneOffset>+01:00</eventTimeZoneOffset>
	<parentID>	Mandatory	The parent element to capture the UID of parent SGTIN/SSCC for the following packed items.	<parentID>urn:epc:id:sscc:0123456.0001000516</parentID>
	<childEPCs>	Mandatory	This is a mandatory empty list as only the top level item is captured to disassociate the parentID from the childEPCs.	<childEPCs></childEPCs>
	<action>	Mandatory	Constant Value from “xsd:schema” for the event type action (see Section 6 for overview).	<action> DELETE </action>
	<bizStep>	Mandatory	Constant value. The business step representing the event activity (see Section 6 for overview).	<bizStep>urn:epcglobal:cbv:bizstep: unpacking </bizStep>
	<readpoint>	Mandatory	The read point must be the GLN in SGLN format of the Distributor.	<readPoint> <id>urn:epc:id:sgln:123456.789101.0</id> </readPoint>
	<bizLocation>	Mandatory	The business location must be the same GLN as the <readpoint>.	<bizLocation> <id>urn:epc:id:sgln:123456.000000.0</id> </bizLocation>

Table 14 Aggregation – Unpacking Attributes

5.5 EPCIS Shipping Attributes

The shipping event is used to control the flow of goods as they are shipped through the UAE market. Typically, the products are packaged onto pallets (SSCC), prior to shipping. This aids logistics transactions and logistics movements for Distributor warehouse efficiency. The transaction based messages therefore:

- Must follow the aggregation events for the top level hierarchy EPC and relevant packaged product items.
- Must report only the top-level hierarchy EPCs.

	Element	Occurrence & Format	Description	Example
Standard Fields	<eventTime>	Mandatory	The date and time, in ISO 8601 standard UTC format, at which the EPCIS Capturing Applications asserts the event occurred.	<eventTime>2021-05-31T12:02:11.000Z</eventTime>
	<eventTimeZoneOffset>	Mandatory	The UTC time zone offset, including daylight saving considerations, in effect at the time and place the event occurred.	<eventTimeZoneOffset>+01:00</eventTimeZoneOffset>
	<epcList>	Mandatory	A list of one or more EPCs naming specific objects to which the event pertained. Only the highest level aggregated EPCs in the hierarchy are listed here.	<epcList> <epc>urn:epc:id:sscc:123456.02029914567</epc> </epcList>
	<action>	Mandatory	Constant Value from “xsd:schema” for the event type action (see Section 6 for overview).	<action>OBSERVE</action>
	<bizStep>	Mandatory	Constant value. The business step representing the event activity (see Section 6 for overview).	<bizStep>urn:epcglobal:cbv:bizstep:shipping</bizStep>
	<disposition>	Mandatory	Constant value. The disposition relevant to the business step representing the event activity (see Section 6 for overview).	<disposition>urn:epcglobal:cbv:disposition:in_transit</disposition>
	<readPoint>	Mandatory	The read point must be the GLN in SGLN format of the Distributor.	<readPoint> <id>urn:epc:id:sgln:123456.789101.0</id> </readPoint>
	<bizTransactionList>	Optional	A list of business transactions that define the context of this event.	

	Element	Occurrence & Format	Description	Example
	<bizTransaction>	Optional	An identifier that denotes the specific shipping despatch advice reference between the Distributor and the recipient. Only the “desadv” reference is recorded in the Tatmeen solution when provided within the message. Format is: bt:<GLN>:<reference> where <GLN> is the Distributors own GLN and the <reference> is the Distributors unique reference.	<bizTransaction type="urn:epcglobal:cbv:btt:desadv" >urn:epcglobal:cbv:bt:01234569999 95:0105</bizTransaction>
Extension	<extension><sourceList>	Mandatory	A list of Source elements that provide context about the originating endpoint.	
	<source>	Mandatory	Only the Owning Party applies to this Event and is the same GLN as the <readPoint> represented in urn SGLN format.	<source type="urn:epcglobal:cbv:sdt:owning_party">urn:epc:id:sgln:123456.789 101.0</source>
	<destinationList>	Mandatory	A list of Destination elements that provide context about the terminating endpoint of a business transfer.	
	<destination>	Mandatory	Both the Owning Party (sold-to partner) and the Location (ship-to partner) GLN's are required in SGLN format.	<destination type="urn:epcglobal:cbv:sdt:owning_party">urn:epc:id:sgln:0333333.00 000.0</destination> <destination type="urn:epcglobal:cbv:sdt:location">urn:epc:id:sgln:0356787.00040. 0</destination>

Table 15 Shipping Attributes - Shipping Event

Note that the <bizTransaction> is shown as optional as this reference has no significance to the Tatmeen solution. Recording this allows the Distributor to track event records against their own business document references.

5.6 EPCIS Receiving Attributes

The receiving event is used to control the flow of goods as they arrive at locations throughout the UAE market. Typically, the products are packaged onto pallets (SSCC), prior to shipping. This aids logistics transactions and logistics movements for Distributor warehouse efficiency. The transaction based messages therefore:

- Must follow the shipping events initiating the transfer of the top level hierarchy EPC and relevant packaged product items.
- Must report only the top-level hierarchy EPCs.

	Element	Occurrence & Format	Description	Example
Standard Fields	<eventTime>	Mandatory	The date and time, in ISO 8601 standard UTC format, at which the EPCIS Capturing Applications asserts the event occurred.	<eventTime>2021-05-31T12:02:11.000Z</eventTime>
	<eventTimeZoneOffset>	Mandatory	The UTC time zone offset, including daylight saving considerations, in effect at the time and place the event occurred.	<eventTimeZoneOffset>+01:00</eventTimeZoneOffset>
	<epcList>	Mandatory	A list of one or more EPCs naming specific objects to which the event pertained. Only the highest level aggregated EPCs in the hierarchy are listed here.	<epcList> <epc>urn:epc:id:sscc:123456.02029914567</epc> </epcList>
	<action>	Mandatory	Constant Value from "xsd:schema" for the event type action (see Section 6 for overview).	<action> OBSERVE </action>
	<bizStep>	Mandatory	Constant value. The business step representing the event activity (see Section 6 for overview).	<bizStep>urn:epcglobal:cbv:bizstep: receiving </bizStep>
	<disposition>	Mandatory	Constant value. The disposition relevant to the business step representing the event activity (see Section 6 for overview).	<disposition>urn:epcglobal:cbv:disp: in_progress </disposition>
	<readpoint>	Mandatory	The read point must be the GLN in SGLN format of the Distributor.	<readPoint> <id>urn:epc:id:sgln:0356787.00040.0</id> </readPoint>

	Element	Occurrence & Format	Description	Example
	<bizLocation>	Mandatory	The business location must be the same GLN as the <readpoint>.	<bizLocation> <id>urn:epc:id:sgln:0356787.00040.0</id> </bizLocation>
	<bizTransaction List>	Optional	A list of business transactions that define the context of this event.	
	<bizTransaction >	Optional	An identifier that denotes the specific shipping despatch advice reference between the Distributor and the recipient. Only the “desadv” reference is recorded in the Tatmeen solution when provided within the message. Format is: bt:<GLN>:<reference> where <GLN> is the Distributors own GLN and the <reference> is the Distributors unique reference.	<bizTransaction type="urn:epcglobal:cbv:btt:desadv" >urn:epcglobal:cbv:bt: 0356787000406:GR8015694</bizT ransaction>

Table 16 Receiving Attributes

Note that the <bizTransaction> is shown as optional as this reference has no significance to the Tatmeen solution. Recording this allows the Distributor to track event records against their own business document references.

5.7 EPCIS Status and Destruction Attributes

This section covers all update definitions:

- Sampled Product Event
- Product Destruction Event
- Damaged Goods Event
- Stolen Goods Event
- Exportation Event
- Lost/Missing Goods Event

5.7.1 Sampled Product Event

	Element	Occurrence & Format	Description	Example
Standard Fields	<eventTime>	Mandatory	The date and time, in ISO 8601 standard UTC format, at which the EPCIS Capturing Applications asserts the event occurred.	<eventTime>2021-05-31T12:02:11.000Z</eventTime>
	<eventTimeZoneOffset>	Mandatory	The UTC time zone offset, including daylight saving considerations, in effect at the time and place the event occurred.	<eventTimeZoneOffset>+01:00</eventTimeZoneOffset>
	<epcList>	Mandatory	A list of one or more EPCs naming specific objects to which the event pertained. Only the highest level aggregated EPCs in the hierarchy are listed here.	<epcList> <epc>urn:epc:id:sgtin:123456.0202991.AFA0UM128F4C</epc> </epcList>
	<action>	Mandatory	Constant Value from "xsd:schema" for the event type action (see Section 6 for overview).	<action> OBSERVE </action>
	<bizStep>	Mandatory	Constant value. The business step representing the event activity (see Section 6 for overview).	For Inactive Case: <bizStep>urn:epcglobal:cbv:bizstep: inspecting </bizStep>
	<disposition>	Mandatory	Constant Value (see Section 6 for overview).	<disposition>urn:epcglobal:cbv:disp: destroyed </disposition>
	<readpoint>	Mandatory	The read point must be the GLN in SGLN format of the Distributor.	<readPoint> <id>urn:epc:id:sgln:123456.789101.0</id> </readPoint>
	<bizLocation>	Mandatory	The business location must be the same GLN as the <readpoint>.	<bizLocation> <id>urn:epc:id:sgln:123456.789101.0</id> </bizLocation>
	<tatmeen.reasonCode>	Mandatory	Custom reason code for the sample. Once all the reason codes are finalised, these will be published in an update to this document.	<tatmeen.reasonCode>S01</tatmeen.reasonCode>

Table 17 Decommission Attributes

5.7.2 Destroyed Goods Event

	Element	Occurrence & Format	Description	Example
Standard Fields	<eventTime>	Mandatory	The date and time, in ISO 8601 standard UTC format, at which the EPCIS Capturing Applications asserts the event occurred.	<eventTime>2021-05-31T12:02:11.000Z</eventTime>
	<eventTimeZoneOffset>	Mandatory	The UTC time zone offset, including daylight saving considerations, in effect at the time and place the event occurred.	<eventTimeZoneOffset>+01:00</eventTimeZoneOffset>
	<epcList>	Mandatory	A list of one or more EPCs naming specific objects to which the event pertained. Only the highest level aggregated EPCs in the hierarchy are listed here.	<epcList> <epc>urn:epc:id:sgtin:123456.0202991.AFA0UM128F4C</epc> </epcList>
	<action>	Mandatory	Constant Value from "xsd:schema" for the event type action (see Section 6 for overview).	<action> DELETE </action>
	<bizStep>	Mandatory	Constant value. The business step representing the event activity (see Section 6 for overview).	For Inactive Case: <bizStep>urn:epcglobal:cbv:bizstep: destroying </bizStep>
	<disposition>	Mandatory	Constant Value (see Section 6 for overview).	<disposition>urn:epcglobal:cbv:disp: destroyed </disposition>
	<readpoint>	Mandatory	The read point must be the GLN in SGLN format of the Distributor.	<readPoint> <id>urn:epc:id:sgln:123456.789101.0</id> </readPoint>
	<bizLocation>	Mandatory	The business location must be the same GLN as the <readpoint>.	<bizLocation> <id>urn:epc:id:sgln:123456.789101.0</id> </bizLocation>

Table 18 Destroyed Attributes

5.7.3 Damaged Goods Event

	Element	Occurrence & Format	Description	Example
Standard Fields	<eventTime>	Mandatory	The date and time, in ISO 8601 standard UTC format, at which the EPCIS Capturing Applications asserts the event occurred.	<eventTime>2021-05-31T12:02:11.000Z</eventTime>
	<eventTimeZoneOffset>	Mandatory	The UTC time zone offset, including daylight saving considerations, in effect at the time and place the event occurred.	<eventTimeZoneOffset>+01:00</eventTimeZoneOffset>
	<epcList>	Mandatory	A list of one or more EPCs naming specific objects to which the event pertained. Only the highest level aggregated EPCs in the hierarchy are listed here.	<epcList> <epc>urn:epc:id:sgtin:123456.0202991.AFA0UM128F4C</epc> > </epcList>
	<action>	Mandatory	Constant Value from "xsd:schema" for the event type action (see Section 6 for overview).	<action> DELETE </action>
	<bizStep>	Mandatory	Constant value. The business step representing the event activity (see Section 6 for overview).	For Inactive Case: <bizStep>urn:epcglobal:cbv:bizstep: Decommissioning </bizStep>
	<disposition>	Mandatory	Constant Value (see Section 6 for overview).	<disposition>urn:epcglobal:cbv:disp: destroyed </disposition>
	<readpoint>	Mandatory	The read point must be the GLN in SGLN format of the Distributor.	<readPoint> <id>urn:epc:id:sgln:123456.789101.0</id> </readPoint>
	<bizLocation>	Mandatory	The business location must be the same GLN as the <readpoint>.	<bizLocation> <id>urn:epc:id:sgln:123456.789101.0</id> </bizLocation>

Table 19 Damaged Attributes

5.7.4 Stolen Goods Event

	Element	Occurrence & Format	Description	Example
Standard Fields	<eventTime>	Mandatory	The date and time, in ISO 8601 standard UTC format, at which the EPCIS Capturing Applications asserts the event occurred.	<eventTime>2021-05-31T12:02:11.000Z</eventTime>
	<eventTimeZoneOffset>	Mandatory	The UTC time zone offset, including daylight saving considerations, in effect at the time and place the event occurred.	<eventTimeZoneOffset>+01:00</eventTimeZoneOffset>
	<epcList>	Mandatory	A list of one or more EPCs naming specific objects to which the event pertained. Only the highest level aggregated EPCs in the hierarchy are listed here.	<epcList> <epc>urn:epc:id:sgtin:123456.0202991.AFA0UM128F4C</epc> </epcList>
	<action>	Mandatory	Constant Value from "xsd:schema" for the event type action (see Section 6 for overview).	<action> DELETE </action>
	<bizStep>	Mandatory	Constant value. The business step representing the event activity (see Section 6 for overview).	For Inactive Case: <bizStep>urn:epcglobal:cbv:bizstep: decommissioning </bizStep>
	<disposition>	Mandatory	Constant Value (see Section 6 for overview).	<disposition>urn:epcglobal:cbv:disp: stolen </disposition>
	<readpoint>	Mandatory	The read point must be the GLN in SGLN format of the Distributor.	<readPoint> <id>urn:epc:id:sgln:123456.789101.0</id> </readPoint>
	<bizLocation>	Mandatory	The business location must be the same GLN as the <readpoint>.	<bizLocation> <id>urn:epc:id:sgln:123456.789101.0</id> </bizLocation>

Table 20 Stolen Attributes

5.7.5 Exportation Event

	Element	Occurrence & Format	Description	Example
Standard Fields	<eventTime>	Mandatory	The date and time, in ISO 8601 standard UTC format, at which the EPCIS Capturing Applications asserts the event occurred.	<eventTime>2021-05-31T12:02:11.000Z</eventTime>
	<eventTimeZoneOffset>	Mandatory	The UTC time zone offset, including daylight saving considerations, in effect at the time and place the event occurred.	<eventTimeZoneOffset>+01:00</eventTimeZoneOffset>
	<epcList>	Mandatory	A list of one or more EPCs naming specific objects to which the event pertained. Only the highest level aggregated EPCs in the hierarchy are listed here.	<epcList> <epc>urn:epc:id:sgtin:123456.0202991.AFA0UM128F4C</epc> </epcList>
	<action>	Mandatory	Constant Value from “xsd:schema” for the event type action (see Section 6 for overview).	<action> OBSERVE </action>
	<bizStep>	Mandatory	Constant value. The business step representing the event activity (see Section 6 for overview).	For Inactive Case: <bizStep>urn:epcglobal:cbv:bizstep: decommissioning </bizStep>
	<disposition>	Mandatory	Constant Value (see Section 6 for overview).	<disposition>urn:epcglobal:cbv:disp: non_sellable_other </disposition>
	<readpoint>	Mandatory	The read point must be the GLN in SGLN format of the Distributor.	<readPoint> <id>urn:epc:id:sgln:123456.789101.0</id> </readPoint>
	<bizLocation>	Mandatory	The business location must be the same GLN as the <readpoint>.	<bizLocation> <id>urn:epc:id:sgln:123456.789101.0</id> </bizLocation>

Table 21 Export Attributes

5.7.6 Lost/Missing Goods Event

	Element	Occurrence & Format	Description	Example
Standard Fields	<eventTime>	Mandatory	The date and time, in ISO 8601 standard UTC format, at which the EPCIS Capturing Applications asserts the event occurred.	<eventTime>2021-05-31T12:02:11.000Z</eventTime>
	<eventTimeZoneOffset>	Mandatory	The UTC time zone offset, including daylight saving considerations, in effect at the time and place the event occurred.	<eventTimeZoneOffset>+01:00</eventTimeZoneOffset>
	<epcList>	Mandatory	A list of one or more EPCs naming specific objects to which the event pertained. Only the highest level aggregated EPCs in the hierarchy are listed here.	<epcList> <epc>urn:epc:id:sgtin:123456.0202991.AFA0UM128F4C</epc> </epcList>
	<action>	Mandatory	Constant Value from “xsd:schema” for the event type action (see Section 6 for overview).	<action> OBSERVE </action>
	<bizStep>	Mandatory	Constant value. The business step representing the event activity (see Section 6 for overview).	For Inactive Case: <bizStep>urn:epcglobal:cbv:bizstep: decommissioning </bizStep>
	<disposition>	Mandatory	Constant Value (see Section 6 for overview).	<disposition>urn:epcglobal:cbv:disp: inactive </disposition>
	<readpoint>	Mandatory	The read point must be the GLN in SGLN format of the Distributor.	<readPoint> <id>urn:epc:id:sgln:123456.789101.0</id> </readPoint>
	<bizLocation>	Mandatory	The business location must be the same GLN as the <readpoint>.	<bizLocation> <id>urn:epc:id:sgln:123456.789101.0</id> </bizLocation>

Table 22 Lost Attributes

5.8 EPCIS Message Technical Response

The following technical responses will provide immediate confirmation regarding delivery of the EPCIS event list message described in the previous sections, to the Tatmeen

solution. The Tatmeen system returns standard HTTP/HTTPS codes to the Distributor. The response codes follow the general standard where:

- 200-299 indicate success / information,
- 300-399 indicate redirection,
- 400-499 are technical errors, and
- 500-599 are application errors.

Solution example codes are shown in the table below with custom messages codes also provided for efficient error handling. Once the complete set of solution technical and application codes are finalised, this document shall be updated and reissued.

The messages detailing the errors and rejections on data will be sent from Tatmeen Systems to the Distributor when using the message status query service.

Code	Message Code	Type	Action	Description
404	Standard	Service Error	Retry	Service Not Found
401	Standard	Auth Error	Retry	Authorization Error
202	I001	Information	N/A	OK
500	E001	Internal Error	Retry	Tatmeen applications not reachable
500	E002	Internal Error	No Retry	Invalid Import Permit
500	E003	Internal Error	No Retry	Message Validation Error

Table 23 Technical Acknowledgments

5.9 EPCIS: Examples

This following examples include the possible supply chain logistic operations.

- Packing new SSCC
- Shipping
- Receiving
- Decommissioning

5.9.1 Packing New SSCC Example

```

<epcis:EPCISDocument schemaVersion="1.2" creationDate="2021-01-28T07:21:26Z"
xmlns:sbdh="http://www.unece.org/cefact/namespaces/StandardBusinessDocumentHeader"
xmlns:epcis="urn:epcglobal:epcis:xsd:1" xmlns:cbvmda="urn:epcglobal:cbv:mda">
  <EPCISHeader>
    <sbdh:StandardBusinessDocumentHeader>
      <sbdh:HeaderVersion>1.3</sbdh:HeaderVersion>
      <sbdh:Sender>
        <sbdh:Identifier Authority="GS1">0123456789005</sbdh:Identifier>
      </sbdh:Sender>
      <sbdh:Receiver>
        <sbdh:Identifier Authority="GS1">7894561230005</sbdh:Identifier>
      </sbdh:Receiver>
      <sbdh:DocumentIdentification>
        <sbdh:Standard>EPCglobal</sbdh:Standard>
        <sbdh:TypeVersion>1.0</sbdh:TypeVersion>

        <sbdh:InstanceIdentifier>2f1bdabdfae464c87e1aeb7e586e6ab</sbdh:InstanceIdentifier>
        <sbdh:Type>Events</sbdh:Type>
        <sbdh:CreationDateAndTime>2021-05-
31T12:02:05.000Z</sbdh:CreationDateAndTime>
      </sbdh:DocumentIdentification>
    </sbdh:StandardBusinessDocumentHeader>
  </EPCISHeader>
  <EPCISBody>
    <EventList>
      <ObjectEvent>
        <!-- Commissioning of SSCC/PALLET -->
        <eventTime>2021-05-31T12:02:20.000Z</eventTime>
        <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>
        <epcList>
          <epc>urn:epc:id:sscc:0123456.0001000516</epc>
        </epcList>
        <action>ADD</action>
        <bizStep>urn:epcglobal:cbv:bizstep:commissioning</bizStep>
        <disposition>urn:epcglobal:cbv:disp:active</disposition>
        <readPoint>
          <id>urn:epc:id:sgln:0123456.99999.0</id>
        </readPoint>
        <bizLocation>
          <id>urn:epc:id:sgln:0123456.99999.0</id>
        </bizLocation>
      </ObjectEvent>
    </EventList>
  </EPCISBody>
</EPCISDocument>

```

```

    </ObjectEvent>
    <AggregationEvent>
      <!-- AGGREGATION OF 2 FULL CASES INTO A PALLET-->
      <eventTime>2021-05-31T12:02:22.000Z</eventTime>
      <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>
      <parentID>urn:epc:id:sscc:0123456.0001000516</parentID>
      <childEPCs>
        <epc>urn:epc:id:sgtin:0123456.305512.Y4QOQBH0VVW1</epc>
        <epc>urn:epc:id:sgtin:0123456.305512.A4QIY780KL6M</epc>
      </childEPCs>
      <action>ADD</action>
      <bizStep>urn:epcglobal:cbv:bizstep:packing</bizStep>
      <disposition>urn:epcglobal:cbv:disp:in_progress</disposition>
      <readPoint>
        <id>urn:epc:id:sgln:0123456.99999.0</id>
      </readPoint>
      <bizLocation>
        <id>urn:epc:id:sgln:0123456.99999.0</id>
      </bizLocation>
    </AggregationEvent>
  </EventList>
</EPCISBody>
</epcis:EPCISDocument>

```

Table 24 EPCIS Packing New SSCC Example

5.9.2 Shipping Example

```

<epcis:EPCISDocument schemaVersion="1.2" creationDate="2021-01-28T07:21:26Z"
  xmlns:sbdh="http://www.unece.org/cefact/namespaces/StandardBusinessDocumentHeader"
  xmlns:epcis="urn:epcglobal:epcis:xsd:1" xmlns:cbvmda="urn:epcglobal:cbv:mda">
  <EPCISHeader>
    <sbdh:StandardBusinessDocumentHeader>
      <sbdh:HeaderVersion>1.3</sbdh:HeaderVersion>
      <sbdh:Sender>
        <sbdh:Identifier Authority="GS1">0123456789005</sbdh:Identifier>
      </sbdh:Sender>
      <sbdh:Receiver>
        <sbdh:Identifier Authority="GS1">7894561230005</sbdh:Identifier>
      </sbdh:Receiver>
      <sbdh:DocumentIdentification>
        <sbdh:Standard>EPCglobal</sbdh:Standard>
        <sbdh:TypeVersion>1.0</sbdh:TypeVersion>
      </sbdh:DocumentIdentification>
    </sbdh:StandardBusinessDocumentHeader>
  </EPCISHeader>
</epcis:EPCISDocument>

```

```

    <sbdh:InstanceIdentifier>2f1bdabdfae464c87e1aeb7e586e6ab</sbdh:InstanceIdentifier>
        <sbdh:Type>Events</sbdh:Type>
        <sbdh:CreationDateAndTime>2021-05-
31T12:02:05.000Z</sbdh:CreationDateAndTime>
    </sbdh:DocumentIdentification>
</sbdh:StandardBusinessDocumentHeader>
</EPCISHeader>
<EPCISBody>
    <EventList>
        <ObjectEvent>
            <!-- Shipping Event -->
            <eventTime>2021-05-31T12:02:25.000Z</eventTime>
            <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>
            <epcList>
                <epc>urn:epc:id:sscc:0123456.0001000516</epc>
            </epcList>
            <action>OBSERVE</action>
            <bizStep>urn:epcglobal:cbv:bizstep:shipping</bizStep>
            <disposition>urn:epcglobal:cbv:disp:in_transit</disposition>
            <readPoint>
                <id>urn:epc:id:sgln:0123456.99999.0</id>
            </readPoint>
            <bizLocation>
                <id>urn:epc:id:sgln:0123456.99999.0</id>
            </bizLocation>
            <bizTransactionList>
                <bizTransaction
type="urn:epcglobal:cbv:btt:desadv">urn:epcglobal:cbv:bt:0123456999995:0105</bizTransaction>
            </bizTransactionList>
            <extension>
                <sourceList>
                    <source
type="urn:epcglobal:cbv:sdt:owning_party">urn:epc:id:sgln:0123456.99999.1</source>
                    <source
type="urn:epcglobal:cbv:sdt:location">urn:epc:id:sgln:0123456.99999.1</source>
                </sourceList>
                <destinationList>
                    <destination
type="urn:epcglobal:cbv:sdt:owning_party">urn:epc:id:sgln:0333333.00000.0</destination>
                    <destination
type="urn:epcglobal:cbv:sdt:location">urn:epc:id:sgln:0356787.00040.0</destination>
                </destinationList>

```

```

        </extension>
      </ObjectEvent>
    </EventList>
  </EPCISBody>
</epcis:EPCISDocument>

```

Table 25 EPCIS Shipping Example

5.9.3 Receiving Example

```

<epcis:EPCISDocument schemaVersion="1.2" creationDate="2021-01-28T07:21:26Z"
xmlns:sbdh="http://www.unece.org/cefact/namespaces/StandardBusinessDocumentHeader"
xmlns:epcis="urn:epcglobal:epcis:xsd:1" xmlns:cbvmda="urn:epcglobal:cbv:mda">
  <EPCISHeader>
    <sbdh:StandardBusinessDocumentHeader>
      <sbdh:HeaderVersion>1.3</sbdh:HeaderVersion>
      <sbdh:Sender>
        <sbdh:Identifier Authority="GS1">0123456789005</sbdh:Identifier>
      </sbdh:Sender>
      <sbdh:Receiver>
        <sbdh:Identifier Authority="GS1">7894561230005</sbdh:Identifier>
      </sbdh:Receiver>
      <sbdh:DocumentIdentification>
        <sbdh:Standard>EPCglobal</sbdh:Standard>
        <sbdh:TypeVersion>1.0</sbdh:TypeVersion>
      </sbdh:DocumentIdentification>
      <sbdh:InstanceIdentifier>2f1bdabdfae464c87e1aeb7e586e6ab</sbdh:InstanceIdentifier>
      <sbdh:Type>Events</sbdh:Type>
      <sbdh:CreationDateAndTime>2021-05-
31T12:02:05.000Z</sbdh:CreationDateAndTime>
    </sbdh:StandardBusinessDocumentHeader>
  </EPCISHeader>
  <EPCISBody>
    <EventList>
      <ObjectEvent>
        <!-- Receiving Event-->
        <eventTime>2019-12-19T11:50:09.000Z</eventTime>
        <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>
        <epcList>
          <epc>urn:epc:id:sscc:0123456.0001000516</epc>
        </epcList>
        <action>OBSERVE</action>
      </ObjectEvent>
    </EventList>
  </EPCISBody>
</epcis:EPCISDocument>

```

```

        <bizStep>urn:epcglobal:cbv:bizstep:receiving</bizStep>
        <disposition>urn:epcglobal:cbv:disp:in_progress</disposition>
        <readPoint>
            <id>urn:epc:id:sgln:0123456.99999.0</id>
        </readPoint>
        <bizLocation>
            <id>urn:epc:id:sgln:0123456.99999.0</id>
        </bizLocation>
    </ObjectEvent>
</EventList>
</EPCISBody>
</epcis:EPCISDocument>

```

Table 26 EPCIS Receiving Example

5.9.4 Sampling Example

```

<epcis:EPCISDocument schemaVersion="1.2" creationDate="2021-01-28T07:21:26Z"
xmlns:sbdh="http://www.unece.org/cefact/namespaces/StandardBusinessDocumentHeader"
xmlns:epcis="urn:epcglobal:epcis:xsd:1" xmlns:cbvmda="urn:epcglobal:cbv:mda"
xmlns:tatmeen="http://tatmeen.ae/epcis/">
    <EPCISHeader>
        <sbdh:StandardBusinessDocumentHeader>
            <sbdh:HeaderVersion>1.3</sbdh:HeaderVersion>
            <sbdh:Sender>
                <sbdh:Identifier Authority="GS1">0123456789005</sbdh:Identifier>
            </sbdh:Sender>
            <sbdh:Receiver>
                <sbdh:Identifier Authority="GS1">7894561230005</sbdh:Identifier>
            </sbdh:Receiver>
            <sbdh:DocumentIdentification>
                <sbdh:Standard>EPCglobal</sbdh:Standard>
                <sbdh:TypeVersion>1.0</sbdh:TypeVersion>
            </sbdh:DocumentIdentification>
            <sbdh:InstanceIdentifier>2f1bdabdfae464c87e1aeb7e586e6ab</sbdh:InstanceIdentifier>
            <sbdh:Type>Events</sbdh:Type>
            <sbdh:CreationDateAndTime>2021-05-
31T12:02:05.000Z</sbdh:CreationDateAndTime>
        </sbdh:StandardBusinessDocumentHeader>
    </EPCISHeader>
    <EPCISBody>
        <EventList>

```

```

<ObjectEvent>
  <!-- Decommission - Sample -->
  <eventTime>2021-05-31T12:02:11.000Z</eventTime>
  <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>
  <epcList>
    <epc>urn:epc:id:sgtin:0123456.305512.NP2P22376C9A</epc>
    <epc>urn:epc:id:sgtin:0123456.305512.NP2P2236YDY7</epc>
    <epc>urn:epc:id:sscc:0123456.0001018329</epc>
    <epc>urn:epc:id:sscc:0123456.0001018330</epc>
  </epcList>
  <action>OBSERVE</action>
  <bizStep>urn:epcglobal:cbv:bizstep:inspecting</bizStep>
  <disposition>urn:epcglobal:cbv:disp:destroyed</disposition>
  <readPoint>
    <id>urn:epc:id:sgln:0123456.99999.0</id>
  </readPoint>
  <bizLocation>
    <id>urn:epc:id:sgln:0123456.99999.0</id>
  </bizLocation>
  <tatmeen:reasonCode>S01</tatmeen:reasonCode>
</ObjectEvent>
</EventList>
</EPCISBody>
</epcis:EPCISDocument>

```

Table 27 EPCIS Sampling Example

5.9.5 Destruction Example

```

<epcis:EPCISDocument schemaVersion="1.2" creationDate="2021-01-28T07:21:26Z"
xmlns:sbdh="http://www.unece.org/cefact/namespaces/StandardBusinessDocumentHeader"
xmlns:epcis="urn:epcglobal:epcis:xsd:1" xmlns:cbvmda="urn:epcglobal:cbv:mda"
xmlns:tatmeen="http://tatmeen.ae/epcis/">
  <EPCISHeader>
    <sbdh:StandardBusinessDocumentHeader>
      <sbdh:HeaderVersion>1.3</sbdh:HeaderVersion>
      <sbdh:Sender>
        <sbdh:Identifier Authority="GS1">0123456789005</sbdh:Identifier>
      </sbdh:Sender>
      <sbdh:Receiver>
        <sbdh:Identifier Authority="GS1">7894561230005</sbdh:Identifier>
      </sbdh:Receiver>
      <sbdh:DocumentIdentification>

```



```

        <sbdh:Standard>EPCglobal</sbdh:Standard>
        <sbdh:TypeVersion>1.0</sbdh:TypeVersion>

        <sbdh:InstanceIdentifier>2f1bdabdfae464c87e1aeb7e5886e6ab</sbdh:InstanceIdentifier>
        <sbdh:Type>Events</sbdh:Type>
        <sbdh:CreationDateAndTime>2021-05-
31T12:02:05.000Z</sbdh:CreationDateAndTime>
        </sbdh:DocumentIdentification>
    </sbdh:StandardBusinessDocumentHeader>
</EPCISHeader>
<EPCISBody>
    <EventList>
        <ObjectEvent>
            <!-- Decommission - Destroyed -->
            <eventTime>2021-05-31T12:02:11.000Z</eventTime>
            <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>
            <epcList>
                <epc>urn:epc:id:sgtin:0123456.305512.NP2P22376C9A</epc>
                <epc>urn:epc:id:sgtin:0123456.305512.NP2P2236YDY7</epc>
                <epc>urn:epc:id:sscc:0123456.0001018329</epc>
                <epc>urn:epc:id:sscc:0123456.0001018330</epc>
            </epcList>
            <action>DELETE</action>
            <bizStep>urn:epcglobal:cbv:bizstep:destroying</bizStep>
            <disposition>urn:epcglobal:cbv:disp:destroyed</disposition>
            <readPoint>
                <id>urn:epc:id:sgln:0123456.99999.0</id>
            </readPoint>
            <bizLocation>
                <id>urn:epc:id:sgln:0123456.99999.0</id>
            </bizLocation>
        </ObjectEvent>
    </EventList>
</EPCISBody>
</epcis:EPCISDocument>

```

Table 28 EPCIS Destruction Example

5.9.6 Damaged Example

```

<epcis:EPCISDocument schemaVersion="1.2" creationDate="2021-01-28T07:21:26Z"
xmlns:sbdh="http://www.unece.org/cefact/namespaces/StandardBusinessDocumentHeader"
xmlns:epcis="urn:epcglobal:epcis:xsd:1" xmlns:cbvmda="urn:epcglobal:cbv:mda"

```

```

xmlns:tatmeen="http://tatmeen.ae/epcis/">
  <EPCISHeader>
    <sbdh:StandardBusinessDocumentHeader>
      <sbdh:HeaderVersion>1.3</sbdh:HeaderVersion>
      <sbdh:Sender>
        <sbdh:Identifier Authority="GS1">0123456789005</sbdh:Identifier>
      </sbdh:Sender>
      <sbdh:Receiver>
        <sbdh:Identifier Authority="GS1">7894561230005</sbdh:Identifier>
      </sbdh:Receiver>
      <sbdh:DocumentIdentification>
        <sbdh:Standard>EPCglobal</sbdh:Standard>
        <sbdh:TypeVersion>1.0</sbdh:TypeVersion>

        <sbdh:InstanceIdentifier>2f1bdabdfae464c87e1aeb7e586e6ab</sbdh:InstanceIdentifier>
        <sbdh:Type>Events</sbdh:Type>
        <sbdh:CreationDateAndTime>2021-05-
31T12:02:05.000Z</sbdh:CreationDateAndTime>
      </sbdh:DocumentIdentification>
    </sbdh:StandardBusinessDocumentHeader>
  </EPCISHeader>
  <EPCISBody>
    <EventList>
      <ObjectEvent>
        <!-- Decommission - Damaged -->
        <eventTime>2021-05-31T12:02:11.000Z</eventTime>
        <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>
        <epcList>
          <epc>urn:epc:id:sgtin:0123456.305512.NP2P22376C9A</epc>
          <epc>urn:epc:id:sgtin:0123456.305512.NP2P2236YDY7</epc>
          <epc>urn:epc:id:sscc:0123456.0001018329</epc>
          <epc>urn:epc:id:sscc:0123456.0001018330</epc>
        </epcList>
        <action>DELETE</action>
        <bizStep>urn:epcglobal:cbv:bizstep:decommissioning</bizStep>
        <disposition>urn:epcglobal:cbv:disp:destroyed</disposition>
        <readPoint>
          <id>urn:epc:id:sgln:0123456.99999.0</id>
        </readPoint>
        <bizLocation>
          <id>urn:epc:id:sgln:0123456.99999.0</id>
        </bizLocation>
      </ObjectEvent>

```

```

        </EventList>
    </EPCISBody>
</epcis:EPCISDocument>

```

Table 29 EPCIS Damaged Example

5.9.7 Stolen Example

```

<epcis:EPCISDocument schemaVersion="1.2" creationDate="2021-01-28T07:21:26Z"
xmlns:sbdh="http://www.unece.org/cefact/namespaces/StandardBusinessDocumentHeader"
xmlns:epcis="urn:epcglobal:epcis:xsd:1" xmlns:cbvmda="urn:epcglobal:cbv:mda"
xmlns:tatmeen="http://tatmeen.ae/epcis/">
    <EPCISHeader>
        <sbdh:StandardBusinessDocumentHeader>
            <sbdh:HeaderVersion>1.3</sbdh:HeaderVersion>
            <sbdh:Sender>
                <sbdh:Identifier Authority="GS1">0123456789005</sbdh:Identifier>
            </sbdh:Sender>
            <sbdh:Receiver>
                <sbdh:Identifier Authority="GS1">7894561230005</sbdh:Identifier>
            </sbdh:Receiver>
            <sbdh:DocumentIdentification>
                <sbdh:Standard>EPCglobal</sbdh:Standard>
                <sbdh:TypeVersion>1.0</sbdh:TypeVersion>

            <sbdh:InstanceIdentifier>2f1bdabdfae464c87e1aeb7e586e6ab</sbdh:InstanceIdentifier>
            <sbdh:Type>Events</sbdh:Type>
            <sbdh:CreationDateAndTime>2021-05-
31T12:02:05.000Z</sbdh:CreationDateAndTime>
            </sbdh:DocumentIdentification>
        </sbdh:StandardBusinessDocumentHeader>
    </EPCISHeader>
    <EPCISBody>
        <EventList>
            <ObjectEvent>
                <!-- Decommission - Stolen -->
                <eventTime>2021-05-31T12:02:11.000Z</eventTime>
                <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>
                <epcList>
                    <epc>urn:epc:id:sgtin:0123456.305512.NP2P22376C9A</epc>
                    <epc>urn:epc:id:sgtin:0123456.305512.NP2P2236YDY7</epc>
                    <epc>urn:epc:id:sscc:0123456.0001018329</epc>
                    <epc>urn:epc:id:sscc:0123456.0001018330</epc>

```

```

        </epcList>
        <action>DELETE</action>
        <bizStep>urn:epcglobal:cbv:bizstep:decommissioning</bizStep>
        <disposition>urn:epcglobal:cbv:disp:stolen</disposition>
        <readPoint>
            <id>urn:epc:id:sgln:0123456.99999.0</id>
        </readPoint>
        <bizLocation>
            <id>urn:epc:id:sgln:0123456.99999.0</id>
        </bizLocation>
    </ObjectEvent>
</EventList>
</EPCISBody>
</epcis:EPCISDocument>

```

Table 30 EPCIS Stolen Example

5.9.8 Exported Example

```

<epcis:EPCISDocument schemaVersion="1.2" creationDate="2021-01-28T07:21:26Z"
xmlns:sbdh="http://www.unece.org/cefact/namespaces/StandardBusinessDocumentHeader"
xmlns:epcis="urn:epcglobal:epcis:xsd:1" xmlns:cbvmda="urn:epcglobal:cbv:mda"
xmlns:tatmeen="http://tatmeen.ae/epcis/">
    <EPCISHeader>
        <sbdh:StandardBusinessDocumentHeader>
            <sbdh:HeaderVersion>1.3</sbdh:HeaderVersion>
            <sbdh:Sender>
                <sbdh:Identifier Authority="GS1">0123456789005</sbdh:Identifier>
            </sbdh:Sender>
            <sbdh:Receiver>
                <sbdh:Identifier Authority="GS1">7894561230005</sbdh:Identifier>
            </sbdh:Receiver>
            <sbdh:DocumentIdentification>
                <sbdh:Standard>EPCglobal</sbdh:Standard>
                <sbdh:TypeVersion>1.0</sbdh:TypeVersion>
            </sbdh:DocumentIdentification>
            <sbdh:InstanceIdentifier>2f1bdabdfae464c87e1aeb7e586e6ab</sbdh:InstanceIdentifier>
            <sbdh:Type>Events</sbdh:Type>
            <sbdh:CreationDateAndTime>2021-05-
31T12:02:05.000Z</sbdh:CreationDateAndTime>
        </sbdh:StandardBusinessDocumentHeader>
    </EPCISHeader>

```

```

    <EPCISBody>
      <EventList>
        <ObjectEvent>
          <!-- Decommission - Exported -->
          <eventTime>2021-05-31T12:02:11.000Z</eventTime>
          <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>
          <epcList>
            <epc>urn:epc:id:sgtin:0123456.305512.NP2P22376C9A</epc>
            <epc>urn:epc:id:sgtin:0123456.305512.NP2P2236YDY7</epc>
            <epc>urn:epc:id:sscc:0123456.0001018329</epc>
            <epc>urn:epc:id:sscc:0123456.0001018330</epc>
          </epcList>
          <action>OBSERVE</action>
          <bizStep>urn:epcglobal:cbv:bizstep:decommissioning</bizStep>
          <disposition>urn:epcglobal:cbv:disp:non_sellable_other</disposition>
          <readPoint>
            <id>urn:epc:id:sgln:0123456.99999.0</id>
          </readPoint>
          <bizLocation>
            <id>urn:epc:id:sgln:0123456.99999.0</id>
          </bizLocation>
        </ObjectEvent>
      </EventList>
    </EPCISBody>
  </epcis:EPCISDocument>

```

Table 31 EPCIS Exported Example

5.9.9 Lost Example

```

<epcis:EPCISDocument schemaVersion="1.2" creationDate="2021-01-28T07:21:26Z"
  xmlns:sbdh="http://www.unece.org/cefact/namespaces/StandardBusinessDocumentHeader"
  xmlns:epcis="urn:epcglobal:epcis:xsd:1" xmlns:cbvmda="urn:epcglobal:cbv:mda"
  xmlns:tatmeen="http://tatmeen.ae/epcis/">
  <EPCISHeader>
    <sbdh:StandardBusinessDocumentHeader>
      <sbdh:HeaderVersion>1.3</sbdh:HeaderVersion>
      <sbdh:Sender>
        <sbdh:Identifier Authority="GS1">0123456789005</sbdh:Identifier>
      </sbdh:Sender>
      <sbdh:Receiver>
        <sbdh:Identifier Authority="GS1">7894561230005</sbdh:Identifier>
      </sbdh:Receiver>
    </sbdh:StandardBusinessDocumentHeader>
  </EPCISHeader>
</epcis:EPCISDocument>

```

```

        <sbdh:DocumentIdentification>
            <sbdh:Standard>EPCglobal</sbdh:Standard>
            <sbdh:TypeVersion>1.0</sbdh:TypeVersion>

        <sbdh:InstanceIdentifier>2f1bdabdfae464c87e1aeb7e586e6ab</sbdh:InstanceIdentifier>
            <sbdh:Type>Events</sbdh:Type>
            <sbdh:CreationDateAndTime>2021-05-
31T12:02:05.000Z</sbdh:CreationDateAndTime>
        </sbdh:DocumentIdentification>
    </sbdh:StandardBusinessDocumentHeader>
</EPCISHeader>
<EPCISBody>
    <EventList>
        <ObjectEvent>
            <!-- Decommission Lost -->
            <eventTime>2021-05-31T12:02:11.000Z</eventTime>
            <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>
            <epcList>
                <epc>urn:epc:id:sgtin:0123456.305512.NP2P22376C9A</epc>
                <epc>urn:epc:id:sgtin:0123456.305512.NP2P2236YDY7</epc>
                <epc>urn:epc:id:sscc:0123456.0001018329</epc>
                <epc>urn:epc:id:sscc:0123456.0001018330</epc>
            </epcList>
            <action>DELETE</action>
            <bizStep>urn:epcglobal:cbv:bizstep:decommissioning</bizStep>
            <disposition>urn:epcglobal:cbv:disp:inactive</disposition>
            <readPoint>
                <id>urn:epc:id:sgln:0123456.99999.0</id>
            </readPoint>
            <bizLocation>
                <id>urn:epc:id:sgln:0123456.99999.0</id>
            </bizLocation>
        </ObjectEvent>
    </EventList>
</EPCISBody>
</epcis:EPCISDocument>

```

Table 32 EPCIS Lost Example

5.10 EPCIS Message Technical Response Examples

5.10.1 Success

```
<?xml version="1.0" encoding="UTF-8" ?>
<Response>
  <statustype>I</statustype>
  <code>202</code>
  <date>2021-07-20T09:36:47.127Z</date>
  <messageid>660d45b4-360c-51b5-8645-1192e09ac44c</messageid>
  <status>
    <reason> Message accepted for Tatmeen Processing, the message status can be viewed in the message
    status query</reason>
    <code>I001</code>
  </status>
</Response>
```

Table 33 Success Example

5.10.2 Connectivity Error

```
<?xml version="1.0" encoding="UTF-8" ?>
<Response>
  <statustype>E</statustype>
  <code>500</code>
  <date>2021-07-20T09:36:47.127Z</date>
  <messageid>660d45b4-360c-51b5-8645-1192e09ac44c</messageid>
  <status>
    <reason>Tatmeen applications not reachable, try later </reason>
    <code>E001</code>
  </status>
</Response>
```

Table 34 Connectivity Error Example

5.10.3 System Error

```
<?xml version="1.0" encoding="UTF-8" ?>
<Response>
  <statustype>E</statustype>
  <code>500</code>
  <date>2021-07-20T09:36:47.127Z</date>
  <messageid>660d45b4-360c-51b5-8645-1192e09ac44c</messageid>
  <status>
```

```

    <reason>Invalid Import Permit</reason>
    <code>E003</code>
  </status>
</Response>

```

Table 35 System Error Example

5.10.4 Mapping Error

```

<?xml version="1.0" encoding="UTF-8" ?>
<Response>
  <statustype>E</statustype>
  <code>500</code>
  <date>2021-07-20T09:36:47.127Z</date>
  <messageid>660d45b4-360c-51b5-8645-1192e09ac44c</messageid>
  <status>
    <reason>Message Validation Error</reason>
    <code>E003</code>
  </status>
  <status>
    <reason>Mandatory field SSCC – XXXX length not valid</reason>
    <code>E003</code>
  </status>
</Response>

```

Table 36 Mapping Error Example

5.11 EPCIS Message Query Status

The intention is for the Tatmeen system to provide the message status for EPCIS messages technically accepted by the Tatmeen.

The Distributor sends a query message to the Tatmeen solution to determine the status they have sent to the Tatmeen solution.

The response from the Tatmeen solution provides a series of system log entries that are shared with the technical user of the sending party.

The response is an overall status for the messages, followed by a list of the log responses from the Tatmeen solution. These response are organised into a response list to publish the Tatmeen solution responses to the message received by that system.

There are two elements in each entry of the status log response:

- Log type

- Log Message

Type	Meaning
S	Successful
W	Successful with Warnings
E	Application Error
A	Technical Error
C	Cancelled
U	Unknown

Table 37 Message Status Query Types

5.11.1 Message Status Query

```
<?xml version="1.0" encoding="utf-8"?>
<tatmeenMsgStatusQuery>
  <language>E</language>
  <instanceIdentifier>52540081D8101edA8FA0FF68B3CA74E3</instanceIdentifier>
</tatmeenMsgStatusQuery>
```

Table 38 Message Status Query Example

5.11.2 Message Status Query Response

```
<?xml version="1.0" encoding="UTF-8" ?>
<tatmeenResponse>
  <instanceIdentifier>52540081D8101edA8FA0FF68B3CA74E3</instanceIdentifier>
  <messagestatus>A - Technical Error</messagestatus>
  <logList>
    <log>
      <type>A</type>
      <message>Object Event failed, all changes in the event have been reverted</message>
    </log>
    <log>
      <type>E</type>
      <message>Event on 18.11.2021 12:02:11 failed. (1)</message>
    </log>
    <log>
      <type>E</type>
      <message>Activity packing is invalid as object does not exist</message>
    </log>
  </logList>
</tatmeenResponse>
```

```
</log>
<log>
  <type>I</type>
  <message>Invalid object: 123456.3111113.ASADSFSDSRT(SGTIN)</message>
</log>
</logList>
</tatmeenResponse>
```

Table 39 Message Query Response Example

6 EPCIS Message Summary

Activity	Field	Event Type	Action Type	EPC(List)	Business Step	Disposition	Business Transaction Type	Read Point	Business Location
	XML Tag	variable	<action>	variable	<bizstep>	<disposition>	<bizTransactionType>	<readPoint>	<bizLocation>
	Dimension	EVENT		WHAT	WHY			WHERE	
Registering serialised object		<ObjectEvent>	ADD	<epc> sgtin; sssc	commissioning	active		sgln	sgln
Aggregation - packing		<AggregationEvent>	ADD	<parentID> sgtin; sssc <epc> sgtin; sssc	packing			sgln	sgln
Aggregation - unpacking		<AggregationEvent>	DELETE	<parentID> sgtin; sssc <epc> null	unpacking			sgln	sgln
Shipping		<ObjectEvent>	OBSERVE	<epc> sgtin; sssc	shipping	in_transit	desadv	sgln	
Receiving		<ObjectEvent>	OBSERVE	<epc> sgtin; sssc	receiving	in_progress	recadv	sgln	sgln
Sample		<ObjectEvent>	OBSERVE	<epc> sgtin; sssc	inspecting	destroyed		sgln	sgln
Destroyed		<ObjectEvent>	DELETE	<epc> sgtin; sssc	destroying	destroyed		sgln	sgln
Damaged		<ObjectEvent>	DELETE	<epc> sgtin; sssc	decommissioning	destroyed		sgln	sgln
Stolen		<ObjectEvent>	DELETE	<epc> sgtin; sssc	decommissioning	stolen		sgln	sgln

Activity	Field	Event Type	Action Type	EPC(List)	Business Step	Disposition	Business Transaction Type	Read Point	Business Location
	XML Tag	variable	<action>	variable	<bizstep>	<disposition>	<bizTransactionType>	<readPoint>	<bizLocation>
	Dimension	EVENT		WHAT	WHY			WHERE	
Export		<ObjectEvent>	OBSERVE	<epc> sgtin; sssc	decommissioning	non_sellable_other		sgln	sgln
Lost		<ObjectEvent>	OBSERVE	<epc> sgtin; sssc	decommissioning	inactive		sgln	sgln

Table 40 Summary of EPCIS Message Constant Values

NOTES:

1. The Action Types apply to the actions being applied to the EPCs in the 'WHAT' dimension above.
2. The 'WHEN' and 'EXTENSION' dimensions are omitted from this table for simplicity.

7 Glossary

General short terms and abbreviations can be found in the Global Glossary (see references).

Short Term	Description
3PL	3 rd Party Logistics
API	Application Programming Interface
EPCIS	Electronic Product Code Information Services
ESB	Enterprise Service Bus
GTIN	Global Trade Item Number
HTTP(s)	Hypertext Transfer Protocol
ILMD	Item Level Master Data is the GS1 EPCIS master data extension segment within the product item commissioning event.
MAH	Marketing Authorization Holder
REST	Representational State Transfer
SC	Supply Chain
SGTIN	Serialized Global Trade Item Number
SPOC	Single Point of Contact, being the individual in a business partner organisation responsible for managing the interactions with the Tatmeen system.
SSCC	Serial Shipping Container Code
UTC	Coordinated Universal Time, which is the time standard commonly used across the world.
VPN	Virtual Private Network
WSDL	Web Service Definition Language
XML	Extensible Markup Language

Table 41 Glossary