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**Information technology — Unique  
identifiers —**

**Part 6:  
Unique identifier for product groupings**

*Technologies de l'information — Identificateurs uniques —*

*Partie 6: Identificateur unique pour les regroupements de produits*

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## Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 15459-6 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 31, *Automatic identification and data capture techniques*.

ISO/IEC 15459 consists of the following parts, under the general title *Information technology — Unique identifiers*:

- *Part 1: Unique identifiers for transport units*
- *Part 2: Registration procedures*
- *Part 3: Common rules for unique identifiers*
- *Part 4: Unique identifiers for supply chain management*
- *Part 5: Unique identifier for returnable transport items (RTIs)*
- *Part 6: Unique identifier for product groupings*

## Introduction

Unique identifiers can occur at many different levels in the supply chain, at the transport unit, at the item level, at the returnable transport item, at the product and/or material level, at the product and/or material grouping level, and elsewhere. Such distinct entities are often handled by several parties: the manufacturer, the wholesaler, the retailer, the consumer, related governmental agency, etc. Each of these parties must be able to identify and trace the product grouping so that reference can be made to associated information such as quality inspection data, the chemical substance to contain, the batch or lot number of parts, components or raw materials, etc.

The information is often held on computer systems, and may be exchanged between parties involved via EDI (Electronic Data Interchange) and XML (eXtensible Markup Language) messages.

There are considerable benefits if the identity of the product grouping is represented by linear bar code and two-dimensional symbols, radio frequency identification (RFID) transponder or other automatic identification and data capture (AIDC) media and attached to or made a constituent part of that which is being uniquely identified so that

- it can be read electronically, thus minimising errors;
- one identity can be used by all parties;
- each party can use the identity to look up its computer files to find the data associated with the product grouping;
- the identifier is unique within the class and cannot appear on any other grouping within the class during the lifetime of the product grouping.

The unique identifier for product groupings defined in this part of ISO/IEC 15459, and represented by linear bar code and two-dimensional symbols, RFID transponder or other AIDC media attached to the entities (e.g. raw material, parts, work in progress, finished goods, certain consumer products), meets these needs.

All AIDC technologies have the potential to encode a unique identifier. It is expected that application standards for items, using various automatic identification technologies, will be developed based upon the unique identifier as a prime key. These application standards may be made available from the Issuing Agency.

# Information technology — Unique identifiers —

## Part 6: Unique identifier for product groupings

### 1 Scope

This part of ISO/IEC 15459 specifies a unique, non-significant string of characters for the unique identifier of product groupings. The character string is intended to be represented in linear bar code and two-dimensional symbols, radio frequency identification (RFID) transponder or other automatic identification and data capture (AIDC) media attached to the product and/or material to meet the management needs in a batch or lot unit. To address management needs, different classes of item are recognised in the various parts of ISO/IEC 15459. This allows different requirements to be met by the unique identifiers of each class.

The unique identifier for product grouping enables a product grouping defined by a batch or lot number to be uniquely identified from all other lots and batches compliant with this part of ISO/IEC 15459. Encoding this unique identifier in a data carrier enables information about the quality of product and end-of-life processing to be clearly identified.

The rules for the unique identifier for product grouping, to identify the unique occurrence of that quality, are defined and supported by an example.

**NOTE** The unique identifier for product groupings is intended for “look-up” purposes, and cannot be directly used as a unique item identifier in the strictest sense of the definition (as used, for example, in ISO/IEC 15459-1, ISO/IEC 15459-4, and ISO/IEC 15459-5).

### 2 Normative references

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

ISO/IEC 646, *Information technology — ISO 7-bit coded character set for information interchange*

ISO/IEC 15459-2, *Information technology — Unique identifiers — Part 2: Registration procedures*

ISO/IEC 15459-3, *Information technology — Unique identifiers — Part 3: Common rules for unique identifiers*

ISO/IEC 15459-4, *Information technology — Unique identifiers — Part 4: Unique identifiers for supply chain management*

ISO/IEC 19762 (all parts), *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary*

ANS MH10.8.2, *ASC M H 10 Data Identifiers and Application Identifiers*

GS1 *General Specifications*, GS1

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 19762 (all parts) and ISO/IEC 15459-2 apply.

### 4 Identification of a unique entity

An individual instance of an entity is aptly identified by a serial number unique from any other serial number. The description of such a form of unique identification is described in ISO/IEC 15459-4. Where an identifier for an individual item is required employing a specific instance of an entity, ISO/IEC 15459-4 shall be used. Where an identifier for product grouping is required, the provisions of this part of ISO/IEC 15459 shall be used.

### 5 Identification of group of entities

The group of entities of which the quality is considered the same shall be defined uniquely and distinctly. Each group of entities shall be unambiguously identified by a code as defined in Clause 6.

So that groups of entities of this class can be distinguished from groups of entities of other classes, the unique identifier shall be combined with a class identifier. These class identifiers shall be one of the following:

- the GS1 Application Identifier (See GS1 General Specifications, latest version) “01”(GTIN: Global Trade Item Number) followed by “10” [Traceability Number assigned by the Supplier to Identify/trace a unique group of entities (e.g. Lot or Batch Number)];
- the ASC MH 10 Data Identifier “25T” (see ANSI MH10.8.2, latest version), which starts with an Issuing Agency Code.

NOTE There are situations where the identifier may need to be constructed from various factors, such as the manufacturing date, materials, production facilities, operator, environmental conditions, and many kinds of parameters at the manufacturing process is required to specify the quality of a product uniquely, dependent on the characteristics of the product. In such a case, these factors should be reflected elsewhere in an AIDC domain; not as an identifier but as an attribute.

### 6 Unique identifier for product groupings

#### 6.1 Introduction

A unique identifier is assigned to a product and/or material to enable follow up by a unique identifier issuer. This shall be done in accordance with the rules established by an authorised Issuing Agency as identified in ISO/IEC 15459-2 and ISO/IEC 15459-3.

#### 6.2 Maximum number of characters permissible in a unique identification for product groupings

The unique identifier for product groupings shall not contain more than 50 characters.

For efficient use within bar code and other AIDC data carrier systems, it is recommended that wherever possible the number of characters be maximum 20. However, any data processing system shall be capable of processing unique identifiers of 50 characters.