



General Specifications Change Notification (GSCN)

WR #	GSCN Name	Ratification Date
21-278	Predefined assortments and random assortment	Dec 2021

Associated Work Request (WR) Number:

WR21-248 Dynamic assortment

Background:

In reviewing WR21-248, it was found that improvements should be made to the definitions of predefined assortments and random assortment. Proposed changes remove additional guidance that are not part of the definition. This guidance still appears in section 2.1.1.7 with minor adjustments and an added example.

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- **General retail consumer trade items** use omnidirectional linear barcodes that are read by high-volume omnidirectional retail POS scanners or linear hand-held scanners. This scanning environment cannot read 2D matrix symbols.
- **Regulated healthcare retail consumer trade items** require a high capacity symbology, such as 2D matrix symbols, but these cannot be deployed for high-volume omnidirectional retail POS. Regulated healthcare retail consumer trade items marked with 2D matrix symbols are intended to be read in lower-volume retail scenarios or hospital pharmacies or in high volume applications such as distribution centres.
- **Non-retail trade items** are any trade item that does not cross retail POS. Commonly, these trade items will appear in mixed scanning environments (laser, image-based, etc.) depending on the application and industry sector. Typical examples include trade item groupings, direct part marked items, etc.

2.1.1.5 Books and serial publications

Published material (newspapers, magazines, and books) requires special consideration due to the following factors:

- A solution for published material should address the requirement to process returns (sorting and counting) to wholesalers and publishers. This implies the reading of a supplementary number that is not required for item identification.
- The international systems, ISSN, ISBN and ISMN, already handle the numbering of publications and books.

2.1.1.6 Single item or trade item grouping

A trade item may be a single, non-breakable unit or a predefined grouping of a series of single items. Such trade item groupings may be present in a wide variety of physical forms, such as a fibreboard case, a covered or banded pallet, a film wrapped tray, or a crate with bottles. Trade items consisting of a single unit are identified with a Global Trade Item Number (GTIN). Trade item groupings of identical or different units, each identified with a GTIN, are identified with a separate GTIN; the individual trade item GTIN, within any grouping, remains the same. Example: trade item A has the same GTIN whether it is sold as a single unit in a case of twelve or sold as a single unit in a case of twenty-four.

2.1.1.7 Trade item assortments

Three kinds of assortments exist:

- **Predefined assortments:** An assortment that comprises a fixed count of two or more different trade items, each identified with a ~~unique~~ GTIN that is declared on the package. The trade items contained within the assortment may be trade items of one or more manufacturers. When an assortment contains items from multiple manufacturers the GTIN requirements for the assortment is the responsibility of the organisation that creates the assortment. Any change in the configuration of the assortment is considered a new trade item. For example, a predefined assortment contains a total of six trade items, always four of GTIN X and two of GTIN Y.
- **Dynamic assortments:** An assortment that comprises a fixed total count of a changing assortment comprised of two or more different ~~retail-consumer~~ trade items, each identified with a ~~unique~~ GTIN. All ~~of the retail-consumer~~ trade items and their GTINs will have been communicated to the ~~buyer recipient~~ before trading takes place ~~and are declared on the package~~. The ~~recipient-buyer~~ has accepted that the ~~supplier-seller~~ may change the assortment without any prior notice. The trade items contained within the assortment may be trade items of one or more manufacturers. When an assortment contains items from multiple manufacturers the GTIN requirements for the assortment is the responsibility of the organisation that creates the assortment. For example, a dynamic assortment could contain a total of six trade items, with different combinations of GTIN X and GTIN Y as long as there are always six trade items within the assortment.
- **Random assortments:** An assortment of two or more products that comprises items that are not uniquely identified on the package and are not marked for individual sale (e.g., a bag of individually wrapped candies or colours of toothbrushes).

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Term	Definition
module	The narrowest nominal width unit of measure in a barcode. In certain symbologies, element widths may be specified as multiples of one module. The nominal width (& height for 2D barcodes) of a single module is equivalent to the X-dimension
modulo 10	The name of the algorithm – a simple checksum formula in the public domain – used to create a check digit for those GS1 identification keys that require one.
multiple unit blister/package	Immediate package for a medicine with more than one single unit. Package which fully encloses the pill/caplet/capsule. Each dosage form may be individually packaged. The individually blistered dosage forms are attached to each other in one strip.
National Healthcare Reimbursement Number (NHRN)	National and/or regional identification numbers used on pharmaceutical and/or medical devices where required by national or regional regulatory organisations for product registration purposes and/or for the management of healthcare provider reimbursement.
National Trade Item Number (NTIN)	A coding scheme, administered in the healthcare sector by a national organisation for which a GS1 Prefix has been issued to permit its uniqueness within the GTIN pool but without assurance of full compatibility with GTIN functionality. The result is a product identification number assigned by a third party (not the brand owner or manufacturer). Example: the CIP (Club Inter Pharmaceutique) in France administered by the French Health Products Safety Agency (AFSSAPS).
non-human readable interpretation text (non-HRI)	Characters such as letters and numbers that can be read by persons and may or may not be encoded in GS1 AIDC data carriers and are not confined to a structure and format based on GS1 standards (e.g., a date code expressed in a national format that could be used to encode a date field in a GS1 AIDC data carrier, brand owner name, consumer declarations).
odd parity	A characteristic of the encodation of a symbol character whereby the symbol character contains an odd number of dark modules.
omnidirectional linear barcode	A linear barcode symbology designed to be read in segments by suitably programmed laser point-of-sale (POS) scanners.
packaging component	Objects such as bottles, caps, and labels to package a consumer trade item.
packaging component number	Global Trade Item Number (GTIN) attribute used to establish a relationship between a finished consumer trade item and packaging components.
payment slip	The end customer's notification of a demand for payment for a billable service (e.g., utility bill) comprising an amount payable and payment conditions.
point-of-care (POC)	Location where dispensing or use of a non-retail, regulated healthcare pharmaceutical or medical device to or for a patient occurs.
point-of-sale (POS)	Refers to the retail checkout where omnidirectional linear barcodes must be used to support high-volume laser-based scanning or low volume checkout where linear barcodes (or for regulated healthcare trade items, GS1 DataMatrix) are used with image-based scanners.
predefined assortments	An assortment that comprises a fixed count of two or more different trade items, each identified with a unique GTIN that is declared on the package. The trade items contained within the assortment may be trade items of one or more manufacturers. When an assortment contains items from multiple manufacturers the GTIN requirement for the assortment is the responsibility of the organisation that creates the assortment. Any change in the configuration of the assortment is considered a new trade item. A trade item that comprises two or more different trade items, with a fixed total count, where the count of each trade item contained does not change.
price verifier digit	A digit calculated from the price element in a Restricted Circulation Number (RCN) that is used to check that the data has been correctly composed.
product model	A base product design or specification from which a trade item is derived.
QR Code symbology	A two-dimensional matrix symbology consisting of square modules arranged in a square pattern. The symbology is characterised by a unique finder pattern located at three corners of the symbol. QR Code symbols are read by two-dimensional imaging scanners or vision systems.
Quiet Zone	A clear space which precedes the start character and follows the stop character of a linear barcode or surrounds a 2D symbol.
Quiet Zone Indicator	A greater than (>) or less than (<) character, printed in the human readable field of the barcode, with the tip aligned with the outer edge of the Quiet Zone.



Term	Definition
radio frequency	Any frequency within the electromagnetic spectrum associated with radio wave propagation. When radio frequency power is supplied to an antenna, an electromagnetic field is created that then is able to propagate through space. A radio frequency signal that can be processed by a radio frequency receiver. Many wireless technologies are based on radio frequency field propagation.
radio frequency identification (RFID)	A technology that uses radio frequency electromagnetic fields or waves to automatically identify and track tags attached to objects. An RFID system consists of RFID tags and readers. When triggered by a radio frequency electromagnetic interrogation signal from a nearby RFID reader, the RFID tag transmits digital data, usually a unique identifier like an EPC, back to the reader.
random assortment	An assortment that comprises items that are not uniquely identified on the package and are not marked for individual sale (e.g., a bag of individually wrapped candies or colours of tooth brushes). A trade item that comprises two or more products that are not identified by a GTIN and are not intended for individual sale.
RCN-12	A 12-digit Restricted Circulation Number (see Restricted Circulation Number).
RCN-13	A 13-digit Restricted Circulation Number (see Restricted Circulation Number).
RCN-8	An 8-digit Restricted Circulation Number (see Restricted Circulation Number)
refund receipt	A voucher produced by equipment handling empty containers (i.e., bottles and crates).
regulated healthcare non-retail consumer trade item	A regulated healthcare trade item not intended for scanning at POS and identified with a GTIN-14, GTIN-13, GTIN-12 or GTIN-8 utilising linear or 2D matrix barcodes that can be scanned by image-based scanners.
regulated healthcare retail consumer trade item	A regulated healthcare trade item to be sold to the end consumer at a regulated healthcare retail point-of-sale (pharmacy). They are identified with a GTIN-13, GTIN-12 or GTIN-8 utilising linear or 2D matrix barcodes that can be scanned by image-based scanners.
regulated healthcare trade item	Pharmaceuticals or medical devices that are sold or dispensed in a controlled environment (e.g., retail pharmacy, hospital pharmacy).
responsible entity	The party responsible for the safety and effectiveness of the medical product at a moment in time in its lifecycle, according to the approved regulatory file (including labelling) and regulatory/legal/professional obligations associated with the medical product. (e.g., brand owner, repackager, hospital pharmacy, etc.)
Restricted Circulation Number (RCN)	Signifies an identification number used for special applications in restricted environments, either defined by local GS1 Member Organisations (for regional applications such as variable measure product identification and, couponing) or by a company (for internal applications).
retail consumer trade item variant	A variation of change to a retail consumer trade item (which may itself be a homogeneous or predefined assortment of other retail consumer trade items) which does not require a new GTIN, but where identification of the variation may be required.
returnable asset	A reusable entity owned by a company that is used for transport and storage of goods. It is identified with a GRAI.
separator character	Special character(s) that are defined as part of GS1 symbologies and used to separate concatenated element strings, based on their positioning in the GS1 barcodes.
serial number	A code, numeric or alphanumeric, assigned to an individual instance of an entity for its lifetime. Example: a unique individual item may be identified with the combined Global Trade Item Number (GTIN) and serial number.
serial reference	A component of the Serial Shipping Container Code (SSCC) assigned by the physical builder or brand owner of the logistic unit to create a unique SSCC.
Serial Shipping Container Code (SSCC)	The GS1 identification key used to identify logistics units. The key comprises an extension digit, GS1 Company Prefix, serial reference, and check digit.
service reference	A component of the Global Service Relation Number (GSRN) assigned by the issuing organisation to create a unique GSRN.
service relation instance number (SRIN)	An attribute to the GSRN which allows to distinguish different encounters during a service relationship.
shipment	A grouping of logistic and transport units assembled and identified by the seller (sender) of the goods travelling under one despatch advice and/or Bill of Lading to one customer (recipient).
short life items	An item, preparation or reconstituted product with limited use/shelf life.