

Rules for AI use

GINC Rules

Allocating Global Identification Numbers for Consignment

General Rule

An individual Global Identification Number for Consignment is a unique number, which remains the same for the life of a grouping of logistics or transport units to which it is assigned. When assigning a GINC, the rule is that an individual GINC number must not be reallocated within one year of the shipment date from the freight forwarder assigning the GINC to a transport. However, prevailing regulatory or industry organisation specific requirements may extend this period.

GSIN Rules

Allocating Global Shipment Identification Numbers

General Rule

An individual Global Shipment Identification Number (GSIN) is a unique number, which remains the same for the life of the grouping of logistics or transport units to which it is assigned. When assigning a GSIN, the rule is that an individual GSIN number must not be reallocated within ten years of the shipment date from the seller or third party logistics provider (sender) of the GSIN to a trading partner buyer (recipient) to comply with the regulations of the World Customs Organisation (WCO). For goods that circulate within one country (domestic transport), the period of re-use is based on either governmental, industry or the discretion of the seller (sender) of the goods.

GCN Rules

Allocating Global Coupon Numbers

The exact method used to allocate the Global Coupon Number (GCN) is left to the discretion of the issuing organisation. However, the GCN must remain unique for a period well beyond the lifetime of the records relevant to the coupon. For ease of administration, GS1 recommends that GCNs be allocated sequentially and not contain classifying elements.

CPID Rules

Allocating Component/Part identifiers


The exact method used to allocate the Component/Part identifier (CPID) is left to the discretion of the issuing organisation.


Data Relationships


The Element Strings that require specialised software and/or scanner set up are not covered by these rules. These are the Element Strings with GS1 Prefixes 0001 to 0007, 02, 04, 05, 20 to 29, 98, and 99; GTIN-8 Prefixes 0 and 2; two-digit and five-digit Add-On Symbols.

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In Figures 4.13.1 - 1 and 4.13.2 - 1, the Application Identifiers (AIs) are used to indicate the Element String. The AI (01) is used to indicate a Global Trade Item Number (GTIN); however, the Element Strings that encode GTINs are defined in Section 3. GTINs may be encoded in barcodes from the EAN/UPC Symbology family, ITF-14 barcodes, GS1 DataBar Symbology family, GS1 DataMatrix and GS1-128 barcodes using AI (01) or AI (8006) and GS1 QR barcodes using AI (01).

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Note: If duplicate element strings (e.g., two serial numbers, two batch/lot numbers, two Extended Packaging URLs) must appear on the same physical entity they must always have the same value in each occurrence on that entity.

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Note: It is possible to have multiple different National Healthcare Reimbursement Numbers (NHRNs), from different country or regional NHRN authorities, associated with the same GTIN on a given item. It is possible and permissible to change one of these NHRNs without a change to the other NHRNs or to the GTIN.

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Note: It is not allowed to have multiple of the same NHRN AI with different data associated with the same GTIN on a given item.

Invalid Pairs of Element Strings

This section defines the pairs of Element Strings that cannot appear on the same physical entity.

Figure Error! No text of specified style in document.-1. Invalid Pairs of Element Strings

Pair of Element Strings				Comment
AI	Designation	AI	Designation	
01	Identification of a trade item	01	Identification of a trade item	Duplicate Global Trade Item Numbers (GTINs) with different values
01	Identification of a trade item	02	Identification of logistic unit contents	AI (02) must not be used for the identification of trade items contained in a trade item.
01	Identification of a trade item	37	Count of units contained	The count of units contained would duplicate the master data of the GTIN. AI (37) may only be used with AI (02).
242	Made-to-Order Variation	01 or 02 with N ₁ not equal to 9	Identification of a Variable Measure Trade Item	Made-to-Order Variation can only be used with a GTIN-14, Indicator digit 9. This represents a Custom Industrial Supply Item
420	Ship to postal code, single postal authority	421	Ship to postal code with ISO country code	Only one ship to postal code may be applied on an item
422	Country of origin of a trade item	426	Country of full processing	Duplication of country of origin of a trade item (covered by country of full processing)
423	Country of initial processing	426	Country of full processing	Duplication of country of initial processing (covered by country of full processing)
424	Country of processing	426	Country of full processing	Duplication of country of processing (covered by country of full processing)
425	Country of disassembly	426	Country of full processing	Duplication of country of disassembly (covered by country of full processing)
390n	Amount payable or Coupon value – single monetary area	391n	Amount payable – with ISO currency code	Only one amount payable Element String may be applied on a payment slip or coupon

Rules for AI use

Pair of Element Strings				Comment
AI	Designation	AI	Designation	
392n	Amount Payable for a Variable Measure Trade Item – Single Monetary Area	393n	Amount Payable for a Variable Measure Trade Item and ISO Currency Code	Only one amount payable Element String may be applied on a Variable Measure Trade Item.
710, 711, 712, 713 (nnn)	National Healthcare Reimbursement Number	Any AI (01) allowable attributes	Any GTIN allowable attributes	When NHRN(s) are applied to the physical trade item with the mandatory association to the GTIN, any attribute AIs must only be processed with the GTIN and must not be processed with the NHRNs (AIs 710, 711, 712, 713.....) alone.
8006	Component identification	01	Identification of a trade item	Other GTINs cannot be used with AI (8006). The trade item is identified by a GTIN contained in the AI (8006).
8018	Global Service Relation Number for the Recipient	8017	Global Service Relation Number for the Provider	Only one Global Service Relation Number (recipient or provider) can be applied at one time for identification of an individual in a given service relationship

Mandatory Association of Element Strings

This section defines the Element Strings that mandate the appearance of another Element String on the same physical entity.

Figure Error! No text of specified style in document.-2. Mandatory Association of Element Strings

If Element String		Then Mandatory Associated Element String	Comment
AI	Designation		
01 with N ₁ = 0	Identification of a Variable Measure Trade Item Scanned at POS	30 or 3nnn* or 3nnn**	Mandatory association with a variable count or a trade measure information scanned at POS identified with GTIN-12 or GTIN-13. Only GS1 DataBar Expanded barcodes can encode associated elements strings for use at POS. (See Note at bottom)
01 or 02 with N ₁ = 9	Identification of a Variable Measure Trade Item Not Scanned at POS	30 or 3nnn* or 3nnn** or 8001	Mandatory association with variable measure information not scanned at POS identified with a GTIN-14 starting with Indicator digit 9 (See Note at bottom) Only GS1-128, ITF-14, and GS1 DataBar Expanded barcodes can encode a GTIN with N ₁ = 9.
02	Identification of logistic unit contents	00	Mandatory association with an SSCC (Serial Shipping Container Code)
02	Identification of logistic unit contents	37	Mandatory count of the contained trade items
10	Batch/lot number	01 or 02	Mandatory association with a Global Trade Item Number (GTIN) or with the identification of logistic unit contents
11, 13, 15, 16	Dates	01 or 02	Mandatory association with a GTIN or with the identification of logistic unit contents

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If Element String		Then Mandatory Associated Element String	Comment
12	Due date	8020 and 415	Mandatory association with the payment slip reference number and the Global Location Number (GLN) of the invoicing party
17	Expiration Date	01 or 02 or 255	Mandatory association with a GTIN or with the identification of logistic unit contents or with the Global Coupon Number
20	Product variant	01 or 02	Mandatory association with a GTIN or with the identification of logistic unit contents
21	Serial number	01	Mandatory association with a GTIN of a single trade item (a serial number cannot apply to a grouping of trade items). SGTIN is a common term for the mandatory association of AI (21) with GTIN AI (01)
240	Additional product identification	01 or 02	Mandatory association with a GTIN or with the identification of logistic unit contents
241	Customer part number	01 or 02	Mandatory association with a GTIN or with the identification of logistic unit contents
242	Made-to-Order Variation Number	01 or 02 with N ₁ = 9	Mandatory association with a GTIN-14 with Indicator Digit 9 represents a Custom Industrial Supply Item
243	Packaging Component Number	01	Mandatory association with GTIN
250	Secondary serial number	01 and 21	Mandatory association with a GTIN (a secondary serial number cannot apply to a grouping of trade items) and the serial number of the trade item AI(21)
251	Reference to source entity	01	Mandatory association with GTIN of the trade item
254	Extension component of a GLN	414	Mandatory association with AI (414). Only GS1-128, GS1 DataBar Expanded symbologies, and EPC RFID tags are valid. This is used with GLN and not GTIN.
30	Variable count	01 or 02	Mandatory association with a GTIN for a variable measure trade item (e.g., GTIN-12 or GTIN-13 for trade items scanned at POS, GTIN-14s starting with Indicator digit 9 for trade items not scanned at POS) or the identification of variable measure content of a logistic unit
3nnn*	Trade measures that cannot be summed	01	Mandatory association with a GTIN for a variable measure trade item (e.g., GTIN-12 or GTIN-13 for trade items scanned at POS, GTIN-14s starting with Indicator digit 9 for trade items not scanned at POS)
3nnn**	Trade measures that can be summed	01 or 02	Mandatory association with a GTIN for a variable measure trade item (e.g., GTIN-12 or GTIN-13 for trade items scanned at POS, GTIN-14s starting with Indicator digit 9 for trade items not scanned at POS) or the identification of variable measure content of a logistic unit
3nnn***	Logistic measures	00 or 01	Mandatory association with an SSCC or a variable measure GTIN for trade item not scanned at POS (e.g., a GTIN-14 starting with the digit 9)
337n	Kilograms per square metre	01	Mandatory association with a GTIN
37	Count of units contained	02	Mandatory association with the identification of logistic unit contents

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If Element String		Then Mandatory Associated Element String	Comment
390n	Amount payable or Coupon value – single monetary area	8020 and 415 or 255	Mandatory association with the payment slip reference number and the GLN of the invoicing party or with the Global Coupon Number
391n	Amount payable – with ISO currency code	8020 and 415	Mandatory association with the payment slip reference number and the GLN of the invoicing party
392n	Amount payable – when scanned at POS - single monetary unit	01	Mandatory association with a variable count or a trade measure scanned at POS when identified with a GTIN-12 or GTIN-13.
392n	Amount payable when not scanned at POS – single monetary unit	01	Mandatory association with a variable measure information when identified GTIN-14.
393n	Amount payable – when scanned at POS –with ISO currency code	01	Mandatory association with a variable count or a variable measure when scanned at POS and identified with GTIN-12 or GTIN-13.
393n	Amount payable when not scanned at POS – with ISO currency code	01	Mandatory association with a variable measure information when identified with a GTIN-14.
403	Routing code	00	Mandatory association with an SSCC
415	GLN of the invoicing party	8020	Mandatory association with payment slip reference number
422	Country of origin	01 or 02	Mandatory association with a GTIN
423	Country of initial processing	01 or 02	Mandatory association with a GTIN or with the identification of logistic unit contents
424	Country of processing	01 or 02	Mandatory association with a GTIN or with the identification of logistic unit contents
425	Country of disassembly	01 or 02	Mandatory association with a GTIN or with the identification of logistic unit contents
426	Country of full processing	01 or 02	Mandatory association with a GTIN or with the identification of logistic unit contents
427	Country Subdivision of Origin Code for a Trade Item	01 or 02 and 422	Mandatory association with a GTIN and the Country of Origin of the trade item
7001	NATO stock number	01 or 02	Mandatory association with a GTIN or with the identification of logistic unit contents
7002	UN/ECE meat carcasses and cuts classification	01 or 02	Mandatory association with a GTIN or with the identification of logistic unit contents
7003	Expiration Date and Time	01 or 02	Mandatory association with a GTIN or with the identification of logistic unit contents
7004	Active Potency	01 and 10	Mandatory association with the GTIN and Batch/Lot Number

Rules for AI use

If Element String		Then Mandatory Associated Element String	Comment
7005	Catch Area	01 or 02	Mandatory association with a Global Trade Item Number (GTIN) or with the identification of logistic unit contents
7006	First Freeze Date	01 or 02	Mandatory association with a Global Trade Item Number (GTIN) or with the identification of logistic unit contents
7007	Harvest Date	01 or 02	Mandatory association with a Global Trade Item Number (GTIN) or with the identification of logistic unit contents
7008	Species for Fishery Purposes	01 or 02	Mandatory association with a Global Trade Item Number (GTIN) or with the identification of logistic unit contents
7009	Fishing Gear Type	01 or 02	Mandatory association with a Global Trade Item Number (GTIN) or with the identification of logistic unit contents
7010	Production Method	01 or 02	Mandatory association with a Global Trade Item Number (GTIN) or with the identification of logistic unit contents
703(s)	Number of processor	01 or 02	Mandatory association with a GTIN or with the identification of logistic unit contents
710	National Healthcare Reimbursement Number	01	Mandatory association with the GTIN of the trade item
711	National Healthcare Reimbursement Number	01	Mandatory association with the GTIN of the trade item
712	National Healthcare Reimbursement Number	01	Mandatory association with the GTIN of the trade item
713	National Healthcare Reimbursement Number	01	Mandatory association with the GTIN of the trade item
8001	Variables of roll products	01	Mandatory association with a variable measure GTIN (e.g., an GTIN-14 starting with the digit 9)
8005	Price per unit of measure	01 or 02	Mandatory association with a GTIN for a variable measure trade item (e.g., GTIN-12 or GTIN-13 for trade items scanned at POS, GTIN-14s starting with Indicator digit 9 for trade items not scanned at POS) or the identification of variable measure content of a logistic unit.
8007	International Bank Account Number	8020 and 415	Mandatory association with the payment slip reference number and the GLN of the invoicing party
8008	Date and time of production	01 or 02	Mandatory association with a GTIN or with the identification of logistic unit contents
8011	Component / Part Identifier Serial Number	8010	Mandatory association with Component / Part Identifier
8019	Service Relation Instance Number	8018	Mandatory association with a Global Service Relation Number (GSRN), AI 8018
8020	Payment slip reference number	415	Mandatory association with the GLN of the invoicing party

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If Element String		Then Mandatory Associated Element String	Comment
8200	Extended Packaging URL	01	Mandatory association with GTIN

- * Is (3nnn) where the first three digits are 312, 313, 324, 325, 326, 327, 328, and 329
- ** Is (3nnn) where the first three digits are 310, 311, 314, 315, 316, 320, 321, 322, 323, 350, 351, 352, 356, 357, 360, 361, 364, 365, and 366
- *** Is (3nnn) where the first three digits are 330, 331, 332, 333, 334, 335, 336, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 353, 354, 355, 362, 363, 367, 368, and 369



Note: Exception for Point-of-Sale. See Figure 5.5.2.6 – 1. Areas of GS1 System Application.