WR #	GSCN Name	Effective Date
18-157	Marine Equipment Certification AI	**13 Sept 2018**

Associated Work Request (WR) Number:

18-157

Background:

The MED ID is a certificate of a safety-relevant item on a ship sailing under the Flag of any EEA-state (European Economic Area: EU + Norway, Iceland and Liechtenstein) -but also beyond, such as ships sailing under Liberian, Marshall-Islands and Isle of Man's flag- and it is currently applied to the item as a Wheelmark (a combination of a steering wheel logo and a MED identifier).

The e-Tag (or Electronic Tag) is a machine-readable data capture mode, consisting of an RFID-tag affixed to or a DataMatrix printed/labelled on the item. The Marine e-Tag should serve as a supplement or as a replacement for the above-mentioned "Wheelmark".

There is a need for a new GS1 Application Identifier that can hold :

- The type of conformity assessment module (always 1 letter)
- The notified body ID nr. (always 4 numbers)
- The number of the unit verification (module G) or EC type examination and conformity to type certificates (Modules B and D, E or F) – maximum 20 digits.
- Each safety-relevant item can hold up to max. 2 different MED-IDs, depending on the conformity assessment module they fall under.

GS1 General Specification Change:

The recommended changes are highlighted below, relative to GS1 General Specifications version 18.

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3.1 Introduction

This section describes the meaning, structure, and function of the GS1 system element strings so they can be correctly processed in users' application programmes. An element string is the combination of a GS1 Application Identifier and a GS1 Application Identifier data field. The allowable character set to be used for GS1 Application Identifier element strings is defined in section *7.11*. There are AIs that have additional syntax restrictions, e.g., numerical only; see below definition for each AI.

Automatic processing of element strings in business applications requires information about the type of transaction to which the transferred data refers. See section *7* for an explanation of this process. Element strings can be carried by GS1-128, GS1 DataBar symbology, GS1 Composite, GS1 DataMatrix and GS1 QR Code symbols. The rules for use and interrelationships between the GS1 Application Identifiers are contained in section 2 and 4.

When a predefined length GS1 key and attributes are encoded together, the GS1 key SHOULD appear before the attributes. In most cases predefined length element strings SHOULD be followed by non-predefined element strings. The sequence of predefined and non-predefined element strings should be at the discretion of the creator of the element strings.

3.2 GS1 Application Identifiers in numerical order

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Figure 3.2-1. GS1 Application Identifiers

AI	Data Content	Format (*)	FNC1 required (****)	Data title
00	*Serial Shipping Container Code (SSCC)*	N2+N18		SSCC
01	*Global Trade Item Number (GTIN)*	N2+N14		GTIN
02	*GTIN of contained trade items*	N2+N14		CONTENT
10	*Batch or lot number*	N2+X..20	(FNC1)	BATCH/LOT
11 (**)	*Production date (YYMMDD)*	N2+N6		PROD DATE
12 (**)	*Due date (YYMMDD)*	N2+N6		DUE DATE
13 (**)	*Packaging date (YYMMDD)*	N2+N6		PACK DATE
15 (**)	*Best before date (YYMMDD)*	N2+N6		BEST BEFORE or BEST BY
16 (**)	*Sell by date (YYMMDD)*	N2+N6		SELL BY
17 (**)	*Expiration date (YYMMDD)*	N2+N6		USE BY OR EXPIRY
20	*Internal product variant*	N2+N2		VARIANT
21	*Serial number*	N2+X..20	(FNC1)	SERIAL
22	*Consumer product variant*	N2+X..20	(FNC1)	CPV
240	*Additional product identification assigned by the manufacturer*	N3+X..30	(FNC1)	ADDITIONAL ID
241	*Customer part number*	N3+X..30	(FNC1)	CUST. PART NO.
242	*Made-to-Order variation number*	N3+N..6	(FNC1)	MTO VARIANT
243	*Packaging component number*	N3+X..20	(FNC1)	PCN
250	*Secondary serial number*	N3+X..30	(FNC1)	SECONDARY SERIAL
251	*Reference to source entity*	N3+X..30	(FNC1)	REF. TO SOURCE
253	*Global Document Type Identifier (GDTI)*	N3+N13+X..17	(FNC1)	GDTI
254	*GLN extension component*	N3+X..20	(FNC1)	GLN EXTENSION COMPONENT
255	*Global Coupon Number (GCN)*	N3+N13+N..12	(FNC1)	GCN
30	*Variable count of items (variable measure trade item)*	N2+N..8	(FNC1)	VAR. COUNT
310n (***)	*Net weight, kilograms (variable measure trade item)*	N4+N6		NET WEIGHT (kg)
311n (***)	*Length or first dimension, metres (variable measure trade item)*	N4+N6		LENGTH (m)
312n (***)	*Width, diameter, or second dimension, metres (variable measure trade item)*	N4+N6		WIDTH (m)
313n (***)	*Depth, thickness, height, or third dimension, metres (variable measure trade item)*	N4+N6		HEIGHT (m)
314n (***)	*Area, square metres (variable measure trade item)*	N4+N6		AREA (m^2)
315n (***)	*Net volume, litres (variable measure trade item)*	N4+N6		NET VOLUME (l)
316n (***)	*Net volume, cubic metres (variable measure trade item)*	N4+N6		NET VOLUME (m^3)
320n (***)	*Net weight, pounds (variable measure trade item)*	N4+N6		NET WEIGHT (lb)
321n (***)	*Length or first dimension, inches (variable measure trade item)*	N4+N6		LENGTH (i)
322n (***)	*Length or first dimension, feet (variable measure trade item)*	N4+N6		LENGTH (f)

AI	Data Content	Format (*)	FNC1 required (****)	Data title
323n (***)	*Length or first dimension, yards (variable measure trade item)*	N4+N6		LENGTH (y)
324n (***)	*Width, diameter, or second dimension, inches (variable measure trade item)*	N4+N6		WIDTH (i)
325n (***)	*Width, diameter, or second dimension, feet (variable measure trade item)*	N4+N6		WIDTH (f)
326n (***)	*Width, diameter, or second dimension, yards (variable measure trade item)*	N4+N6		WIDTH (y)
327n (***)	*Depth, thickness, height, or third dimension, inches (variable measure trade item)*	N4+N6		HEIGHT (i)
328n (***)	*Depth, thickness, height, or third dimension, feet (variable measure trade item)*	N4+N6		HEIGHT (f)
329n (***)	*Depth, thickness, height, or third dimension, yards (variable measure trade item)*	N4+N6		HEIGHT (y)
330n (***)	*Logistic weight, kilograms*	N4+N6		GROSS WEIGHT (kg)
331n (***)	*Length or first dimension, metres*	N4+N6		LENGTH (m), log
332n (***)	*Width, diameter, or second dimension, metres*	N4+N6		WIDTH (m), log
333n (***)	*Depth, thickness, height, or third dimension, metres*	N4+N6		HEIGHT (m), log
334n (***)	*Area, square metres*	N4+N6		AREA (m^2), log
335n (***)	*Logistic volume, litres*	N4+N6		VOLUME (l), log
336n (***)	*Logistic volume, cubic metres*	N4+N6		VOLUME (m^3), log
337n (***)	*Kilograms per square metre*	N4+N6		KG PER m^2
340n (***)	*Logistic weight, pounds*	N4+N6		GROSS WEIGHT (lb)
341n (***)	*Length or first dimension, inches*	N4+N6		LENGTH (i), log
342n (***)	*Length or first dimension, feet*	N4+N6		LENGTH (f), log
343n (***)	*Length or first dimension, yards*	N4+N6		LENGTH (y), log
344n (***)	*Width, diameter, or second dimension, inches*	N4+N6		WIDTH (i), log
345n (***)	*Width, diameter, or second dimension, feet*	N4+N6		WIDTH (f), log
346n (***)	*Width, diameter, or second dimension, yard*	N4+N6		WIDTH (y), log
347n (***)	*Depth, thickness, height, or third dimension, inches*	N4+N6		HEIGHT (i), log
348n (***)	*Depth, thickness, height, or third dimension, feet*	N4+N6		HEIGHT (f), log
349n (***)	*Depth, thickness, height, or third dimension, yards*	N4+N6		HEIGHT (y), log
350n (***)	*Area, square inches (variable measure trade item)*	N4+N6		AREA (i^2)

AI	Data Content	Format (*)	FNC1 required (****)	Data title
351n (***)	Area, square feet (variable measure trade item)	N4+N6		AREA (f^2)
352n (***)	Area, square yards (variable measure trade item)	N4+N6		AREA (y^2)
353n (***)	Area, square inches	N4+N6		AREA (i^2), log
354n (***)	Area, square feet	N4+N6		AREA (f^2), log
355n (***)	Area, square yards	N4+N6		AREA (y^2), log
356n (***)	Net weight, troy ounces (variable measure trade item)	N4+N6		NET WEIGHT (t)
357n (***)	Net weight (or volume), ounces (variable measure trade item)	N4+N6		NET VOLUME (oz)
360n (***)	Net volume, quarts (variable measure trade item)	N4+N6		NET VOLUME (q)
361n (***)	Net volume, gallons U.S. (variable measure trade item)	N4+N6		NET VOLUME (g)
362n (***)	Logistic volume, quarts	N4+N6		VOLUME (q), log
363n (***)	Logistic volume, gallons U.S.	N4+N6		VOLUME (g), log
364n (***)	Net volume, cubic inches (variable measure trade item)	N4+N6		VOLUME (i^3)
365n (***)	Net volume, cubic feet (variable measure trade item)	N4+N6		VOLUME (f^3)
366n (***)	Net volume, cubic yards (variable measure trade item)	N4+N6		VOLUME (y^3)
367n (***)	Logistic volume, cubic inches	N4+N6		VOLUME (i^3), log
368n (***)	Logistic volume, cubic feet	N4+N6		VOLUME (f^3), log
369n (***)	Logistic volume, cubic yards	N4+N6		VOLUME (y^3), log
37	~~Count of trade items~~Count of trade items or trade item pieces contained in a logistic unit	N2+N..8	(FNC1)	COUNT
390n (***)	Applicable amount payable or Coupon value, local currency	N4+N..15	(FNC1)	AMOUNT
391n (***)	Applicable amount payable with ISO currency code	N4+N3+N..15	(FNC1)	AMOUNT
392n (***)	Applicable amount payable, single monetary area (variable measure trade item)	N4+N..15	(FNC1)	PRICE
393n (***)	Applicable amount payable with ISO currency code (variable measure trade item)	N4+N3+N..15	(FNC1)	PRICE
394n (***)	Percentage discount of a coupon	N4+N4	(FNC1)	PRCNT OFF
400	Customer's purchase order number	N3+X..30	(FNC1)	ORDER NUMBER
401	Global Identification Number for Consignment (GINC)	N3+X..30	(FNC1)	GINC
402	Global Shipment Identification Number (GSIN)	N3+N17	(FNC1)	GSIN
403	Routing code	N3+X..30	(FNC1)	ROUTE
410	Ship to - Deliver to Global Location Number	N3+N13		SHIP TO LOC

Field Code Changed

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AI	Data Content	Format (*)	FNC1 required (****)	Data title
411	*Bill to - Invoice to Global Location Number*	N3+N13		BILL TO
412	*Purchased from Global Location Number*	N3+N13		PURCHASE FROM
413	*Ship for - Deliver for - Forward to Global Location Number*	N3+N13		SHIP FOR LOC
414	*Identification of a physical location - Global Location Number*	N3+N13		LOC No
415	*Global Location Number of the invoicing party*	N3+N13		PAY TO
416	*GLN of the production or service location*	N3+N13		PROD/SERV LOC
420	*Ship to - Deliver to postal code within a single postal authority*	N3+X..20	(FNC1)	SHIP TO POST
421	*Ship to - Deliver to postal code with ISO country code*	N3+N3+X..9	(FNC1)	SHIP TO POST
422	*Country of origin of a trade item*	N3+N3	(FNC1)	ORIGIN
423	*Country of initial processing*	N3+N3+N..12	(FNC1)	COUNTRY - INITIAL PROCESS.
424	*Country of processing*	N3+N3	(FNC1)	COUNTRY - PROCESS.
425	*Country of disassembly*	N3+N3+N..12	(FNC1)	COUNTRY - DISASSEMBLY
426	*Country covering full process chain*	N3+N3	(FNC1)	COUNTRY – FULL PROCESS
427	*Country subdivision of origin*	N3+X..3	(FNC1)	ORIGIN SUBDIVISION
7001	*NATO Stock Number (NSN)*	N4+N13	(FNC1)	NSN
7002	*UN/ECE meat carcasses and cuts classification*	N4+X..30	(FNC1)	MEAT CUT
7003	*Expiration date and time*	N4+N10	(FNC1)	EXPIRY TIME
7004	*Active potency*	N4+N..4	(FNC1)	ACTIVE POTENCY
7005	*Catch area*	N4+X..12	(FNC1)	CATCH AREA
7006	*First freeze date*	N4+N6	(FNC1)	FIRST FREEZE DATE
7007	*Harvest date*	N4+N6..12	(FNC1)	HARVEST DATE
7008	*Species for fishery purposes*	N4+X..3	(FNC1)	AQUATIC SPECIES
7009	*Fishing gear type*	N4+X..10	(FNC1)	FISHING GEAR TYPE
7010	*Production method*	N4+X..2	(FNC1)	PROD METHOD
7020	*Refurbishment lot ID*	N4+X..20	(FNC1)	REFURB LOT
7021	*Functional status*	N4+X..20	(FNC1)	FUNC STAT
7022	*Revision status*	N4+X..20	(FNC1)	REV STAT
7023	*Global Individual Asset Identifier (GIAI) of an assembly*	N4+X..30	(FNC1)	GIAI – ASSEMBLY
703s	*Number of processor with ISO Country Code*	N4+N3+X..27	(FNC1)	PROCESSOR # s
710	*National Healthcare Reimbursement Number (NHRN) – Germany PZN*	N3+X..20	(FNC1)	NHRN PZN
711	*National Healthcare Reimbursement Number (NHRN) – France CIP*	N3+X..20	(FNC1)	NHRN CIP
712	*National Healthcare Reimbursement Number (NHRN) – Spain CN*	N3+X..20	(FNC1)	NHRN CN
713	*National Healthcare Reimbursement Number (NHRN) – Brasil DRN*	N3+X..20	(FNC1)	NHRN DRN
714	*National Healthcare Reimbursement Number (NHRN) – Portugal AIM*	N3+X..20	(FNC1)	NHRN AIM
... (*****)	*National Healthcare Reimbursement Number (NHRN) – Country "A" NHRN*	N3+X..20	(FNC1)	NHRN xxx

AI	Data Content	Format (*)	FNC1 required (****)	Data title
723s (******)	Certification reference	N4+X2+X..28	(FNC1)	CERT # s
8001	Roll products (width, length, core diameter, direction, splices)	N4+N14	(FNC1)	DIMENSIONS
8002	Cellular mobile telephone identifier	N4+X..20	(FNC1)	CMT No
8003	Global Returnable Asset Identifier (GRAI)	N4+N14+X..16	(FNC1)	GRAI
8004	Global Individual Asset Identifier (GIAI)	N4+X..30	(FNC1)	GIAI
8005	Price per unit of measure	N4+N6	(FNC1)	PRICE PER UNIT
8006	Identification of an individual trade item piece	N4+N14+N2+N2	(FNC1)	ITIP or GCTIN (******)
8007	International Bank Account Number (IBAN)	N4+X..34	(FNC1)	IBAN
8008	Date and time of production	N4+N8+N..4	(FNC1)	PROD TIME
8010	Component/Part Identifier (CPID)	N4+X..30	(FNC1)	CPID
8011	Component/Part Identifier serial number (CPID SERIAL)	N4+N..12	(FNC1)	CPID SERIAL
8012	Software version	N4+X..20	(FNC1)	VERSION
8013	Global Model Number (GMN)	N4+X..30	(FNC1)	GMN or BUDI-DI (*******)
8017	Global Service Relation Number to identify the relationship between an organisation offering services and the provider of services	N4+N18	(FNC1)	GSRN - PROVIDER
8018	Global Service Relation Number to identify the relationship between an organisation offering services and the recipient of services	N4+N18	(FNC1)	GSRN - RECIPIENT
8019	Service Relation Instance Number (SRIN)	N4+N..10	(FNC1)	SRIN
8020	Payment slip reference number	N4+X..25	(FNC1)	REF No
8110	Coupon code identification for use in North America	N4+X..70	(FNC1)	-
8026	ITIP of contained pieces	N4+N18	(FNC1)	ITIP CONTENT
8111	Loyalty points of a coupon	N4+N4	(FNC1)	POINTS
8112	Paperless coupon code identification for use in North America (AI 8112)~~Paperless coupon code identification for use in North America (AI 8112)~~	N4+X..70	(FNC1)	-
8200	Extended Packaging URL	N4+X..70	(FNC1)	PRODUCT URL
90	Information mutually agreed between trading partners	N2+X..30	(FNC1)	INTERNAL
91 to 99	Company internal information	N2+X..90	(FNC1)	INTERNAL

NOTES:
(*): The first position indicates the length (number of digits) of the GS1 Application Identifier. The following value refers to the format of the data content. The following convention is applied:

- n implied decimal point position
- N numeric digit
- X any character in figure 7.11-1
- N3 3 numeric digits, predefined length
- N..3 up to 3 numeric digits
- X..3 up to 3 characters in figure 7.11-1

(**): If only year and month are available, DD must be filled with two zeroes.

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(***): The fourth digit of this GS1 Application Identifier indicates the number of decimal places (and in that way the implied decimal point position).

Example:

- 3100 Net weight in kg without a decimal point
- 3102 Net weight in kg with two decimal places

(****): All GS1 element strings that begin with GS1 Application Identifiers not contained in the predefined table shown in figure 7.8.4-2 SHALL be separated by a separator character unless this element string is the last one to be encoded in the symbol. For details on the separator character see section 7.8.3.

(*****) An example to illustrate future additional National Healthcare Reimbursement Numbers (NHRNs). If additional NHRN AIs are required, a request for a new NHRN AI SHALL be made through the GS1 GSMP.

(******) ITIP is the preferred data title for AI (8006) and GCTIN will have a sunset date of January 2020.

(*******) For medical devices, the default, global data title is BUDI-DI

(********) The fourth digit of this GS1 Application Identifier indicates the sequence number, allowing for multiple occurrences of the AI.

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3.3 GS1 Application Identifiers starting with digit 0

3.3.1 Identification of a logistic unit (SSCC): AI (00)

The GS1 Application Identifier (00) indicates that the GS1 Application Identifier data field contains an SSCC (Serial Shipping Container Code). The SSCC is used to identify logistic units (see section 2.2).

The extension digit is used to increase the capacity of the serial reference within the SSCC. It is assigned by the company that constructs the SSCC. The extension digit ranges from 0-9.

The GS1 Company Prefix is allocated by GS1 Member Organisations to the company that allocates the SSCC – here the physical builder or the brand owner of the logistic unit (see section 1.4.4). It makes the SSCC unique worldwide but does not identify the origin of the unit.

The structure and content of the serial reference is at the discretion of owner of the GS1 Company Prefix to uniquely identify each logistic unit.

The check digit is explained in section 7.9. Its verification, which must be carried out in the application software, ensures that the number is correctly composed.

Figure 3.3.1-1. Format of the element string

GS1 Application Identifier	SSCC (Serial Shipping Container Code)																
	Extension digit	GS1 Company Prefix →									Serial reference ←						Check digit
0 0	N_1	N_2	N_3	N_4	N_5	N_6	N_7	N_8	N_9	N_{10}	N_{11}	N_{12}	N_{13}	N_{14}	N_{15}	N_{16}	N_{17}	N_{18}

The data transmitted from the barcode reader means that the element string denoting the SSCC of a logistic unit has been captured. When indicating this element string in the non-HRI text section of a barcode label, the following data title SHOULD be used (see also section 3.2): **SSCC**

3.3.2 Identification of a trade item (GTIN): AI (01)

The GS1 Application Identifier (01) indicates that the GS1 Application Identifier data field contains a GTIN. The GTIN is used to identify trade items (see section 4).

The GTIN for trade items may be a GTIN-8, GTIN-12, GTIN-13 or a GTIN-14. See section 2.1 for the rules for GTIN formats and mandatory or optional attributes in the various trade item applications.

The check digit is explained in section 7.9. Its verification, which must be carried out in the application software, ensures that the number is correctly composed.

Figure 3.8.17-2. Overview of NHRN Application Identifiers

GS1 Application Identifier	National Healthcare Reimbursement Number			Organisation
710	X_1	variable length	X_{20}	Germany IFA
711	X_1	variable length	X_{20}	France CIP
712	X_1	variable length	X_{20}	Spain National Code
713	X_1	variable length	X_{20}	Brazil ANVISA
714	X_1	variable length	X_{20}	Portugal INFARMED
nnn (*)	X_1	variable length	X_{20}	Country "A" NHRN Authority
(*) An example to illustrate future additional NHRNs. If additional NHRN AIs are required, a request for a new NHRN AI SHALL be made through the GS1 GSMP.				

Note: Companies wishing to apply one of the listed NHRN AIs will need to associate that NHRN AI to the trade item's GTIN according to the NHRN AI rules and should contact their GS1 Member Organisation for further considerations of use.

The data transmitted from the barcode reader means that the element string denoting a National Healthcare Reimbursement Number has been captured. This element string is an attribute of a trade item and must be processed together with the GTIN of the trade item to which it relates. When indicating this element string in the non-HRI text section of a barcode label, the data title in figure *3.2-1* SHOULD be used.

3.8.18 Certification reference: AI (723s)

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The GS1 Application Identifier (723s) indicates that the GS1 Application Identifier data field contains a reference to a product certification. The certification reference is an attribute of a trade item or an individual asset.

As multiple certificates may be present, each with an individual certification reference, the fourth digit of the AI (s in the figure below) indicates the sequence of the certification references.

The general structure of AI (723s) is:

- Certification scheme (2 characters) defined by GS1. The following code values are currently allowed:
  - "EM" (European Marine Equipment Directive). See *http://eur-lex.europa.eu/legal-content/EN/AUTO/?uri=CELEX:32018R0608* for more information.
- Certification reference (28 characters)

Figure 3.8.18-1. Format of the element string

GS1 Application Identifier	Certification scheme	Certification reference
7 2 3 s	X_1 X_2	X_3 ——variable length——› X_{30}

The data transmitted from the barcode reader means that the element string denoting the certification reference has been captured. As this element string is an attribute of a trade item or an asset, it must be processed together with the GTIN of the trade item or the GIAI of the asset to which it relates.

When indicating this element string in the non-HRI text section of a barcode label, the following data title SHOULD be used (see also section *3.2*): **CERT # s**

Invalid pairs of element strings				Rule
AI	Designation	AI	Designation	
422, 423, 424, 425	Country of origin, initial processing, processing, or disassembly	426	Country of full processing	Country of origin, initial processing, processing, or disassembly SHALL NOT be used in combination with country of full processing, since this would lead to ambiguous data.
390n	Amount payable – single monetary area	391n	Amount payable – with ISO currency code	Only one amount payable element string SHALL be applied on a payment slip.
390n	Coupon value	394n, 8111	Percentage discount of a coupon, Loyalty points of a coupon	The element strings coupon value, percentage discount of a coupon and loyalty points of a coupon SHALL NOT be applied in combination.
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 SHALL be applied on a variable measure trade item.
394n	Percentage discount of a coupon	8111	Loyalty points of a coupon	The element strings percentage discount of a coupon and loyalty points of a coupon SHALL NOT be applied in combination.
8006	~~Identification of an individual trade item piece~~ITIP	01	GTIN	The GTIN SHALL NOT be used in combination with the identification of an individual trade item piece. The GTIN of the trade item to which the individual trade item piece belongs is contained in the element string.
8006	ITIP	37	Count of units contained	The count of units contained SHALL only be used with GTIN of contained trade items or trade item pieces.
8018	GSRN for the recipient	8017	GSRN for the provider	Only one Global Service Relation Number (recipient or provider) SHALL be applied at one time for identification of an individual in a given service relationship
8026	Identification of a trade item piece contained in a logistic unit	02, 8006	GTIN of contained trade items, Identification of an individual trade item piece	Identification of the trade item piece contained in a logistic unit SHALL NOT be used in combination with GTIN of contained trade items or identification of an individual trade item piece.

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4.14.2 Mandatory association of element strings

This section defines the element strings that mandate the appearance of another element string on the same physical entity.

Note: This does not necessarily mean that the element strings need to appear in the same data carrier. For example, multiple GS1-128 barcode symbols may be used in combination on a GS1 Logistics Label.

Some explanation on figure *04.14.2-1*:

- The table is sorted by AI value, with the AI that is the trigger for the rule displayed in the first column. This means that this table cannot be read in both directions. For example, a rule that says AI (17) must be used together with AI (01), does not imply that AI (17) can only be used together with AI (01), since it can also be used with AI (255) GCN.
- Multiple AIs may be listed in the first column, separated by commas. This means that the rule applies to all of the listed AIs (element strings).
- The same AI can occur in the first column multiple times, in different rows. This means that depending on the value of the element string different rules need to be applied.

- When multiple AIs are included in the third column, this is always done with an AND, OR or XOR logical operator between them:
  - AND means that both element strings SHALL appear on the physical entity
  - OR means that one or both of the element strings SHALL appear on the physical entity.
  - XOR means that one of the element strings SHALL appear on the physical entity, and the other element string SHALL NOT.

Figure 4.14.2-1. Mandatory association of element strings

If element string		Then mandatory associated element string	Rule
AI	Designation	AI	
01 with $N_1 = 0$	GTIN of a variable measure trade item scanned at POS	30 OR 3nnn*	The GTIN of a variable measure trade item scanned at POS SHALL occur in combination with: ▪ variable count of items; or ▪ a trade measure Note: Master data will be needed to determine whether the GTIN represents a variable measure trade item scanned at POS. Also see the note below this table.
01 with $N_1 = 9$, 02 with $N_1 = 9$	GTIN of a variable measure trade item not scanned at POS	30 OR 3nnn* OR 8001	The GTIN of a variable measure trade item not scanned at POS SHALL occur in combination with: ▪ variable count of items; or ▪ a trade measure; or ▪ the dimensions of a roll product. Note: The first position of the GTIN is "9" for such trade items. Also see the note below this table.
01 with N1 = 9	GTIN of a custom trade item.	242	The GTIN of a custom trade item SHALL be used in combination with the Made-to-Order variation number. Note: The first position of the GTIN is "9" for such trade items.
02	GTIN of contained trade items	00 AND 37	The GTIN of contained trade items SHALL occur in combination with an SSCC and the count of the trade items.
10	Batch/lot number	01 XOR 02 XOR 8006 XOR 8026 ***	Batch/lot number SHALL occur in combination with: ▪ a GTIN; or ▪ ~~a GTIN of contained trade items; or~~ ▪ an ITIP~~the identification of an individual trade item piece~~ ▪ an ITIP of contained trade item pieces ~~.~~
11, 13, 15, 16, 17	Production date, packaging date, best before date, sell by date, expiration date (of a trade item)	01 XOR 02 XOR 8006 XOR 8026 ***	These dates SHALL occur in combination with: ▪ a GTIN; or ▪ a GTIN of contained trade items; or ▪ an ITIP ▪ an ITIP of contained trade item pieces ~~the identification of an individual trade item piece.~~
12	Due date	8020 AND 415	The due date SHALL occur in combination with the payment slip reference number and the GLN of the invoicing party
17	Expiration date (of a coupon)	255	The expiration date of a coupon SHALL occur in combination with the GCN.
20	Internal product variant	01 XOR 02 XOR 8006 XOR 8026 ***	Internal product variant SHALL occur in combination with: ▪ a GTIN; or ▪ a GTIN of contained trade items; or ▪ an ITIP ▪ an ITIP of contained trade item pieces ~~the identification of an individual trade item piece.~~

Commented [CJ12]: WR18-115, several similar changes related to the introduction of AI 8026

If element string		Then mandatory associated element string	Rule
AI	Designation	AI	
21	Serial number	01 XOR 8006***	The serial number SHALL occur in combination with: ▪ a GTIN; or ▪ an ITIP~~the identification of an individual trade item piece.~~ Note: SGTIN is a common term for the combination of GTIN and serial number.
22	Consumer product variant	01	The consumer product variant SHALL occur in combination with a GTIN of a retail consumer trade item.
240	Additional product identification	01 XOR 02 XOR 8006 XOR 8026 ***	The additional product identification SHALL occur in combination with: ▪ a GTIN; or ▪ a GTIN of contained trade items; or ▪ an ITIP ▪ an ITIP of contained trade item pieces ~~the identification of an individual trade item piece.~~
241	Customer part number	01 XOR 02 XOR 8006 XOR 8026 ***	The customer part number SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items; or ▪ an ITIP ▪ an ITIP of contained trade item pieces ~~the identification of an individual trade item piece.~~
242	Made-to-Order variation number	(01 with N_1 = 9) XOR (02 with N_1 = 9) XOR (8006*** with N_1 = 9) XOR (8026 with N_1 = 9) ***	The Made-to-Order variation number SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items; or ▪ an ITIP ▪ an ITIP of contained trade item pieces ~~the identification of an individual trade item piece.~~ Note: The GTIN must relate to a custom trade item. The first position of the GTIN is "9" for such trade items.
243	Packaging Component Number	01	The Packaging Component Number SHALL occur in combination with the GTIN
250	Secondary serial number	(01 XOR 8006***) AND 21	The secondary serial number SHALL occur in combination with the serial number and: ▪ the GTIN; or ▪ ~~the identification of an individual trade item piece.~~an ITIP
251	Reference to source entity	01 XOR 8006***	The reference to source entity SHALL occur in combination with: ▪ the GTIN; or ▪ ~~the identification of an individual trade item piece.~~ An ITIP
254	GLN extension component	414	The GLN extension component SHALL occur with the Identification of a physical location (GLN).
30	Variable count of items	01 XOR 02	The variable count of items SHALL occur with: ▪ the GTIN; or ▪ the GTIN of contained trade items. Note: The GTIN must relate to a variable measure trade item.
3nnn*	Trade measures	01 XOR 02	Trade measures SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items. Note: The GTIN must relate to a variable measure trade item.

If element string		Then mandatory associated element string	Rule
AI	Designation	AI	
3nnn**	Logistic measures	00 OR 01	Logistic measures SHALL occur in combination with: ▪ an SSCC ▪ a GTIN
337n	Kilograms per square metre	01	Kilograms per square metre SHALL occur in combination with a GTIN.
37	Count of units contained	00 AND (02 XOR 8026)	The count of units contained SHALL occur in combination with the SSCC and: ▪ GTIN of contained trade items, or ▪ ITIP of contained trade item pieces.
390n	Amount payable – single monetary area	8020 AND 415	The amount payable (single monetary area) SHALL occur in combination with the payment slip reference number and the GLN of the invoicing party.
390n	Coupon value – single monetary area	255	The coupon value (single monetary area) SHALL occur in combination with the Global Coupon Number.
391n	Amount payable – with ISO currency code	8020 AND 415	The amount payable (with ISO currency code) SHALL occur in combination with the payment slip reference number and the GLN of the invoicing party.
392n	Applicable amount payable - single monetary unit	01 AND (30 XOR 3nnn*)	The applicable amount payable (single monetary area) SHALL occur in combination with the GTIN and either: ▪ variable count of items; or ▪ a trade measure. Note: The GTIN must relate to a variable measure trade item.
393n	Applicable amount payable –with ISO currency code	01 AND (30 XOR 3nnn*)	The applicable amount payable (with ISO currency code) SHALL occur in combination with the GTIN and either: ▪ variable count of items; or ▪ a trade measure. Note: The GTIN must relate to a variable measure trade item.
394n	Percentage of a coupon	255	The percentage of a coupon SHALL occur in combination with the Global Coupon Number.
403	Routing code	00	The routing code SHALL occur in combination with an SSCC.
415	GLN of the invoicing party	8020	The GLN of the invoicing party SHALL occur in combination with the payment slip reference number.
422	Country of origin	01 XOR 02 XOR 8006 XOR 8026 ***	The country of origin SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items; or ▪ an ITIP ▪ an ITIP of contained trade item pieces ~~the identification of an individual trade item piece.~~
423	Country of initial processing	01 XOR 02	The country of initial processing SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items.
424	Country of processing	01 XOR 02	The country of processing SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items.
425	Country of disassembly	01 XOR 02	The country of disassembly SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items.

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If element string		Then mandatory associated element string	Rule
AI	Designation	AI	
426	Country of full processing	01 XOR 02	The country of full processing SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items.
427	Country subdivision of origin	(01 XOR 02) AND 422	The country subdivision of origin SHALL occur in combination with the country of origin and: ▪ the GTIN; or ▪ the GTIN of contained trade items.
7001	NATO stock number	01 XOR 02 XOR 8006 XOR 8026 ***	The NATO stock number SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items; or ▪ an ITIP ▪ an ITIP of contained trade item pieces ~~the identification of an individual trade item piece.~~
7002	UN/ECE meat carcasses and cuts classification	01 XOR 02	The UN/ECE meats carcasses and cuts classification SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items.
7003	Expiration date and time	01 XOR 02	The expiration date and time SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items.
7004	Active potency	01 AND 10	The expiration date and time SHALL occur in combination with the batch/lot number and the GTIN.
7005	Catch area	01 XOR 02	The catch area SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items.
7006	First freeze date	01 XOR 02	The first freeze date SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items.
7007	Harvest date	01 XOR 02	The harvest date SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items.
7008	Species for fishery purposes	01 XOR 02	The species for fishery purposes SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items.
7009	Fishing gear type	01 XOR 02	The fishing gear type SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items.
7010	Production method	01 XOR 02	The production method SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items.
703(s)	Number of processor	01 XOR 02	The number of processor SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items.
710, 711, 712, 713, 714	National Healthcare Reimbursement Number	01	National Healthcare Reimbursement Number(s) SHALL occur in combination with the GTIN.

If element string		Then mandatory associated element string	Rule
AI	Designation	AI	
7020	Refurbishment lot ID	(01 XOR 8006***) AND 416	The refurbishment lot ID SHALL occur in combination with the GLN of production/service location and: ▪ the GTIN; or ▪ ~~the identification of an individual trade item piece.~~an ITIP
7021	Functional status	01 XOR 8006***	The functional status SHALL occur in combination with: ▪ the GTIN; or ▪ an ITIP~~the identification of an individual trade item piece.~~
7022	Revision status	(01 XOR 8006***) AND 7021	The revision status SHALL occur in combination with the functional status and: ▪ the GTIN; or ▪ an ITIP~~the identification of an individual trade item piece.~~
723s	Certification reference	01 XOR 8004	Certification reference SHALL occur in combination with: ▪ a GTIN; or ▪ a GIAI
8001	Dimensions of roll products	01	Dimensions of roll products SHALL occur in combination with the GTIN. Note: The GTIN must relate to a variable measure trade item.
8005	Price per unit of measure	01 XOR 02	The price per unit of measure SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items. Note: The GTIN must relate to a variable measure trade item.
8007	International Bank Account Number	8020 AND 415	The International Bank Account Number SHALL occur in combination with the payment slip reference number and the GLN of the invoicing party.
8008	Date and time of production	01 XOR 02	The date and time of production SHALL occur in combination with: ▪ the GTIN; or ▪ the GTIN of contained trade items.
8011	CPID serial number	8010	The CPID serial number SHALL occur in combination with the CPID.
8012	Software Version	01 XOR 8006***	The software version SHALL occur in combination with: ▪ the GTIN; or ▪ an ITIP~~the identification of an individual trade item piece.~~
8019	Service Relation Instance Number	8017 XOR 8018	The Service Relation Instance Number SHALL occur in combination with: ▪ the GSRN for the provider; or ▪ the GSRN for the recipient.
8020	Payment slip reference number	415	The payment slip reference number SHALL occur in combination with the GLN of the invoicing party.
8026	ITIP of contained pieces	00 AND 37	The ITIP of contained pieces SHALL occur in combination with an SSCC and the count of the pieces.
8111	Loyalty points of a coupons	255	Loyalty points of a coupon SHALL occur in combination with the GCN.
8200	Extended packaging URL	01	The extended packaging URL SHALL occur in combination with the GTIN.

* The AIs for trade measures are set out in section *3.6.2 Trade measures: AIs (31nn, 32nn, 35nn, 36nn)*

Commented [CJ13]: WR18-157

**	The AIs for logistics measures are set out in section *3.6.3 Logistic measures: AIs (33nn, 34nn, 35nn, 36nn)*
***	If used in combination with the identification of trade item pieces (ITIP), the optional AIs on all individual pieces of the trade item SHALL be identical.

Note: Exception for point-of-sale. See figure *2.7–1. Areas of GS1 system application*.