WR # GSCN Name		Effective Date
WR 22-353 Scan4Transport Temperature Requirement AI		Aug 2023

1 Associated Work Request (WR) Number:

2 Background:

Logistic service providers require the ability to encode and retrieve maximum and minimum temperatures for freight (shipping containers) from a barcode on the logistics label. Key requirements include:

- Enable maximum and minimum temperature requirements to be captured from a barcode scanned during pickup or processing, often needed in the transport sector when master data is not available/accessible.
- Must be able to encode maximum temperature (keep below) and or minimum temperature (keep above) requirements.
- Global solution required, therefore users need the option to encode capture temperature in either metric (Celsius) or imperial (Fahrenheit) units.

3 Disclaimer

GS1[®], under its IP Policy, seeks to avoid uncertainty regarding intellectual property claims by requiring the participants in the Work Group that developed this **General Specifications Change Notification** to agree to grant to GS1 members a royalty-free licence or a RAND licence to Necessary Claims, as that term is defined in the GS1 IP Policy. Furthermore, attention is drawn to the possibility that an implementation of one or more features of this Specification may be the subject of a patent or other intellectual property right that does not involve a Necessary Claim. Any such patent or other intellectual property right is not subject to the licencing obligations of GS1. Moreover, the agreement to grant licences provided under the GS1 IP Policy does not include IP rights and any claims of third parties who were not participants in the Work Group.

Accordingly, GS1 recommends that any organization developing an implementation designed to be in conformance with this Specification should determine whether there are any patents that may encompass a specific implementation that the organisation is developing in compliance with the Specification and whether a licence under a patent or other intellectual property right is needed. Such a determination of a need for licencing should be made in view of the details of the specific system designed by the organisation in consultation with their own patent counsel.

THIS DOCUMENT IS PROVIDED "AS IS" WITH NO WARRANTIES WHATSOEVER, INCLUDING ANY WARRANTY OF
 MERCHANTABILITY, NONINFRINGMENT, FITNESS FOR PARTICULAR PURPOSE, OR ANY WARRANTY OTHER WISE ARISING
 OUT OF THIS SPECIFICATION. GS1 disclaims all liability for any damages arising from use or misuse of this Standard,
 whether special, indirect, consequential, or compensatory damages, and including liability for infringement of any
 intellectual property rights, relating to use of information in or reliance upon this document.

GS1 retains the right to make changes to this document at any time, without notice. GS1 makes no warranty for the use of this document and assumes no responsibility for any errors which may appear in the document, nor does it make a commitment to update the information contained herein.

24 GS1 and the GS1 logo are registered trademarks of GS1 AISBL.

25



Symbol size is determined by the amount of data and the number of rows and columns required encoding the data for the X-dimensions selected (see figures section 5.6.3.2).

Consult *GS1 symbol specification table 7*, section <u>5.12.3.7</u>, for minimum and maximum X-dimensions and other sizing requirements.

Durable labelling and marking:

For long distance scanning see section <u>5.12.3.13</u>, GS1 symbol specification table 13.

For short distance scanning see section 5.12.3.9, GS1 symbol specification table 9 (assets) or section 5.12.3.4, GS1 symbol specification table 4 (trade items).

Symbol placement

General principles on placement of barcodes are described in section $\underline{6}$.

The majority of uses for these symbols will be on very small items with curved surfaces such as vials, ampoules and very small bottles. For guidance in locating these symbols on curved surfaces, refer to section 6.2.

Unique application processing requirements for direct part marking

See section $\underline{7}$ and section $\underline{5.12.4.3}$.

2.6.15 Encoding transport process information

Introduction

The global Transport & Logistics industry is experiencing exponential growth in freight volumes and becoming ever more open and competitive to support the growing needs. The increasing number of service providers (especially in Last Mile) and new entrants coming in from outside the traditional T&L environment causes challenges within the supply chain where parties involved in a supply chain at times don't even know each other, let alone have integrated systems. The fragmented nature of the industry, connectivity limitations (e.g., internet access) and the need for redundancy (e.g., absence of advance information exchange) drives the need for greater interoperability and the ability to capture transport process information via barcode(s). Information such as ship-to / deliver-to address and other delivery information is encoded directly on the logistic label to support first/last mile and sortation processes.

Note (informative): For further guidance and supporting standards see the <u>GS1 Encoding</u> <u>Transport Process Information Implementation Guideline</u>.

Application description

This application describes the creation of transport unit labels when using 2D barcodes to include necessary transport data on GS1 transport labels. The SSCC is the mandatory identifier required on all transport labels in a GS1-128 barcode and this application defines how it should be used together with optional attributes in 2D barcodes to support transport and logistic processes.

GS1 key

Required

SSCC

The GS1 Application Identifier for the SSCC is AI (00), see section 3.2.

Rules

All SSCC rules described in section 4.3.

Attributes

Required

Not applicable

Release 23.1, Draft, Jul 23

© 2023 GS1 AISBL

Page 140 of 519



Optional

To provide optional transport process information, see figure below for a listing of GS1 Application Identifiers. For all the GS1 Application Identifiers that may be used with an SSCC in support of encoding transport process information and their format, see section 3.2.

Figure 2.6.15-1. Application	Identifiers used	to support the	transport process

AI	Data Content	Permits Non-Latin Characters
420	Ship-to / Deliver-to postal code with a single postal authority	
4300	Ship-to / Deliver-to company name	Х
4301	Ship-to / Deliver-to contact	х
4302	Ship-to / Deliver-to address line 1	х
4303	Ship-to / Deliver-to address line 2	х
4304	Ship-to / Deliver-to suburb	х
4305	Ship-to / Deliver-to locality	Х
4306	Ship-to / Deliver-to region	х
4307	Ship-to / Deliver-to country code	
4308	Ship-to / Deliver-to telephone number	
4309	Ship-to / Deliver-to GEO location	
4310	Return-to company name	Х
4311	Return-to contact	х
4312	Return-to address line 1	х
4313	Return-to address line 2	х
4314	Return-to suburb	х
4315	Return-to locality	Х
4316	Return-to region	Х
4317	Return-to country code	
4318	Return-to postal code	
4319	Return-to telephone number	
4320	Service code description	Х
4321	Dangerous goods flag	
4322	Authority to leave	
4323	Signature required flag	
4324	Not before delivery date time	
4325	Not after delivery date time	
4326	Release date	
<u>4330</u>	Maximum temperature in Fahrenheit (expressed in hundredths of degrees)	
<u>4331</u>	Maximum temperature in Celsius (expressed in hundredths of degrees)	
<u>4332</u>	Minimum temperature in Fahrenheit (expressed in hundredths of degrees)	
<u>4333</u>	Minimum temperature in Celsius (expressed in hundredths of dearees)	

Release 23.1, Draft, Jul 23



3 GS1 Application Identifier definitions

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 Z 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

Figure 3.2-1. GS1 Application Identifiers

AI	Data Content	Format ⁽¹⁾	FNC1 required ⁽⁴⁾	Data title
00	Identification of a logistic unit (SSCC): AI (00)	N2+N18		SSCC
01	Identification of a trade item (GTIN): AI (01)	N2+N14		GTIN
02	Identification of trade items contained in a logistic unit: AI (02)	N2+N14		CONTENT
10	Batch or lot number: AI (10)	N2+X20	(FNC1)	BATCH/LOT
11 (2)	Production date: AI (11)	N2+N6		PROD DATE
12 (2)	Due date for amount on payment slip: AI (12)	N2+N6		DUE DATE
13 (2)	Packaging date: AI (13)	N2+N6		PACK DATE
15 (2)	Best before date: AI (15)	N2+N6		BEST BEFORE or BEST BY
16 (2)	Sell by date: AI (16)	N2+N6		SELL BY
17 (2)	Expiration date: AI (17)	N2+N6		USE BY OR EXPIRY
20	Internal product variant: AI (20)	N2+N2		VARIANT
21	Serial number: AI (21)	N2+X20	(FNC1)	SERIAL
22	Consumer product variant: AI (22)	N2+X20	(FNC1)	CPV
235	Third Party Controlled, Serialised Extension of Global Trade Item Number (GTIN) (TPX): AI (235)	N3+X28	(FNC1)	ТРХ
240	Additional product identification assigned by the manufacturer: AI (240)	N3+X30	(FNC1)	ADDITIONAL ID
241	Customer part number: AI (241)	N3+X30	(FNC1)	CUST. PART No.
242	Made-to-Order variation number: AI (242)	N3+N6	(FNC1)	MTO VARIANT
243	Packaging component number: AI (243)	N3+X20	(FNC1)	PCN
250	Secondary serial number: AI (250)	N3+X30	(FNC1)	SECONDARY SERIAL
251	Reference to source entity: AI (251)	N3+X30	(FNC1)	REF. TO SOURCE
253	Global Document Type Identifier (GDTI): AI (253)	N3+N13[+X17]	(FNC1)	GDTI

Release 23.1, Draft, Jul 23

© 2023 GS1 AISBL

Page 148 of 519



AI	Data Content	Format ⁽¹⁾	FNC1 required ⁽⁴⁾	Data title
254	Global Location Number (GLN) extension component: AI (254)	N3+X20	(FNC1)	GLN EXTENSION COMPONENT
255	Global Coupon Number (GCN): AI (255)	N3+N13[+N12]	(FNC1)	GCN
30	Variable count of items: AI (30)	N2+N8	(FNC1)	VAR. COUNT
310n ⁽³⁾	Net weight, kilograms (variable measure trade item)	N4+N6		NET WEIGHT (kg)
311n ⁽³⁾	Length or first dimension, metres (variable measure trade item)	N4+N6		LENGTH (m)
312n ⁽³⁾	Width, diameter, or second dimension, metres (variable measure trade item)	N4+N6		WIDTH (m)
313n ⁽³⁾	Depth, thickness, height, or third dimension, metres (variable measure trade item)	N4+N6		HEIGHT (m)
314n ⁽³⁾	Area, square metres (variable measure trade item)	N4+N6		AREA (m ²)
315n (3)	Net volume, litres (variable measure trade item)	N4+N6		NET VOLUME (I)
316n (3)	Net volume, cubic metres (variable measure trade item)	N4+N6		NET VOLUME (m ³)
320n (3)	Net weight, pounds (variable measure trade item)	N4+N6		NET WEIGHT (lb)
321n ⁽³⁾	Length or first dimension, inches (variable measure trade item)	N4+N6		LENGTH (i)
322n ⁽³⁾	Length or first dimension, feet (variable measure trade item)	N4+N6		LENGTH (f)
323n ⁽³⁾	Length or first dimension, yards (variable measure trade item)	N4+N6		LENGTH (y)
324n ⁽³⁾	Width, diameter, or second dimension, inches (variable measure trade item)	N4+N6		WIDTH (i)
325n ⁽³⁾	Width, diameter, or second dimension, feet (variable measure trade item)	N4+N6		WIDTH (f)
326n (3)	Width, diameter, or second dimension, yards (variable measure trade item)	N4+N6		WIDTH (y)
327n ⁽³⁾	Depth, thickness, height, or third dimension, inches (variable measure trade item)	N4+N6		HEIGHT (i)
328n ⁽³⁾	Depth, thickness, height, or third dimension, feet (variable measure trade item)	N4+N6		HEIGHT (f)
329n ⁽³⁾	Depth, thickness, height, or third dimension, yards (variable measure trade item)	N4+N6		HEIGHT (y)
330n (3)	Logistic weight, kilograms	N4+N6		GROSS WEIGHT (kg)
331n ⁽³⁾	Length or first dimension, metres	N4+N6		LENGTH (m), log
332n (3)	Width, diameter, or second dimension, metres	N4+N6		WIDTH (m), log
333n ⁽³⁾	Depth, thickness, height, or third dimension, metres	N4+N6		HEIGHT (m), log
334n ⁽³⁾	Area, square metres	N4+N6		AREA (m ²), log
335n ⁽³⁾	Logistic volume, litres	N4+N6		VOLUME (I), log
336n (3)	Logistic volume, cubic metres	N4+N6		VOLUME (m ³), log
337n ⁽³⁾	Kilograms per square metre	N4+N6		KG PER m ²
340n (3)	Logistic weight, pounds	N4+N6		GROSS WEIGHT (lb)
341n (3)	Length or first dimension, inches	N4+N6		LENGTH (i), log
342n (3)	Length or first dimension, feet	N4+N6		LENGTH (f), log
343n (3)	Length or first dimension, yards	N4+N6		LENGTH (y), log
344n (3)	Width, diameter, or second dimension, inches	N4+N6		WIDTH (i), log



AI	Data Content	Format ⁽¹⁾	FNC1 required ⁽⁴⁾	Data title
345n (3)	Width, diameter, or second dimension, feet	N4+N6		WIDTH (f), log
346n (3)	Width, diameter, or second dimension, yard	N4+N6		WIDTH (y), log
347n ⁽³⁾	Depth, thickness, height, or third dimension, inches	N4+N6		HEIGHT (i), log
348n (3)	Depth, thickness, height, or third dimension, feet	N4+N6		HEIGHT (f), log
349n ⁽³⁾	Depth, thickness, height, or third dimension, yards	N4+N6		HEIGHT (y), log
350n ⁽³⁾	Area, square inches (variable measure trade item)	N4+N6		AREA (i ²)
351n ⁽³⁾	Area, square feet (variable measure trade item)	N4+N6		AREA (f ²)
352n ⁽³⁾	Area, square yards (variable measure trade item)	N4+N6		AREA (y ²)
353n ⁽³⁾	Area, square inches	N4+N6		AREA (i ²), log
354n (3)	Area, square feet	N4+N6		AREA (f ²), log
355n ⁽³⁾	Area, square yards	N4+N6		AREA (y ²), log
356n ⁽³⁾	Net weight, troy ounces (variable measure trade item)	N4+N6		NET WEIGHT (t)
357n ⁽³⁾	Net weight (or volume), ounces (variable measure trade item)	N4+N6		NET VOLUME (oz)
360n ⁽³⁾	Net volume, quarts (variable measure trade item)	N4+N6		NET VOLUME (q)
361n ⁽³⁾	<u>Net volume, gallons U.S. (variable measure</u> trade item)	N4+N6		NET VOLUME (g)
362n ⁽³⁾	Logistic volume, quarts	N4+N6		VOLUME (q), log
363n ⁽³⁾	Logistic volume, gallons U.S.	N4+N6		VOLUME (g), log
364n ⁽³⁾	Net volume, cubic inches (variable measure trade item)	N4+N6		VOLUME (i ³)
365n ⁽³⁾	Net volume, cubic feet (variable measure trade item)	N4+N6		VOLUME (f ³)
366n ⁽³⁾	Net volume, cubic yards (variable measure trade item)	N4+N6		VOLUME (y ³)
367n ⁽³⁾	Logistic volume, cubic inches	N4+N6		VOLUME (i ³), log
368n ⁽³⁾	Logistic volume, cubic feet	N4+N6		VOLUME (f ³), log
369n ⁽³⁾	Logistic volume, cubic yards	N4+N6		VOLUME (y ³), log
37	Count of trade items or trade item pieces contained in a logistic unit: AI (37)	N2+N8	(FNC1)	COUNT
390n ⁽³⁾	Amount payable or coupon value - Single monetary area: AI (390n)	N4+N15	(FNC1)	AMOUNT
391n ⁽³⁾	Amount payable and ISO currency code: AI (391n)	N4+N3+N15	(FNC1)	AMOUNT
392n ⁽³⁾	Amount payable for a variable measure trade item – Single monetary area: AI (392n)	N4+N15	(FNC1)	PRICE
393n ⁽³⁾	Amount payable for a variable measure trade item and ISO currency code: AI (393n)	N4+N3+N15	(FNC1)	PRICE
394n ⁽³⁾	Percentage discount of a coupon: AI (394n)	N4+N4	(FNC1)	PRCNT OFF
395n ⁽³⁾	Amount payable per unit of measure single monetary area (variable measure trade item): AI (395n)	N4+N6	(FNC1)	PRICE/UoM
400	Customer's purchase order number: AI (400)	N3+X30	(FNC1)	ORDER NUMBER
401	<u>Global Identification Number for Consignment</u> (GINC): AI (401)	N3+X30	(FNC1)	GINC



AI	Data Content	Format ⁽¹⁾	FNC1 required ⁽⁴⁾	Data title
402	Global Shipment Identification Number (GSIN): AI (402)	N3+N17	(FNC1)	GSIN
403	Routing code: AI (403)	N3+X30	(FNC1)	ROUTE
410	Ship to - Deliver to Global Location Number (GLN): AI (410)	N3+N13		SHIP TO LOC
411	Bill to - Invoice to Global Location Number (GLN): AI (411)	N3+N13		BILL TO
412	Purchased from Global Location Number (GLN): AI (412)	N3+N13		PURCHASE FROM
413	Ship for - Deliver for - Forward to Global Location Number (GLN): AI (413)	N3+N13		SHIP FOR LOC
414	Identification of a physical location - Global Location Number (GLN): AI (414)	N3+N13		LOC No.
415	Global Location Number (GLN) of the invoicing party: AI (415)	N3+N13		ΡΑΥ ΤΟ
416	Global Location Number (GLN) of the production or service location: AI (416)	N3+N13		PROD/SERV LOC
417	Party Global Location Number (GLN): AI (417)	N3+N13		PARTY
420	Ship-to / Deliver-to postal code within a single postal authority: AI (420)	N3+X20	(FNC1)	SHIP TO POST
421	Ship-to / Deliver-to postal code with three-digit ISO country code: AI (421)	N3+N3+X9	(FNC1)	SHIP TO POST
422	Country of origin of a trade item: AI (422)	N3+N3	(FNC1)	ORIGIN
423	Country of initial processing: AI (423)	N3+N3+N12	(FNC1)	COUNTRY - INITIAL PROCESS
424	Country of processing: AI (424)	N3+N3	(FNC1)	COUNTRY - PROCESS
425	Country of disassembly: AI (425)	N3+N3+N12	(FNC1)	COUNTRY - DISASSEMBLY
426	Country covering full process chain: AI (426)	N3+N3	(FNC1)	COUNTRY - FULL PROCESS
427	Country subdivision of origin code for a trade item: AI (427)	N3+X3	(FNC1)	ORIGIN SUBDIVISION
4300	Ship-to / Deliver-to Company name: AI (4300)	N4+X35	(FNC1)	SHIP TO COMP
4301	Ship-to / Deliver-to contact name: AI (4301)	N4+X35	(FNC1)	SHIP TO NAME
4302	Ship-to / Deliver-to address line 1: AI (4302)	N4+X70	(FNC1)	SHIP TO ADD1
4303	Ship-to / Deliver-to address line 2: AI (4303)	N4+X70	(FNC1)	SHIP TO ADD2
4304	Ship-to / Deliver-to suburb: AI (4304)	N4+X70	(FNC1)	SHIP TO SUB
4305	Ship-to / Deliver-to locality: AI (4305)	N4+X70	(FNC1)	SHIP TO LOC
4306	Ship-to / Deliver-to region: AI (4306)	N4+X70	(FNC1)	SHIP TO REG
4307	Ship-to / Deliver-to country code: AI (4307)	N4+X2	(FNC1)	SHIP TO COUNTRY
4308	Ship-to / Deliver-to telephone number: AI (4308)	N4+X30	(FNC1)	SHIP TO PHONE
4309	Ship-to / Deliver-to GEO location: AI (4309)	N4+N20	(FNC1)	SHIP TO GEO
4310	Return-to company name: AI (4310)	N4+X35	(FNC1)	RTN TO COMP
4311	Return-to contact name: AI (4311)	N4+X35	(FNC1)	RTN TO NAME
4312	Return-to address line 1: AI (4312)	N4+X70	(FNC1)	RTN TO ADD1
4313	Return-to address line 2: AI (4313)	N4+X70	(FNC1)	RTN TO ADD2
4314	Return-to suburb: AI (4314)	N4+X70	(FNC1)	RTN TO SUB
4315	Return-to locality: AI (4315)	N4+X70	(FNC1)	RTN TO LOC
4316	Return-to region: AI (4316)	N4+X70	(FNC1)	RTN TO REG
		1	/	

Release 23.1, Draft, Jul 23

© 2023 GS1 AISBL

Page 151 of 519



AI	Data Content	Format ⁽¹⁾	FNC1 required ⁽⁴⁾	Data title
4317	Return-to country code: AI (4317)	N4+X2	(FNC1)	RTN TO COUNTRY
4318	Return-to postal code: AI (4318)	N4+X20	(FNC1)	RTN TO POST
4319	Return-to telephone number: AI (4319)	N4+X30	(FNC1)	RTN TO PHONE
4320	Service code description: AI (4320)	N4+X35	(FNC1)	SRV DESCRIPTION
4321	Dangerous goods flag: AI (4321)	N4+N1	(FNC1)	DANGEROUS GOODS
4322	Authority to leave flag: AI (4322)	N4+N1	(FNC1)	AUTH LEAVE
4323	Signature required flag: AI (4323)	N4+N1	(FNC1)	SIG REQUIRED
4324	Not before delivery date/time: AI (4324)	N4+N10	(FNC1)	NBEF DEL DT
4325	Not after delivery date/time: AI (4325)	N4+N10	(FNC1)	NAFT DEL DT
4326	Release date: AI (4326)	N4+N6	(FNC1)	REL DATE
<u>4330⁽⁷⁾</u>	Maximum temperature in Fahrenheit: AI (4330)	<u>N4+N6+[-]</u>	(FNC1)	MAX TEMP F
<u>4331⁽⁷⁾</u>	Maximum temperature in Celsius: AI (4331)	<u>N4+N6+[-]</u>	(FNC1)	MAX TEMP C
4332(7)	Minimum temperature in Fahrenheit: AI (4332)	<u>N4+N6+[-]</u>	(FNC1)	MIN TEMP F
<u>4333⁽⁷⁾</u>	Minimum temperature in Celsius: AI (4333)	<u>N4+N6+[-]</u>	(FNC1)	MIN TEMP C
7001	NATO Stock Number (NSN): AI (7001)	N4+N13	(FNC1)	NSN
7002	UNECE meat carcasses and cuts classification: AI (7002)UN/ECE meat carcasses and cuts classification: AI (7002)	N4+X30	(FNC1)	MEAT CUT
7003	Expiration date and time: AI (7003)	N4+N10	(FNC1)	EXPIRY TIME
7004	Active potency: AI (7004)	N4+N4	(FNC1)	ACTIVE POTENCY
7005	Catch area: AI (7005)	N4+X12	(FNC1)	CATCH AREA
7006	First freeze date: AI (7006)	N4+N6	(FNC1)	FIRST FREEZE DATE
7007	Harvest date: AI (7007)	N4+N6[+N6]	(FNC1)	HARVEST DATE
7008	Species for fishery purposes: AI (7008)	N4+X3	(FNC1)	AQUATIC SPECIES
7009	Fishing gear type: AI (7009)	N4+X10	(FNC1)	FISHING GEAR TYPE
7010	Production method: AI (7010)	N4+X2	(FNC1)	PROD METHOD
7011	Test by date: AI (7011)	N4+N6[+N4]	(FNC1)	TEST BY DATE
7020	Refurbishment lot ID: AI (7020)	N4+X20	(FNC1)	REFURB LOT
7021	Functional status: AI (7021)	N4+X20	(FNC1)	FUNC STAT
7022	Revision status: AI (7022)	N4+X20	(FNC1)	REV STAT
7023	Global Individual Asset Identifier of an assembly: AI (7023)	N4+X30	(FNC1)	GIAI - ASSEMBLY
703s ⁽⁶⁾	Number of processor with three-digit ISO country code: AI (703s)	N4+N3+X27	(FNC1)	PROCESSOR # s
7040	GS1 UIC with Extension 1 and Importer index: AI (7040)	N4+N1+X3	(FNC1)	UIC+EXT
710	<u>National Healthcare Reimbursement Number</u> (NHRN) – Germany PZN: AI (710)	N3+X20	(FNC1)	NHRN PZN
711	National Healthcare Reimbursement Number (NHRN) – France CIP: AI 711)	N3+X20	(FNC1)	NHRN CIP
712	<u>National Healthcare Reimbursement Number</u> (NHRN) – Spain CN: AI (712)	N3+X20	(FNC1)	NHRN CN
713	National Healthcare Reimbursement Number (NHRN) – Brasil DRN: AI (713)	N3+X20	(FNC1)	NHRN DRN
714	National Healthcare Reimbursement Number (NHRN) – Portugal AIM: AI (714)	N3+X20	(FNC1)	NHRN AIM
715	National Healthcare Reimbursement Number (NHRN) – United States of America NDC: AI (715)	N3+X20	(FNC1)	NHRN NDC

Commented [DM8]: WR22-334



AI	Data Content	Format ⁽¹⁾	FNC1 required ⁽⁴⁾	Data title		
⁽⁵⁾	National Healthcare Reimbursement Number (NHRN) – Country "A" NHRN	N3+X20	(FNC1)	NHRN xxx		
723s (6)	Certification reference: AI (723s)	N4+X2+X28	(FNC1)	CERT # s		
7240	Protocol ID: AI (7240)	N4+X20	(FNC1)	PROTOCOL		
7241	AIDC media type: AI (7241)	<u>N4+N2</u>	(FNC1)	AIDC MEDIA TYPE		Commented [DM9]: GSCN 22-345
7242	Version Control Number (VCN): AI (7242)	<u>NX+X25</u>	(FNC1)	VCN		Commented [DM10]: GSCN 22-345
8001	Roll products - width, length, core diameter, direction, splices: AI (8001)	N4+N14	(FNC1)	DIMENSIONS		
8002	Cellular mobile telephone identifier: AI (8002)	N4+X20	(FNC1)	CMT No.		
8003	Global Returnable Asset Identifier (GRAI): AI (8003)	N4+N14[+X16]	(FNC1)	GRAI		
8004	<u>Global Individual Asset Identifier (GIAI): AI</u> (8004)	N4+X30	(FNC1)	GIAI		
8005	Price per unit of measure: AI (8005)	N4+N6	(FNC1)	PRICE PER UNIT		
8006	Identification of an individual trade item (ITIP) piece: AI (8006)	N4+N14+N2+N2	(FNC1)	ITIP		
8007	International Bank Account Number (IBAN): AI (8007)	N4+X34	(FNC1)	IBAN		
8008	Date and time of production: AI (8008)	N4+N8[+N4]	(FNC1)	PROD TIME		
8009	Optically readable sensor indicator: AI (8009)	N4+X50	(FNC1)	OPTSEN		
8010	Component/Part Identifier (CPID): AI (8010)	N4+Y30	(FNC1)	CPID		
8011	Component/Part Identifier serial number: AI (8011)	N4+N12	(FNC1)	CPID SERIAL		
8012	Software version: AI (8012)	N4+X20	(FNC1)	VERSION		
8013	Global Model Number (GMN): AI (8013)	N4+X25	(FNC1)	GMN		
8017	Global Service Relation Number (GSRN) to identify the relationship between an organisation offering services and the provider of services: AI (8017)	N4+N18	(FNC1)	GSRN - PROVIDER		
8018	Global Service Relation Number (GSRN) to identify the relationship between an organisation offering services and the recipient of services: AI (8018)	N4+N18	(FNC1)	GSRN - RECIPIENT	-	
8019	Service Relation Instance Number (SRIN): AI (8019)	N4+N10	(FNC1)	SRIN		
8020	Payment slip reference number: AI (8020)	N4+X25	(FNC1)	REF No.		
8026	Identification of pieces of a trade item (ITIP) contained in a logistic unit: AI (8026)	N4+N14+N2+N2	(FNC1)	ITIP CONTENT		
8030	Digital Signature (DigSig)	N4+Z90	(FNC1)	DIGSIG		Commented [DM11]: WR21-307
8110	Coupon code identification for use in North America (AI 8110)	N4+X70	(FNC1)	-		
8111	Loyalty points of a coupon: AI (8111)	N4+N4	(FNC1)	POINTS		
8112	Positive offer file coupon code identification for use in North America: (AI 8112)	N4+X70	(FNC1)	-		
8200	Extended packaging URL: AI (8200)	N4+X70	(FNC1)	PRODUCT URL		
90	Information mutually agreed between trading partners: AI (90)	N2+X30	(FNC1)	INTERNAL		
91 to 99	Company internal information: AIs (91 - 99)	N2+X90	(FNC1)	INTERNAL		

NOTES:

Release 23.1, Draft, Jul 23

Page 153 of 519



(1): 1	he 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	numeric disit	
	numeric orgin	
	any character in figure 7.11-1 for GS1 At encodable character set 82	
<u> </u>	any character in figure 7.11-2 for GS1 AI encodable character set 39	
- N2	any character in right P.11-5 for GST AF encoudule character set 64 (nie-sale / UKI-sale Dase64)	Commented [DM12]: WR21-307
= N3	S numeric agics, insea lengui	
= X.3	S Characters, fixed rength	
= IN	up to 3 numeric digits	
- X	up to 3 characters in figure 7.11-1 for GS1 AF encodable character set 82	
_ T	up to 3 characters in figure 7.11-2 for CG1 Al another because character set 59	
- <u>C</u>	opto 5 characters in figure 7.11-5 for GST AF encodable character set 64 (file-safe / 0K1-safe base64)	Commented [DM13]: WR21-307
• []	enciosed value is an optional component	
(2): I	f only year and month are available, DD must be filled with two zeroes, except where noted.	
(3): 1 implie Exam	he fourth digit of this GS1 Application Identifier indicates the number of decimal places (and in that way the d decimal point position).	
3 10	0 Net weight in kg without a decimal point	
310	2 Net weight in kg with two decimal places	
010		
(4): A figure the sy	Il GS1 element strings that begin with GS1 Application Identifiers not contained in the predefined table shown in $\frac{7.8.5-2}{1.8.5-2}$ SHALL be separated by a separator character unless this element string is the last one to be encoded in mbol. For details on the separator character see section $\frac{7.8.4}{1.8.4}$.	
(5) A NHRN	n example to illustrate future additional National Healthcare Reimbursement Numbers (NHRNs). If additional AIs are required, a request for a new NHRN AI SHALL be made through GSMP.	
(6) The	ne fourth digit of this GS1 Application Identifier indicates the sequence number, allowing for multiple occurrences AI.	
<u>(7)</u> T	ne temperatures in these GS1 Application Identifiers are expressed in hundredths of degrees.	
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 <u>1.4.4</u>). 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.	



The data transmitted from the barcode reader means that the element string denoting a release date has been captured. As this element string is an attribute to a logistic unit it must be processed together with the SSCC of the unit to which it relates (see section <u>4.13</u> Data relationships). When indicating this element string in the non-HRI text section of a barcode label, the following data title SHOULD be used: **REL DATE**.

3.7.48 Maximum temperature in Fahrenheit: AI (4330)

The GS1 Application Identifier (4330) indicates that the data fields contain the maximum temperature, measured in hundredths of degrees Fahrenheit, allowed for the transport and storage of the logistic unit.

The GS1 system provides standards for temperatures in Fahrenheit and Celsius units of measure. A maximum temperature SHALL NOT be applied in more than one unit of measure.

Figure 3.7.47-1 Format of the element string

GS1 Application				
<u>Fachanci</u>	Absolute value of temperature (Measured in Fahrenheit with two decimal precision)	Negative Temperature Indicator (when required)		
<u>4330</u>	<u>N1 N2 N3 N4 N5 N6</u>	Ξ		

The structure is:

- Absolute value of the temperature in Fahrenheit with two decimal precision: Last two digits will be after a decimal point (e.g., 023020 = 230.20° F)
- Negative temperature indicator: If a negative temperature is intended, a "-" is encoded as the last character in this AI field (e.g., 000250- = -2.50° F). If a "-" is not encoded as the last character, the digits indicate a positive temperature.

The data transmitted from the barcode reader means that the element string denoting a maximum temperature in hundredths of degrees thi Fahrenheit has been captured. As this element string is an attribute to a logistic unit it must be processed together with the SSCC of the unit to which it relates (see section 4.13 *Data relationships*). When indicating this element string in the non-HRI text section of a barcode label, the following data title SHOULD be used: **MAX TEMP F**.

3.7.49 Maximum temperature in Celsius: AI (4331)

The GS1 Application Identifier (4331) indicates that the data field contains the maximum temperature, measured in hundredths of degrees Celsius, allowed for the transport and storage of the logistic unit.

The GS1 system provides standards for temperatures in Fahrenheit and Celsius units of measure. A maximum temperature SHALL NOT be applied in more than one unit of measure.

Figure 3.7.47-1 Format of the element string						
GS1 Application						
<u>Identinet</u>		<u>Negative Temperature</u> <u>Indicator</u> (when required)				
<u>4331</u>	<u>N1 N2 N3 N4 N5 N6</u>	Ξ.				

The structure is:

 Absolute value of the temperature in Celsius with two decimal precision: Last two digits will be after a decimal point (e.g., 000090 = 0.90° C)

Release 23.1, Draft, Jul 23



Negative temperature indicator: If a negative temperature is intended, a "-" is encoded as the last character in this AI field (e.g., 001000- = -10.00° C). If a "-" is not encoded as the last character, the digits indicate a positive temperature.

The data transmitted from the barcode reader means that the element string denoting a maximum temperature in hundredths of degrees Celsius has been captured. As this element string is an attribute to a logistic unit it must be processed together with the SSCC of the unit to which it relates (see section 4.13 *Data relationships*). When indicating this element string in the non-HRI text section of a barcode label, the following data title SHOULD be used: **MAX TEMP C**.

3.7.50 Minimum temperature in Fahrenheit: AI (4332)

The GS1 Application Identifier (4333) indicates that the data fields contain the minimum temperature, measured in hundredths of degrees Fahrenheit, allowed for the transport and storage of the logistic unit.

The GS1 system provides standards for temperatures in Fahrenheit and Celsius units of measure. A minimum temperature SHALL NOT be applied in more than one unit of measure.

Figure 3.7.47-1 Format of the element string				
<u>GS1 Application</u> Identifier				
<u>adentiner</u>	Absolute value of temperature (Measured in Fahrenheit with two decimal precision)			
<u>4332</u>	<u>N₁ N₂ N₃ N₄ N₅ N₆</u>	-		

The structure is:

- Absolute value of the temperature in Fahrenheit with two decimal precision: Last two digits will be after a decimal point (e.g., 023020 = 230.20° F)
- Negative temperature indicator: If a negative temperature is intended, a "-" is encoded as the last character in this AI field (e.g., 000250- = -2.50° F). If a "-" is not encoded as the last character, the digits indicate a positive temperature.

The data transmitted from the barcode reader means that the element string denoting a minimum temperature in hundredths of degrees Fahrenheit has been captured. As this element string is an attribute to a logistic unit it must be processed together with the SSCC of the unit to which it relates (see section 4.13 *Data relationships*). When indicating this element string in the non-HRI text section of a barcode label, the following data title SHOULD be used: **MIN TEMP F**.

3.7.51 Minimum temperature in Celsius: AI (4333)

The GS1 Application Identifier (4333) indicates that the data field contains the minimum temperature, measured in hundredths of degrees Celsius, allowed for the transport and storage of the logistic unit.

The GS1 system provides standards for temperatures in Fahrenheit and Celsius units of measure. A minimum temperature SHALL NOT be applied in more than one unit of measure.

Figure 3.7.47-1 Format of	f the element string
---------------------------	----------------------

<u>GS1 Application</u> Identifier	<u>Temperature</u>			
	Absolute value of temperature (Measured in Celsius with two decimal precision)	<u>Negative Temperature</u> <u>Indicator</u> (when required)		
<u>4333</u>	$\underline{N_1 \ N_2 \ N_3 \ N_4 \ N_5 \ N_6}$	Ξ.		

Release 23.1, Draft, Jul 23



The structure is:

- Absolute value of the temperature in Celsius with two decimal precision: Last two digits will be after a decimal point (e.g., 000090 = 0.90° C)
- Negative temperature indicator: If a negative temperature is intended, a "-" is encoded as the last character in this AI field (e.g., 001000- = -10.00° C). If a "-" is not encoded as the last character, the digits indicate a positive temperature.

The data transmitted from the barcode reader means that the element string denoting a minimum temperature in hundredths of degrees Celsius has been captured. As this element string is an attribute to a logistic unit it must be processed together with the SSCC of the unit to which it relates (see section 4.13 *Data relationships*). When indicating this element string in the non-HRI text section of a barcode label, the following data title SHOULD be used: **MIN TEMP C**.

3.8 GS1 Application Identifiers starting with digit 7

3.8.1 Seven series AIs - Cautionary note

 $\mathsf{GS1}$ Application Identifiers issued in the 7 series represent a special case because they are restricted to:

- one or a small number of sectors (i.e. are not multi-sectoral) or
- a country or a region (i.e. are not global).

3.8.2 NATO Stock Number (NSN): AI (7001)

The GS1 Application Identifier (7001) indicates that the GS1 Application Identifier data field contains a NATO stock number.

The NATO stock number is the number allocated to any item of supply in the NATO Alliance. It is the responsibility of the country that manufactures or controls the design of the item to allocate the number.

 $\mathbf{ }$

Note: This element string is only for use within the context of the supply within the NATO Alliance. Use of it is subject to the rules and regulations of the Allied Committee 135 (AC/135), the NATO Group of National Directors on Codification.

Figure 3.8.2-1	Format of the	element string
----------------	---------------	----------------

GS1 Application Identifier	NATO supply classification	Assigning country	Sequential number
7001	N1 N2 N3 N4	N5 N6	N7 N8 N9 N10 N11 N12 N13

The data transmitted from the barcode reader means that the element string denoting a NATO stock number has been captured. As this element string is an attribute of a trade item, it must be processed together with the GTIN of the trade item to which it relates (see section 4.13 Data relationships).

When indicating this element string in the non-HRI text section of a barcode label, the following data title SHOULD be used: $\ensuremath{\text{NSN}}$

3.8.3 UN/ECE meat carcasses and cuts classification: AI (7002)

The GS1 Application Identifier (7002) indicates that the GS1 Application Identifier data field contains a United Nations Economic Commission for Europe (UNECE, formerly know as UN/ECE) meat carcasses and cuts classification code. The UN/ECE meat carcasses and cuts code is an attribute of a

Commented [DM15]: WR22-334

Release 23.1, Draft, Jul 23

© 2023 GS1 AISBL

Page 195 of 519



Additional attributes across all GTINs associated with one GMN may not be common.

If any attribute defined for a GMN changes in a way that trading partners are expected to distinguish the changed or new product model from previous/current product model, a new GMN must be assigned. Since all GMN attributes are common for all associated GTINs, this also implies the change of these GTINs according to guiding principle 1 of the <u>GS1 GTIN Management Standard</u> (see <u>https://www.gs1.org/1/gtinrules/en</u>).

For regulated healthcare medical devices, the following applies:

Basic UDI-DI attributes are common for all GTINs (UDI-DIs) associated with it. The identifier can be attributed to GTINs (UDI-DIs) associated with it, in the UDI database (e.g., EUDAMED).

4.13 Data relationships

This section defines the rules for allowed combinations of element strings on the same physical entity, irrespective of the data carrier(s) applied to the entity. The rules are application-neutral, which means that they apply to all applications listed in section 2 and to any other application where multiple element strings are combined on the same physical entity.

The rules are presented in two tables:

- 1. Invalid pairs of element strings, indicating which combinations of element strings are not allowed on the same physical entity.
- 2. Mandatory pairs of element strings, indicating which element strings must occur in combination with one or more other element strings.

Note: In both tables, the GS1 Application Identifiers (AIs) are used to indicate the element string. But when evaluating the rule the complete element string, i.e. the AI and the data field, needs to be taken into account.

Note: GTINs encoded in an EAN/UPC and ITF-14 symbols are to be regarded as element strings prefixed by an inferred AI (01).

Note: Duplicate element strings (e.g., two serial numbers, two batch/lot numbers, two Extended Packaging URLs) MAY appear on the same physical entity (for example in multiple barcodes). In that case they SHALL have the same value in each occurrence on that entity.

4.13.1 Invalid pairs of element strings

This section defines the pairs of element strings that SHALL NOT appear together on the same physical entity. The table does not provide a finite list of all possible rules, only situations that have proven to pose difficulties in practice are included.

Some explanation on figure 4.13.1-1:

- The table is sorted by AI value, with the lowest AI value displayed in the first column.
- Multiple AIs may be listed in the first or third column, separated by commas. This means that
 the same rule applies to all listed AIs.
- The rules work in both directions, e.g., if it states AI (01) SHALL NOT be combined with AI (37) this implies that AI (37) SHALL NOT be combined with AI (01).

Figure 4.13.1-1. Invalid pairs of element strings

Invalid pairs of element strings			Rule	
AI	Designation	AI	Designation	
01	GTIN	01	GTIN	All occurrences of GTIN SHALL have one value. It is for example not allowed to include GTINs of other packaging levels.

Release 23.1, Draft, Jul 23



Invalid pairs	of element strings		Rule	
AI	Designation	AI	Designation	
01	GTIN	02	GTIN of contained trade items	GTIN of contained trade items is intended to list the trade items contained in a logistic unit and SHALL NOT be used to identify the contents of a trade item.
01	GTIN	37	Count of units contained	The count of units contained SHALL only be used with GTIN of contained trade items or trade item pieces.
01	GTIN	255	Global Coupon Number	A trade item SHALL NOT also be identified as a coupon.
21	Serial Number	235	Third Party Controlled, Serialised Extension of GTIN	Only Serial Number or Third Party Controlled, Serialised Extension of GTIN SHALL be used with GTIN.
420	Ship to postal code, single postal authority	421	Ship to postal code with ISO country code	Only one ship to postal code SHALL be applied on the same physical entity.
421	Ship-to / Deliver- to postal code with three-digit ISO country code	4307	Ship-to / Deliver- to country code	Only one ship to country code SHALL be applied on the same physical entity.
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, 395n	Amount payable for a variable measure trade item and ISO currency code, Amount payable per unit of measure single monetary area (variable measure trade item)	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.
395n	Amount payable per unit of measure single monetary area (variable measure trade item)	8005	Price per unit of measure	The element strings Amount payable per unit of measure single monetary area (variable measure trade item) and Price per unit of measure SHALL NOT be applied in combination.

Release 23.1, Draft, Jul 23

Page 238 of 519



Invalid pairs of element strings			Rule	
AI	Designation	AI	Designation	
395n	Amount payable per unit of measure single monetary area (variable measure trade item)	392n, 393n	Applicable amount payable, single monetary area (variable measure trade item), Applicable amount payable with ISO currency code (variable measure trade item)	Only one amount payable element string SHALL be applied on a variable measure trade item.
<u>4330</u>	<u>Maximum</u> <u>temperature in</u> Fahrenheit	<u>4331</u>	<u>Maximum</u> <u>temperature in</u> <u>Celsius</u>	Only a single maximum temperature SHALL be used in combination with an SSCC
<u>4332</u>	<u>Minimum</u> <u>temperature in</u> <u>Fahrenheit</u>	<u>4333</u>	<u>Minimum</u> <u>temperature in</u> <u>Celsius</u>	Only a single minimum temperature SHALL be used in combination with an SSCC
8006	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.

4.13.2 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 Logistic Label.

The figure below reflects the use case requirements to date. Should future applications aries that require associations they will be added at that time.

Some explanation on figure 4.13.2-1:

- 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 states AI (17) must be used together with AI (01), does not imply that AI (01) can only be used together with AI (17), since it can also be used with other AIs.
- 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.

Release 23.1, Draft, Jul 23

© 2023 GS1 AISBL

Page 239 of 519



- 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 all element strings SHALL appear on the physical entity
 - OR means that one or a combination 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.

If element string		Then mandatory associated element string	Rule
AI	Designation	AI	
01 with N ₁ = 0	GTIN of a variable measure trade	30 OR 3nnn*	The GTIN of a variable measure trade item scanned at POS SHALL occur in combination with:
item scanned at		 variable count of items; or 	
	PUS		 a trade measure
			Note: Master data will be needed to determine whether the GTIN represents a variable measure trade item scanned at POS.
		20.00.2*	The CTIN of a variable measure trade item not econored at DOC
= 9,02	measure trade	OR 8001	SHALL occur in combination with:
with $N_1 =$	item not scanned		 variable count of items; or
9	at POS		 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	Batch/lot number SHALL occur in combination with:
		8006 XOR 8026	 a GTIN; or
		***	 a GTIN of contained trade items; or
			an ITIP
			 an ITIP of contained trade item pieces
11, 13,	Production date,	01 XOR 02 XOR	These dates SHALL occur in combination with:
15, 16, 17	packaging date,	8006 XOR 8026	a GTIN; or
	sell by date,		 a GTIN of contained trade items; or
	expiration date		an ITIP
	(of a trade item)		 an ITIP of contained trade item pieces
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	01 XOR 02 XOR	Internal product variant SHALL occur in combination with:
variant	8006 XOR 8026	 a GTIN; or 	
		***	 a GTIN of contained trade items; or
			 an ITIP
			 an ITIP of contained trade item pieces

Figure 4.13.2-1. Mandatory association of element strings



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 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.
235	Third Party Controlled Serialised Extension of GTIN	01	The Third Party Controlled Serialised Extension of GTIN SHALL occur in combination with a GTIN of a 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
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
242	Made-to-Order variation number	$\begin{array}{l} (01 \mbox{ with } N_1 = 9) \\ XOR \mbox{ (} 02 \mbox{ with } N_1 \\ = 9) \mbox{ XOR } \mbox{ (} 8006 \\ \mbox{ with } N_1 = 9) \\ XOR \mbox{ (} 8026 \mbox{ with } \\ N_1 = 9) \mbox{ *** } \end{array}$	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 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 <u>and</u> : • a GTIN; or • an ITIP
251	Reference to source entity	01 XOR 8006***	The reference to source entity SHALL occur in combination with: a GTIN; or 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: a GTIN; or a 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: a GTIN; or a GTIN of contained trade items. Note: The GTIN must relate to a variable measure trade item.

Release 23.1, Draft, Jul 23



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 31nn XOR 32nn XOR 35nn XOR 36nn *)	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 31nn XOR 32nn XOR 35nn XOR 36nn *)	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.
395n	Amount payable per unit of measure single monetary area (variable measure trade item)	01 AND (30 XOR 31nn XOR 32nn XOR 35nn XOR 36nn *)	The applicable amount payable per unit of measure (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.
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: a GTIN; or a GTIN of contained trade items; or an ITIP an ITIP of contained trade item pieces
423	Country of initial processing	01 XOR 02	The country of initial processing SHALL occur in combination with: a GTIN; or a GTIN of contained trade items.
424	Country of processing	01 XOR 02	The country of processing SHALL occur in combination with: a GTIN; or a GTIN of contained trade items.



If element string The ass eler		Then mandatory associated element string	Rule
AI	Designation	AI	
425	Country of disassembly	01 XOR 02	The country of disassembly SHALL occur in combination with: • a GTIN; or • a GTIN of contained trade items.
426	Country of full processing	01 XOR 02	The country of full processing SHALL occur in combination with: • a GTIN; or • a 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 <u>and</u> : a GTIN; or a GTIN of contained trade items.
430N	Ship-to / Deliver- to address GS1 Application Identifiers	00	Ship-to / Deliver-to address GS1 Application Identifiers SHALL occur in combination with an SSCC
4303	Ship-to / Deliver- to address line 2	4302 and 00	Ship-to / Deliver-to address line 2 SHALL occur in combination with line 1 of a ship-to address and an SSCC
4309	Ship-to / Deliver- to GEO location	00	Ship-to / Deliver-to GEO location SHALL occur in combination with an SSCC
431N	Return-to address GS1 Application Identifiers	00	Return-to address GS1 Application Identifiers SHALL occur in combination with an SSCC
4313	Return-to address line 2	4312 AND 00	Return-to address line 2 SHALL occur in combination with line 1 of a return-to address
432N	Service-related GS1 application identifiers for transport process	00	Service-related GS1 application identifiers SHALL occur in combination with an SSCC
<u>4330</u>	<u>Maximum</u> <u>temperature in</u> <u>Fahrenheit</u>	<u>00</u>	Maximum temperature in Fahrenheit SHALL occur in combination with an SSCC
<u>4331</u>	Maximum temperature in Celsius	00	Maximum temperature in Celsius SHALL occur in combination with an SSCC
<u>4332</u>	<u>Minimum</u> <u>temperature in</u> <u>Fahrenheit</u>	00	Minimum temperature in Fahrenheit SHALL occur in combination with an SSCC
<u>4333</u>	Minimum temperature in Celsius	<u>00</u>	Minimum temperature in Cesius SHALL occur in combination with an SSCC
7001	NATO stock number	01 XOR 02 XOR 8006 XOR 8026 ***	The NATO stock number SHALL occur in combination with: • a GTIN; or • a GTIN of contained trade items; or • an ITIP • an ITIP of contained trade item pieces
7002	UN/ECE meat carcasses and cuts classification	01 XOR 02	The UN/ECE meats carcasses and cuts classification SHALL occur in combination with: • a GTIN; or • a GTIN of contained trade items.
7003	Expiration date and time	01 XOR 02	The expiration date and time SHALL occur in combination with: • a GTIN; or • a GTIN of contained trade items.
7004	Active potency	01 AND 10	The active potency SHALL occur in combination with the batch/lot number and the GTIN.

Commented [DM19]: WR22-334

Release 23.1, Draft, Jul 23

© 2023 GS1 AISBL

Page 243 of 519