Documentation		GENERAL DYNAMICS European Land Systems
Division	**GDELS-Mowag**	Version 3/2023
Project	**Instructions for Data Communication using Automated Identification and Data Capture to GS1**	

Contents

0 Purpose

These instructions describe the procedure for the identification of components by the Supplier using the GS1 standards (barcodes or 1D and 2D symbols/symbologies).

1 Area of application

These instructions apply to all goods procured by General Dynamics European Land Systems – Mowag GmbH (referred to hereinafter as GDELS-Mowag) that are subject to the requirements for automated identification and data capture (AIDC).

2 Abbreviations

AIDC	Automated identification and data capture, Barcode
AI	Application identifier
BBD	Best-before date AI (15)
DPM	Direct part marking
EXP	Expiry date AI (17)
GCP	GS1 Company Prefix
GDELS	General Dynamics European Land Systems
GPS	Güteprüfstelle (national quality testing inspectorate)
GTIN	Global trade item number AI (01) **14 digits with leading "0"**
GLN	Global location number
GS1	GS1 Switzerland / or your local member organization (see www.gs1.org/contact)
FNC1	Function code 1
M/D	Manufacture/Production date AI (11)
P/N	Additional manufacturer product information (part number) AI (240)
S/N	Serial number AI (21)
V/N	Manufacturer's logo/Cage code

3 Responsibilities

The Subcontractor undertakes:

- To supply products according to the GS1 standards
- To mark GDELS-Mowag drawing parts with the GDELS-Mowag GTIN
- Where available, the specified details are to be supplied in advance according to the data communication procedure (see chapter 4.2.2 Data communication)

GDELS-Mowag:

- Defines the identification for its parts in the data record according to the GS1 standards
- Provides the GTINs and other data as required

4 Procedure

4.1 General information and requirements

GDELS-Mowag is introducing automated identification and data capture (AIDC) according to the GS1 standards on the basis of greater efficiency of the logistics system and customer demand. By means of extended data content and improved data quality, AIDC aims to achieve a substantially higher quality which enables

- extensive resource transparency
- shorter process times
- interoperability in the area of multinational logistics, and
- a degree of precise control more in keeping with the complexity of defense equipment and supplies

The GS1 standards involve the following procedure:

- Membership of (registration with) the relevant national GS1 organization on the part of the originator of the equipment (the so-called brand owner)
- Definition of a “Global Trade Item Number” (referred to hereinafter as GTIN) for the articles concerned
- Extension of the GTIN by additional application identifiers (referred to hereinafter as AIs)
- Application of an AIDC code (barcode)

The GTIN of an article is created by the combination of the GCP (GS1 Company Prefix - assigned to the company concerned by its local GS1 member organisation) and a serial reference number. The GLN is allocated to the manufacturer by GS1 and identifies the manufacturer. The number range is likewise provided by GS1 but assignment of the individual numbers to the articles is performed by the originator. The AI extends the GTIN by providing additional details such as the serial number.

Wherever possible, the AIDC identification mark is to be in the form of a GS1 DataMatrix. As an option, the GS1-128 barcode may also be used. Direct part marking (DPM) is also possible. Additional information can be found in Chapter 2.6.14 of the General GS1 Specifications. Indelibility and legibility must be ensured.

If GDELS-Mowag owns the intellectual property rights to the article, then GDELS-Mowag allocates the GTIN to the article concerned. If the Supplier owns the intellectual property rights, it must allocate its own GTIN accordingly.

Both GS1 membership and acquisition of the number ranges (the so-called GCP, GS1 Company Prefix) are chargeable. The rates can be found on the website of the relevant national GS1 member organization.

4.2 GS1 identification marking

4.2.1 General details

Every relevant article is allocated a GTIN formed by the combination of the GCP (assigned to the company concerned by its local GS1 member organisation) and a serial reference number. If serial numbering of the part is required, the GTIN is combined with the appropriate application identifier (AI), or alternatively details of batches may be required. In addition, the production or best-before/expiry date may also be incorporated. The Supplier's (originator's) additional product information may also be represented by an AI if required.

4.2.2 Procedure where Supplier is intellectual property rights owner

Responsibility for generation and allocation of a GTIN to the article concerned is held by the Supplier. The Supplier must, if it is not already the case, either be registered with the relevant national GS1 member organization (e.g. GS1 Switzerland for Switzerland; www.gs1.ch) or must assign the wholesaler role to GDELS-Mowag in accordance with the General GS1 Specifications. Additional information can be obtained from Chapter 4.3.3.1 "Responsibility for branded products" of the General GS1 Specifications. In that case, GDELS-Mowag adopts the role of "wholesaler" according to the
General GS1 Specifications and is listed as the producer. The Supplier's contractual rights and obligations (e.g. warranty) are not affected. The Supplier declares its agreement with the above provision on acceptance of the above identification process (for confirmation form, see Annex 2).

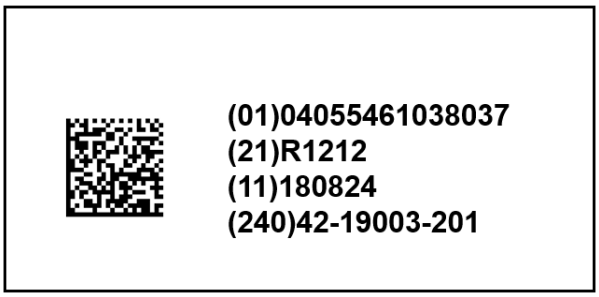
The details of articles to be provided with the identification marking according to the GS1 AIDC standard are communicated in advance by GDELS-Mowag. Responsible; Supply Chain GDELS-Mowag.

It is imperative that the supplementary AI (10) (batch number) or AI (21) (serial number) is incorporated in the barcode (AIDC code) along with the GTIN. Furthermore, is must occupy the second position.

Where possible, the AI (11) (production date) or AI (15) (best-before date)/AI (17) (expiry date) and AI (240) (supplier's article number) must also be incorporated in the barcode (AIDC code).

The GTIN and any assignment of the wholesaler role (for confirmation form see Annex 2) must be communicated to GDELS-Mowag once in advance by e-mail to the address ait-data@gdels.com **. The GTIN data communication with GDELS-Mowag (Brand owner) with Annex 3 (Excel).** Responsible; Supply Chain GDELS-Mowag.

Below is an example of such a GTIN.



A scanner deciphers the above GS1 DataMatrix as follows:

]d201040554610380372 1R1212**<FNC1>11**180824**240**42-19003-201

The GTIN in the above example is: **04055461038037**

]d2	Symbology identifier according to ISO 15424; this corresponds to the subset of the GS1 DataMatrix as a subset of the ISO 16022 DataMatrix
01	AI (01) application identifier (GTIN)
040	Country code with leading "0" – first part of the GCP
554610	Manufacturer number – second part of the GCP
3803	Product number – serial reference number
7	Check digit

21 or **10**	AI (21) = Application identifier or (10) = Application identifier
R1212	Serial number (max. 18 digits) or batch number (max. 15 digits)
<FNC1>	Function code 1 – the FNC1, which guarantees compatibility with the GS1 system, must be encoded at the beginning of the character string. It is delivered in the so called Symbology Identifier. If a separator is required at the end of a variable-length data element (such as batch number or serial number), either an FNC1 or the control character <GS> [ASCII value 29 (decimal), 1D (hexadecimal)] must be used.

11 or **15/17**	AI (11) (production date) or AI (15) (best-before date)/AI (17) (expiry date)
180824	Date (YYMMDD), i.e. year, month, day

240	AI (240) = Application identifier, manufacturer's additional product information
42-19003-201	Supplier's article number

4.2.3 Procedure where GDELS-Mowag is intellectual property owner (GDELS-Mowag drawing parts)

The supplier is provided with the following information in the purchase order:

- GTIN AI (01)
- Serial number (if required) AI (21)
  or batch number (GDELS-Mowag purchase order number) AI (10)
- GDELS-Mowag article number AI (240)
- Arrangement of identification mark via data record (drawing)
- Identification procedure, constituent of parts list

In addition to the AIs mentioned above, the barcode (AIDC code) is to be supplemented by the following AIs:

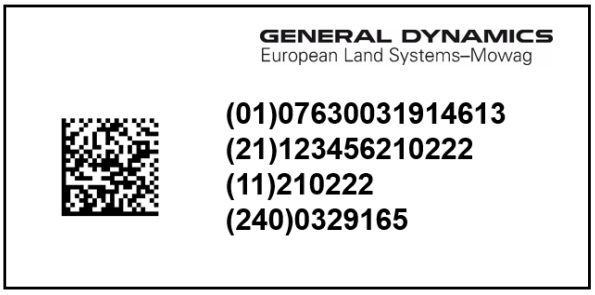
- Production date AI (11) or best-before date AI (15)/expiry date AI (17)

It is imperative that the GDELS-Mowag batch number/purchase order number AI (10) is included in the barcode (AIDC code) if no serial number is provided by GDELS-Mowag.

Below is an example of such a GTIN using the batch number AI (10).

Type plate GS1/MRI 1569915 (GS1 DataMatrix – note: the GTIN must be generated with a leading "0")

Below is an example of such a GTIN using the serial number AI (21).



Type plate GS1/MRI 1569915 (GS1 DataMatrix – note: the GTIN must be generated with a leading "0")

A scanner deciphers the above GS1 DataMatrix as follows:

]d20107630031914613**21**123456210222**<FNC1>11**210222**240**0329165

The GTIN in the above example is: **07630031914613**

]d2	Symbology identifier according to ISO 15424; this corresponds to the subset of the GS1 DataMatrix as a subset of the ISO 16022 DataMatrix
01	AI (01) application identifier (GTIN)
076	Country code with leading "0"
300319	Manufacturer number – second part of the GCP
1461	Product number – serial reference number
3	Check number

21 or **10**	AI (21) = Application identifier or (10) = Application identifier
123456210222	Serial number (max. 18 digits) or batch number (max. 15 digits)

	In the case of externally procured articles to which GDELS-Mowag owns the intellectual property rights, the application identifier **(10)** can contain the GDELS-Mowag purchase order number. In the case of internally produced articles, this data identifier can contain the internal production order number.
<FNC1>	Function code 1 – the FNC1, which guarantees compatibility with the GS1 system, must be encoded at the beginning of the character string. It is delivered in the symbology identifier. If a separator is required at the end of a variable-length data element (such as batch number or serial number), either an FNC1 or the control character <GS> [ASCII value 29 (decimal), 1D (hexadecimal)] must be used.

11 or **15**/**17**	AI (11) production date or AI (15) best-before date/AI (17) expiry date
210222	Date (YYMMDD), i.e. year, month, day

240	AI (240) = Application identifier, manufacturer's additional product information
0329165	GDELS-Mowag article no.

4.2.4 Barcode (AIDC code)

The barcode (GS1 DataMatrix) is generated by a suitable printing program following allocation of the relevant data. It is important that the application identifiers defined as variable-length, such as AI (10), AI (21) or AI (240), are terminated by an FNC1 (function code 1) before the beginning of the next AI. (It is only at the end of the symbol that no FNC1 is needed.)

4.3 Production of identification plates

The user places very high demands on the material and durability of the identification plates. Production of the plates is only possible with the appropriate materials on special printers (lasers). If the Supplier is unable to produce the identification plates itself, reference to qualified plate manufacturers can be found in Annex 1 "Identification plate producers". The legibility of the plates produced can be verified by GS1 if required.

5 Information on GS1

More detailed information about GS1 at global level can be found on the website at www.gs1.org. The relevant national GS1 member organization can be found via www.gs1.org/contact.

6 Annexes

6.1 Identification plate producers/Annex 1

The following identification plate manufacturers supply plates according to the GDELS-Mowag specifications:

Strico AG

Allmendstrasse 14
CH-8320 Fehraltorf
+41 43 377 30 10
strico@strico.ch

Schilderfabrik Cappi & Co

In der Gasse 2b
D-57648 Unnau
+49 0049 2661 95830
info@cappi.de

zweifel metall ag

Fuchsbühlstrasse 8
CH-8580 Amriswil
+41 71 414 41 11
info@zweifel-metall.ch

6.2 AIDC identification procedure wholesaler role/Confirmation/Annex 2

AIDC identification procedure
Wholesaler role

Confirmation

issued by the Supplier to GENERAL DYNAMICS European Land Systems Mowag (referred to hereinafter as GDELS-Mowag).
We hereby confirm – as a supplier to GDELS-Mowag – that we have acknowledged the instructions regarding the product identification obligations on the purchase order documents and subsequent AIDC data communications entitled "Labeling of components according to AIDC" issued by GDELS-Mowag.
We hereby declare our agreement to GDELS-Mowag using the "wholesaler role" as defined by the GS1 standard (according to the General GS1 Specifications, Chapter 4.2.3.1) for the goods supplied by us and applying standards in accordance with the agreed rules of the "GS1 Identification" standards (Chapter 4.2).
The provision relating to the wholesaler role may be revoked at any time by the Supplier – in consultation with GDELS-Mowag – provided the Supplier is registered with GS1 and can, therefore, generate its own GTINs (global trade item numbers).

_____
Company stamp

_____
Place/Date/Legally binding signatures

6.3 GTIN data communication with Brand owner/Annex 3

See Excel document template on,

https://www.gdels.com/de_supply_chain.php

The data must be communicated once in advance to GDELS-Mowag via the email ait-data@gdels.com