



The Global Language of Business

Guideline on how to fill out the Attributes Template

Lists the conventions to be used when developing or entering a GS1 Attribute request.

Release 1.3, April 2022



Document Summary

Document Item	Current Value
Document Name	Guideline on how to fill out the Attributes Template
Document Date	April 2022
Document Version	1.3
Document Issue	
Document Status	Approved
Document Description	Lists the conventions to be used when developing or entering a GS1 Attribute request.

Contributors

Name	Organisation
S.Robba	GS1 Global Office
E Harpell	GS1 Global Office

Log of Changes

Release	Date of Change	Changed By	Summary of Change
1.0	Feb 2021	S. Robba	Initial publication
1.1	Jul 2021	S. Robba	Added ADB template information
1.2	Dec 2021	E. Harpell	Merge ADB template information into existing attribute template
1.3	Apr 2022	S. Robba	Updated for new template

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Document conventions

Like all GS1 standards and guidelines, the “Guideline on how to fill out the GS1 Attribute Template”, is written in UK English.

The keywords, SHALL, SHALL NOT, and MAY, when they appear in this document, are to be interpreted as described in in Annex G of the ISO/IEC Directives, Part 2, 2001, 4th edition, as defined here:

- **SHALL** means that all conforming implementations must do what the statement says, otherwise the implementation is not conforming. No deviation is permitted.
- **SHALL NOT** means that all conforming implementations must not do what the statement prohibits, otherwise the implementation is not conforming. No deviation is permitted.
- **MAY** (or CAN) means that a conformation implementation is allowed to do what the statement says, but it is not required to for conformance.

1 Introduction

Attributes are a part of the GS1 system of standards and SHALL be followed by all the parties that intend to conform to the GS1 standards for which the attributes have been defined.

Attributes SHALL be developed and maintained following the GSMP process.

This document provides guidelines on constructing quality Attributes covering the following GS1 domains:

- GDSN (Global Data Synchronisation Network): all messages currently used within the GDS Network within the business domains of Catalogue Item Synchronisation, Price Synchronisation, Item Authorisation and Party Synchronisation.
- Global Data Model.

When attributes are developed for other GS1 domains, they should follow guidelines provided in this document. As the GS1 standards evolve, this document may need to be revised.

2 Guidance for creating a quality Work Request for a GS1 Attributes

The Attribute template is designed to provide minimal instruction.

Template to submit a Work Request for GS1 Attributes

<https://www.gs1.org/standards/wr>

✔ **Note:** The template contains example rows and use information. EXAMPLE ROWS IN THE TEMPLATE MUST BE DELETED PRIOR TO SAVING YOUR REQUIREMENTS DOCUMENT AND UPLOADING THE REQUIREMENTS DOCUMENT INTO YOUR WORK REQUEST.

✔ **IMPORTANT:** If this request is to change an attribute name or delete an attribute, then a CHANGE row SHALL also be submitted with a definition change stating the attribute is being deprecated with a migration statement, and a migration form template SHALL be included with the work request. Click here for [Migration Template download](#).

Example: Changing attribute from oldAttribute to newAttribute

Change the definition of oldAttribute to state "NOTE: this attribute is being deprecated, please start using newAttribute. This is the old definition"

Add "newAttribute"

Delete the old attribute "oldAttribute"

It is important for the community to have time to migrate, so the process is Add New, Change definition of Old, then Delete Old, once community migrates. GS1 will work with community on implementation timing.

✔ **IMPORTANT:** If this request is to add a new attribute, be sure to complete the New attribute fields in the template.

The request for an attribute type of request SHALL follow the guidance for the following information:

[WR1] Action - to be performed on the requested Attribute SHALL always be provided. One of the following values SHALL be used:

- ADD – for new Attributes
- DELETE – for existing Attributes that need to be removed
- CHANGE – for existing attributes that need to be modified

[WR2] Requirements Description – This SHALL contain what you are requesting in text. This is not the business rationale. See [WR16]

Example: Add a new description attribute for additives.

[WR3] Module – From the drop-down list a selection SHALL be provided.

A Module is a group of attributes that make up a logical set of information.

✔ **Note:** If you do not see the module in the drop-down list or if do not know the name of the module, select "- Modeler Suggested -". GS1 will determine the proper module or create a new one.

✔ **Note:** The module names do not have the word "Module" at the end of each name in the drop down

Example:

- – New – if this is a new grouping of attributes.
- – Common – this is a group of attributes shared with EDI (Not a typical selection).
- – Modeler Suggested – if you are looking for a recommendation from GS1.
- NutritionalInformation


[WR4] Class – the class field is optional. If you know where you would like an attribute to be placed within a module, specify which class. The format for a class is always Upper case for each word in the class.

Example:

- Modeler Suggested – if you do not know or if you would like GS1 to recommend a class.
- AllergenRelatedInformation

[WR5] Technical Attribute Name/Role – The attribute being requested, changed, or deleted SHALL be provided, except if this is a request for a new class. All attributes SHALL begin with a lower case first letter and each word following will be upper case proper.

If the request is for a new class of attributes, the format for a class is always Upper case for each word in the class.

 **Note:** A change to an Attribute name SHALL NOT use font colours nor strikethroughs to represent changes.

An attribute name change requires a migration template to be filled out and accompany the work request

Example:

- allergenStatement
- packagingMarkedLabelAccreditationCode
- height
- dVDRRegionCode – note attributes beginning with an acronym start the same way.


Example of a new class:

- NewClassInformation

[WR6] Business Attribute Name - clearly and concisely conveys the attribute content using business (not technical) terms.

- Significant words are capitalized and separated by blank spaces, for example: "Count of Each Specific Product"
- Acronyms (when needed) SHALL be fully expanded, for example: "Contact Information GLN (Global Location Number)"
- Business Name SHALL include "Code", "Type Code" or "Indicator" for those types of attributes
- Refrain from using the word "Product" as the lead word of the Business Name
 - Exception: where it's required to form an integral understanding of what the attribute is by name
 - Exception: where it's required to differentiate the attribute from another attribute of a similar name

[WR7] Data Type – from the drop-down list a selection SHALL be provided with an add or if the data type is changing.

 **Note:** Do not use: Description/Free Text, Description1000, Description200, Float-UOM, MeasurementUnitCode, NonBinaryLogicEnumeration-ISO3166_2, Numeric

Examples:

Data type	Data Type Definition	Example	Multiplicity	Data length
Amount	Enables currency	\$1.25, €3.75	0..*	Set field length (70)
Boolean	is a yes or no attribute	true or false	0..1	4..5
Codelist	Valid value code list, drop=down	FREE_FROM_GLUTEN	Varies	80
DateTime	Enables a date with time	2021-01-21:13:05:23T...	0..1	Set field length (24)
Decimal	has a decimal place and can be negative numbers	0.001, -3.85	Varies	Set field length (70 (30.39))
Description	enables a text field with languages	This is a description. en Ceci est une description. Fr Tämä on kuvaus. fi	0..*	Varies
ExternalCodeList	For code lists that exist outside of GS1	ABX_TN772	Varies	Varies
Float	has a decimal place and can be negative numbers	-3.78, 5.2786	Varies	Set field length 70 (30.39)
Formatted Description	if there is a need for a language enablement for a sequence to order the descriptions.	See Trade item implementation guide for detailed information. This is a description. Sequence 1 This is the second description. Sequence 2	0..*	Varies
Integer	Whole numbers, no decimal, can be negative.	-2,-1,0,1,2,3...	Varies	70
Country Codes	ISO3166_1 Code	250, 840	Varies	3

Measurement	a decimal with a unit of measure	3.75 CMT, 5.28 KGM	0..8	Set field length 70 (30.39)
NonBinaryLogicEnumeration	Specify a true or false with additional ability to state unspecified	TRUE, FALSE,UNSPECIFIED	0..1	80
NonNegativeInteger	Whole number, no negative values	0,1,2,3	Varies	70
Percentage	A decimal with assumed %	25%	0..1, can vary	70
String	free text field with no language enablement	This is a string.		
Time Measurement	Measurement with set units of measure for seconds, minutes, hours, days	3 ANN 15 DAY 22 MIN 5 MON	Varies	70

There are additional data types contained in the GDSN Common BMS

[WR8] Data Type Length – To describe the length of the field needed.

Only use this for the following data types as all other are pre-defined data types.

- Description, Formatted Description, String this should be the length the field you need.
- Boolean – 4..5
- Codelist, ExternalCodeList, NonBinaryLogicEnumeration – 80
- All other data types are pre-defined and you can leave field blank.

[WR9] Secondary Class – Do not populate

[WR10] Multiplicity – from the drop-down list a selection SHALL be provided with an add or if the data type is changing. A data type is how the XML is structured.

Example:

- 0..1 Optional attribute, only 1 value allowed
- 1..1 Mandatory attribute, only 1 value allowed
- 0..* Optional attribute, repeating values
- 0..* Optional attribute, repeat different language, measurement, currency, ONLY 1 value per type - Validation needed to stop multiple of the same type

- 0..* Optional attribute, repeating language, measurement, currency, multiple value per type
- 1..* Mandatory attribute, same as above

[WR11] Enable Language / Measurement / Currency – from the drop-down list a selection SHALL be provided with an add or if the data type is changing.

Select Yes for the data type below:

- Amount – this is currency enabled
- Description – this is for multiple language enabled
- Formatted Description – if there is a need for a language enablement for a sequence to order the descriptions.
- Measurement – a decimal with a unit of measure
- Time Measurement – seconds, minutes, hours, days....
- Temperature Measurement

Else select No for all other data types.

[WR12] Multiple Values – from the drop-down list a selection SHALL be provided with an add or if the data multiplicity is changing.

Select Yes for the data type below:

- The attribute can have multiple values.
- The attribute can have multiple values for the same language, unit of measure or currency.


Select No for the data type below:

- The attribute can only have 1 value
- The attribute can only have 1 value for the same language, unit of measure or currency.


[WR13] Associated Attribute – If the attribute is dependent on another attribute to make business sense of the data, populate the other attribute needed.

[WR14] Associated Code List – If the attribute is a codelist populate the codelist that the attribute is using for valid value. This used for new codelist attributes. There should be a code work request submitted with this.

[WR15] Attribute Definition –describes the meaning of the attribute’s data content in terms of the product or business process to which it applies.

 **Note:** A change to a definition SHALL NOT use font colours nor strikethroughs to represent changes in the template.

- Start all Business Definitions with “The”, for example: “The code”, “The amount”, “The indicator” or “The measurement”.
- Use common business terms that will be recognized by most users involved with trading the applicable product or implementing the related business process.
- Be aware of, and include where possible, alternate terms used in different geographies or trade channels.

 **Note:** Going forward, all GDD attribute definitions are business definitions (i.e., utilise the “Definition” field in the work request template).

TIPS:

All definitions SHALL have proper punctuation. Make sure you end sentences with a period “.”.

All acronyms SHALL be in parenthesis after the full text of the acronym has been stated.

All acronyms SHALL be extended to the full text in a definition.

A definition SHOULD be able to give a visual representation of the attribute being requested.

Definitions SHALL NOT just repeat the attribute name. Be descriptive and explain what you are requesting the user to populate.

A definition SHALL be able to be understood globally. Avoid using colloquial or local sayings.

Example:

- The code representing the country where the physical or non-physical product is intended to be sold.
- The statement to the consumer on the presence of allergens, based on local rules or regulations, as stated on the product packaging.

[WR16] Rationale – Please provide the business rationale for the attribute.

Try to answer the questions:

“Why does the community want/need this?”

“What business benefits can be achieved?”

“What purpose or how does the recipient use this information?”

Example

This attribute is needed to support a local regulation for additives. regulation 1234

This SHALL NOT be simply that the “community needs this”.

[WR17] Business Usage Statement - conveys the way the information is used in real life by people involved in the product supply chain, from manufacture through consumer purchase.

- Begin usage statements with “Used to” or “Used by”.
- When groups of attributes are commonly used together, list these using the statement “Used in conjunction with...”.
- Referencing GS1 standards is permissible, but avoid specifying links that may change based on date or release number; do not reference external documents or web sites.

[WR18] Business Example - provides explicit examples of how to populate the attribute’s data for one or more common use cases.

- Provide multiple examples when needed to help users understand the different ways the attribute could be populated based on product type, geography, business process, etc.
- Use the same specific examples for attributes that are related and are commonly used together.
- For codes, include a representative sample of code names and explain their meanings if not obvious.

- Provide (where possible) the actual attribute value that would be populated.

[WR19] Applicable Validation Rule – If you are submitting an additional business validation work request, please state the proposed validation rule or state one has been requested.

[WR20] Guidance -

Provide any business process notes that would help the users to supply/make use of this information provided in this attribute.

Example:

- This attribute provides the ability to define the level of the additives contained in the trade item. Without this information, the recipient is left to speculate. Population of this attribute comes from the Level of Containment code list.

[WR21] Trading Partner Neutral Status - states if the data for recipients can vary by values for trading partners **within a market** or they must remain the same.

Example:

- TPN – Values remain neutral/the same for all trading partners.
- TPD – Values can change for trading partners (ex. Price attributes)
- TPN/TPD – Values can be neutral but there are instances when they need to vary by trading partner.

[WR22] Hierarchy Levels Affected - state which level of the trade item hierarchy a value should be populated on as data is not always applicable to all levels. Examples: Pallet, Case, Base Unit, Consumer Unit, and All.

[WR23] Comments – For CHANGE include the text being remove or changed.

[WR24] Global/Local -

- Global means for this GTIN across all markets the attribute must have the same value. Example Computer memory cannot vary by market.
- Global/Local means the values can vary by market but can be the same globally too. Example descriptions. (Majority of items)
- Local means that the value varies by every market (Very rare)

[WR25] AVP Requested – temporary attribute requested (Check with GS1)

- ✓ **Note:** The communities that implement a temporary attribute will need to migrate to the standard attribute once the new attribute standard is in a standard release.

[WR26] BMS ID (if known)

Example

The BMS ID for attribute allergenStatement is 370

- ✓ **Note:** The BMS ID can be found on the GS1 website.

Web page: <https://www.gs1.org/standards/gdsn>

Select a GS1 GDSN Standards Release

Under "Release Guidance", select document: GS1 GDSN Attributes with BMS ID and XPath

3 Appendix: Attribute Definitions for Business styling principles

3.1 Consistent use of terms

- Units of measure: do not use abbreviations (e.g., “gram” – not “gr”, “grm” or “GRM”)
- Refer to “product” or “service” (not “physical” or “non-physical”)
- Do not use “recipient” or “retailer”; instead use “buyer”
- Do not use “supplier”; instead use “seller”
- Use “Shall” rather than “Must”
- Reference the Business Name, *not* the GDD Name, unless no Business Name exists. For example: change “... *isTradeItemAConsumerUnit* ...” to “... *Consumer Unit Indicator* ...”
- Indications of Yes/No responses (such as those for Boolean logic) are expressed as True/False
- Consistent use of terms as defined in the [Glossary of business terms](#)

3.2 Structure

- Present all attribute names in *italics*
- Add the URL when it is to a GS1 website (avoid URLs to external sources)
- Avoid references to local rules and regulations
- Show multiple examples using a bulleted list (i.e., not numbers, dashes or something else)
- Refer to the GS1 Style Guide [https://www.gs1.org/docs/GS1_Style_Guide.pdf] for guidelines related to non-branded images, grammar, capitalization and other styling topics.

3.3 Glossary of business terms

- **item** – a generic term often used to refer to the physical object of a logistic packaging hierarchy for the product (e.g., trade item)
- **product** – usually referring to the consumer unit
- **unit** – a generic term often used to refer to the item in a business activity, sometimes prefixed with the business purpose (e.g., consumer unit, logistic unit, selling unit)
- **buyer** – entity that purchases an item (e.g., retailer, hospital, distributor, etc.)
- **seller** – entity that sells an item (e.g., manufacturer, distributor, GPO, etc.)
- **each** – often used to refer to the consumer unit (i.e., the item that the consumer purchases)
- **pack** – a unit hierarchically between the each and the case. This may be a consumer unit (e.g., carton of cigarettes) and/or a logistic unit (e.g. box of cans)
- **case** – a logistic unit (e.g., a box) that usually contains a product or packs
- **pallet** – a logistic unit that is usually a collection of cases on a wooden platform

Additional terms can be found in the [GS1 Glossary](#)