

EDICOMData

## Data Quality Control Mechanisms



## Introduction

Every company has a database that compiles the information on the products it manufactures, sells or purchases. This database is actually the catalogue from which clients place their orders and manage the logistics. For it to be really useful, the information must be correct and updated at all times. In many cases, synchronizing incorrect or badly classified data creates problems, delays and unnecessary costs in the supply chain.

Data quality, which starts from the moment an article is designed and must be developed throughout the entire creation process, is also crucial. The difficulties arise when modifications to the physical product are introduced and these changes are not recorded in the databases.

To summarize, there are five points that define quality data:

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- ▶ **Complete:** The product file must have all the data that define it and which the supplier and retailer have agreed to exchange.
  - ▶ **Standards:** Standardization of the data allows all supply chain stakeholders to understand the same thing. GS1 has defined standards in terms of taking measurements, attributes that make up the product files, codes for taxes, etc. These rules must be known and used by all partners to ensure that the data are not interpreted differently.
  - ▶ **Consistent:** A consistent file must contain data that is coherent with the rest of the information, which must be the same in all the company's information systems. The number of units in a box or of the boxes on a pallet must be consistent with the information on the grouping dimensions.
  - ▶ **Accurate:** A critical factor in the success of any data synchronization project is that the data in an electronic file must truly reflect the real features of the physical article. We must be rigorous in obtaining the data, know how measurements of articles are taken, check the data to avoid errors, etc. In the ordering process, the accuracy of the data on the units per box, or boxes per pallet, is especially important.
  - ▶ **Updated:** Product files data are only valid for a certain period of time and must be constantly updated. For example, we must keep an eye on the validity of promotional data.
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EDICOM is highly aware of this issue and has placed all the means at its disposal to be able to check automatically that the data making up a product file in EDICOMData fulfil the above points, not forgetting the need for auditing, with physical review by sampling of some product features, such as the dimensions and units contained in the logistic hierarchies: product, box, layer, pallet, etc.

## Data Quality Control Mechanisms

### MANDATORY ATTRIBUTES

Validation of data available as needed by distributors who receive the catalogue. EDICOMData allows incremental parameterization of validation rules and is initially programmed with the rules demanded by the major distribution sector companies in the international scope.

ATTRIBUTE	GDSN validations		
	Base unit	Box	Pallet
EAN code (GTIN)	✓	✓	✓
Additional product code			
Additional code responsible party			
Target market (Country)	✓	✓	✓
Information provider (GLN)	✓	✓	✓
Information provider (Name)	✓	✓	✓
Coded article description	✓	✓	✓
Base Unit (s/n)	✓	✓	✓
Consumer Unit (s/n)	✓	✓	✓
Despatch Units (s/n)	✓	✓	✓
Billing Unit (s/n)	✓	✓	✓
Order Unit (s/n)	✓	✓	✓
Variable measurement item (s/n)	✓	✓	✓
Language for all descriptions	✓	✓	✓
Brand	✓	✓	✓
Functional name	✓	✓	✓
Description	✓	✓	✓
Short description			
Depth (with packaging)	✓	✓	✓
Height (with packaging)	✓	✓	✓
Width (with packaging)	✓	✓	✓
Gross Weight			
Net Weight			
Drained Net Weight			
Packaging marked returnable (s/n)	✓	✓	✓
Global Product Classification Brick	✓		
Packaging type			
Catalogue price (amount)			
Catalogue price validity start date			
Effective date			
Publication date			
Availability start date			
Stackable units			
Number of layers			
Number of items contained per full layer			
Tax type			
Code-assigning agency			
Tax description			
Tax rate			
EAN code (GTIN) content 1		✓	✓
Quantity contained 1		✓	✓
Number of children		✓	✓
Number of units contained		✓	✓

## GDSN NETWORK - ASSOCIATED VALIDATIONS

EDICOMData implements over 230 validation rules required by the GDSN network from the GS1-approved DataPools.

### SPECIFIC EDICOMData VALIDATIONS

Additionally, EDICOMData implements its own validation rules to guarantee maximum quality of the published data, with the ultimate goal of providing a highly useful service for synchronization of product master files from publishers and subscribers.

#### Checking valid GTIN codes

EDICOMData ensures that all the item codes are properly constructed, checking that the control digit is correct.

#### Date Validation

Checking whether there are dates in EndDate fields prior to StartDate of the same item; only for dates included in the standard proposal of the EDICOMData Catalogue Item Notification message.

#### Validation of logistic hierarchy units

Checking that the detail “Number of units per pallet” = layers x units/layer.

#### Validating Dimensions

Normalizing to the same unit of measure; only for dimensions included in the EDICOMData Catalogue Item Notification message standard proposal. The dimensions checked are height, width, depth, volume, net weight, gross weight, drained net weight and net content. This way, we ensure for example that the height of a box is not less than the height of the product it will contain.

Measurement checking considers that a unit from a lower level cannot have larger dimensions than a unit from an upper level in which it is contained. For this validation, the XML message must include references in the first place to those articles that are contained in upper level units, in other words consumer units come before boxes, and boxes before pallets, for example.

#### Syntactic message validations

Syntactic validations are also performed, taking into account the conditionality set out by GDSN for the Catalogue Item Notification message (CIN in XML).

#### Other validations

Ensuring that there are no GTINs repeated in the same message.

Checking that the Brick code (8 digits, starting with 1) is valid.

## GS1 Data Quality Framework

### MANDATORY ATTRIBUTES

EDICOM recommends becoming familiar with and applying the Data Quality Framework developed by GS1 ([http://www.gs1.org/gdsn/dqf/data\\_quality\\_framework](http://www.gs1.org/gdsn/dqf/data_quality_framework)) as far as possible.

This framework was developed as a voluntary standard solution, independently of the sector, which enables collaboration between trading partners to achieve the benefits of quality data, and is valid for any business regardless of its size, function or activity.

The Data Quality Framework is based on a quality protocol for industry data, consisting of:

- ▶ A data quality management system to validate the presence and efficacy of the processes involved in managing key business data.
- ▶ An inspection procedure allowing physical validation of the product features.

Este protocolo ha sido incluido en el Marco de Calidad de Datos, junto con otros elementos para fomentar mejoras en las áreas en las que los socios comerciales pueden colaborar con el fin de obtener los beneficios de una buena calidad de datos.

Actualmente el Marco contiene los siguientes componentes:

#### **Data Quality Management System (DQMS)**

Provides a guide for organizations on how to set up, implement, maintain and enhance a series of processes and activities related with data quality management of the information from the master database. This Data Quality Management System is critical in order to achieve a high-quality overview of the data in the mid-to long-term so that they flow through the global supply chain. This system focuses on the existence of common internal business processes, procedures and performance criteria.

#### **Self-assessment Tools**

Providing the means for organizations to carry out a self-assessment of the key elements in the Descartes Quality Management System to reveal opportunities for improvement. The self-assessment procedure can be used as a "gap analysis" tool to display and prioritize those areas in which an organization might make improvements.

#### **Product Inspection Procedure**

Defines a standardized approach to inspection of the features of traded articles and comparison with the information in the master database. Some GS1 standards are referenced in the inspection procedure, such as the GDSN Packaging Measurement Rules, the Global Data Dictionary (GDD), etc.

#### **Reference documentation**

Additional appendices that point to external documents or extend the information provided in any of the preceding sections.

## About EDICOM

Edicom is a global leader in the development of technological platforms for B2B e-commerce solutions like EDI (Electronic Data Interchange) or Electronic Invoicing.

With a long history in the field of EDI, we currently have over 12000 clients worldwide, many of them leaders in their respective industries such as Unilever, Procter & Gamble, El Corte Inglés, Toys R'Us, etc.

Over 300 million commercial transactions are generated worldwide through Edicom's solutions in ASP – SaaS mode, throughout multiple sectors such as Retail, Healthcare, Logistics and Transportation, Automotive, Tourism, Finance, etc.

Edicom provides advanced technological solutions that enable users to outsource the administration and maintenance of large B2B communications platforms, achieving seamless operation of all systems.

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### SOLUTIONS

- ▶ Application Service Provider
- ▶ EDI - Electronic Data Interchange
- ▶ Electronic Invoice
- ▶ Accounts Payable Integration
- ▶ EdicomData - GDSN Data Pool
- ▶ Continuous Replenishment CRP/VMI
- ▶ EDICOMNet - Private B2B communications network

### CERTIFICATION AUTHORITY

- ▶ Issuing Electronic Certificates
- ▶ Remote Signature Services from Secure Device
- ▶ Timestamping
- ▶ Certified document safekeeping service

### SERVICES

- ▶ International Support Center
- ▶ 24x7 System Monitoring
- ▶ Mapping Management
- ▶ Global Outsourcing
- ▶ Onboarding Projects
- ▶ Integral Partner Management

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