

/ARGE



Data Quality Guideline of the HVAC Industry

Annex 1 to DQG 8.0:

Definition of Data Contents and Data Quality Principles

Version 8.0

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Introduction

The continuous improvement of the quality of electronic product data represents the basis of any process optimization.

Achieving a higher product data quality is the common goal of all distribution levels and also encompasses the involvement of all market partners of the HVAC industry. In order to further optimize the standardized electronic data exchange – and in particular the quality of the article master data – in the future, harmonizing the standards and regulations existing in the field and documenting the partners' individual requirements are issues important to the industry, trade and crafts. This is intended to provide common ground for all those involved for the next steps to be taken while working towards improved data quality.

This document provides a detailed overview of the data contents that are identical for all distribution levels and of the understanding of data quality. When it comes to data contents, it is important that all distribution levels share the same structure, and above all the same understanding regarding content. Defining data contents is not about describing an interface for exchange between software systems, but about showing comprehensive detailed information on the respective contents.

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Annex 1 to the DQG 8.0 as of 19/01/2022

Overview of alterations and amendments to DQG 7.0, Annex 1

Chapter 8.2 Correction of the description content quantity

Specification of the quantity in the content unit related to the order quantity unit

Annex 1 to the DQG 8.0 as of 13/01/2022

Overview of alterations and amendments to DQG 7.0, Annex 1

- Correction of mistake in documentation for REACH indication
- Correction of mistake in documentation for indication ECHA-DB

Annex 1 to the DQG 8.0 as of 17/12/2021

Overview of alterations and amendments to DQG 7.0, Annex 1

Chapter 1.2 Inserting of the article types for logistic sets and package

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Chapter 5.5.5 Inclusion of the attribute SVHC name

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Annex 1 to the DQG 7.0 as of 10/03/2021

Overview of alterations and amendments to DQG 6.0, Annex 1

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Overview of alterations and amendments to DQG 6.0, Annex 1

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Inclusion of further information about hazardous good

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Annex 1 to the DQG 6.0 as of 06/07/2020

Overview of alterations and amendments to DQG 6.0, Annex 1 as of 12/02/2020

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Annex 1 to the DQG 5.2 as of 29/11/2019

Overview of alterations and amendments to DQG 5.1, Annex 1

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Annex 1 to the DQG 5.1 as of 07/06/2019

Overview of alterations and amendments to DQG 5.0, Annex 1

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Annex 1 to the DQG 5.0 as of 12/04/2019

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Content-related adaptation of texts with examples

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Content-related adaptation of texts

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New Chapter inserted

Chapter 8.8 Standard delivery time

Content-related adaptation of texts

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Content-related adaptation of texts

Chapter 9 Media data

Content-related adaptation of texts with an example

Chapter 9.1.1 Web images

Adaptation of format specifications

Chapter 9.1.2 Print images

Adaptation of format specifications

Chapter 9.1.3 Media types for images

Content-related adaptation of texts. Media type LO for Logo added, with reference to Chapter 7.5.

1 Definition of data quality

Defining data quality is first and foremost about evaluating the article master data quality of different databases applying fixed and consistent quality criteria, and, on the basis of the findings, increasing said quality in the long term. The manufacturer-specific requirements existing in the industry prevent the single organizations from fulfilling certain requirements on data quality, because inspection-relevant data contents are not relevant to the product portfolio and are not commonly used. For this reason, it is necessary to consider data quality or the fulfilment of a quality requirement separately in individual cases. To this end, **a so-called manufacturer profile** is implemented. In there, the organization may transmit general requirements and statements on specific data contents together with its data delivery. **This profile will be an integral part of every data verification and facilitate a differentiated evaluation** of the master data at hand.

A **to-do list** will be implemented in addition to the manufacturer profile. By means of this additional list, an organization is invited **to give binding statements as to by when they will be able to fulfil requirements** that cannot be fulfilled immediately. It is the responsibility of the ARGE to check that the binding statements are upheld.

1.1 Quality categories

When determining and classifying the quality of product master data, the following quality categories apply:

Quality category 1 – technically necessary:

These are contents that are necessary from a technological point of view to ensure that a master data record can be processed (e.g. article number).

Quality category 1* – technically necessary if used:

A content consists of different information details. If the content is started with the first information detail, giving further information details may become necessary. Price information for instance consists of the actual price, i.e. the value, but also of other necessary information, namely price type, currency, price basis, and price basis unit.

Quality category 2 – quality criterion obligation:

These are contents that are not mandatory from a merely technological point of view, such as an article number, but are indeed mandatory in terms of content. For instance, an image will be mandatory for each standard product.

Quality category 3 – conditional quality criterion obligation:

A condition such as a product characteristic makes certain further information necessary. If a product has the characteristic of being a hazardous substance, providing further details such as UN number, hazard class or transport category is mandatory. Another condition for the mandatory provision of data contents is the use in publications, such as in print media or on the Internet, provided that these publications are publicly available documents.

Quality category 4 – complementary quality criterion for good data quality:

By providing information such as the definition of accessory lists relating to a product, a service may be rendered to one's own customers. Hence, this is a content by means of which a quality requirement on the data is fulfilled, thus achieving a quality criterion.

Quality category 5 – optional:

The data contain additional contents that further increase quality, for instance URLs leading to more detailed article information or documents such as installation- or maintenance instructions.

1.2 Article types

Article types are defined in order to be able to also consider article particularities with regard to quality requirements.

As a rule, users are invited to provide information as comprehensively as possible.

The following table provides an overview of possible article types and a description of their contents:

Article type	Definition
Standardartikel	All articles are standard articles, unless they are allocated to one of the following article types.
Ersatzteil A	Spare parts that are “fast-moving items”, i.e. this article is in high demand. From the manufacturer’s point of view, these spare parts should be available in the warehouses of the trade. The class A spare parts supplied should account for approx. 80 % of the total sales of spare parts by a manufacturer.
Ersatzteil B	Spare parts that are “slow-moving items”, i.e. this article is in demand, however not in high demand. The manufacturer recommends that the trade keeps these spare parts in stock. The class B spare parts supplied should account for approx. 15 % of the total sales of spare parts by a manufacturer.
Ersatzteil C	Spare parts that are seldom ordered. The manufacturer does not recommend that the trade keeps these spare parts in stock. The class C spare parts supplied should account for approx. 5 % of the total sales of spare parts by a manufacturer.
Variante	A basic product that will only be made available as an article in its final form, e.g. as a combination of colour, surface, handles or materials.
Maßanfertigung	An article whose final form is specifically defined, e.g. in agreement with the customer.
Dienstleistung/Software	Services are e.g. calibration fees or measurement fees.
Paket / Set	If several articles are combined to form one article, they become a set or package.
Logistisches Set	If an article is delivered in several logistic units that cannot be ordered separately, thus it is about a logistic set. As at „Logistic Set“ the components are used within the logistic processes, they do have no mass of the packaged basic (dimension A, B C). These are stated at the components. The statement of the packaging units are not useful.
Packstück	A not orderable article that can be used as a component of a „Logistic Set“. As the article is relevant for the logistic processes only, they do not have all statements. The statement of prices is not necessary.
Sonderartikel (< 1 % Sortiment)	Articles that are no standard articles and cannot be allocated to any other article type, such as sample boards, are non-core items.
Kalkulationsartikel	Calculation items are items based on which articles can be defined in more detail (e.g. m ² of a panel heating). These items are not available for order and are intended for the calculation or estimation of an article that is available for order.
Schüttgut	Bulk goods are bulkable granular or lumpy materials.

Preislinienartikel	Article that have factory list prices for several price lines. The line prices replaces the standard information of the factory list price. The specification “Price on request” and “RRP” is not possible for this article type.
Gebühr	The article constitutes a fee (e.g. calibration fee). The fee can be allocated to an article, e.g. a water meter. The specification “Price on request” is not possible for this article type. Specifications, such as logistic information, images and documents, are not required.

2 Header data

All information pertaining to a master data delivery are divided in header- and article data. The header data are so-called “administrative data” for the master data server and contain **the technically required information on the entire data delivery**. On the one hand, these are information on the supplier or organization, and on the other hand information on the catalogue. A catalogue is a master data record. A supplier may have several catalogues that divide their existing overall range in sub-ranges. For instance, sub-ranges can be product lines, brands, or products and spare parts.

2.1 Data contents at header level

In the first instance, the information on the data contents at header level refers to all information known on the data supplier. This is followed by comprehensive information on the entire data delivery.

Content	Description	Structure
Datenlieferant ID	ID of the data supplier	Text 13 Permitted characters: 0-9
Datenlieferant Name	Company name or legal name of the manufacturer	Text 20
Datenlieferant Kürzel ARGE	Technically required 2-character manufacturer code according to the list of abbreviations for ARGE members	Text 2
Katalog ID	Clear identification of the catalogue, consisting of participant ID, country code, and catalogue name	Text 35
Katalog Name	Descriptive name of the catalogue, identical with <delivery_name>	Text 35
Gültigkeit Katalog Beginn	The start of validity indicates the date from which the catalogue shall be valid as a whole. Please note: Any start of validity at article level always takes precedence!	Date (DDMMYYYY)
Gültigkeit Katalog Ende	The start of validity indicates the date up to which the catalogue shall be valid as a whole. Please note: Any end of validity at article level always takes precedence!	Date (DDMMYYYY)

Bezeichnung der Datenlieferung	Content description of the data delivery: e.g. 2019 price list	Text 35
Artikel mit system-beteiligungspflichtiger Verpackung vorhanden	Article with packaging subject to system participation included	Yes/No
LUCID-Nummer	LUCID Packaging Register number	Text 20
Entsorgungsdienstleister	Name of the disposal service provider	Text 80
Prüfkonstante	Test constant for ensuring the font. Constant value "1234567890abcdefghijklmnopqrstuvwxyzüöäÜÖÄÜß®€"	Text 256

3 Basic article data

Basic article data contain all **information on a product**. For better clarity and easy topic-based search, information on specific topics (e.g. product texts, attributes, prices, groups, logistics, media data) has been divided in separate chapters. This division represents **no** hierarchical structure or sorting of information regarding the article master data.

3.1 Article numbers

The clear allocation or identification of data is just as important as their completeness and up-to-dateness. A key element in this is that the article numbers used in the master data have a similar structure to those used in print media (e.g. catalogues or brochures). Therefore, an article number should always correspond to the number printed on the articles without blanks and special characters. If a new numbering system is introduced, it should not contain any blanks or special characters (i.e. only 0-9, A-Z are permitted) or leading zeros. An article number remains valid for 15 years before it can be reused. Every change to an article published in the market requires a new article with a new article number and GTIN (examples: changed accessories, spare parts, parts lists, advertised improvements, changed base measuring unit).

We distinguish between the following article numbers:

3.1.1 Factory article number

The factory article number is the central key denomination and is assigned to ensure the **clear identification/recognition of an article**. This article number has to be unambiguous across all sub-ranges, catalogues and variants and is assigned ex works by the organization.

Content	Description	Structure
Werksartikelnummer	Unambiguous article number consisting of digits and characters Example: JKS300620112	Text 15

3.1.2 Factory article number catalogue (Werksartikelnummer Katalog)

It is possible to state an additional <Werksartikelnummer Katalog> as long as it deviates from the actual factory article number with regard to the characters used, character length and character set (e.g. PDF documents). In practice, the **structure of the <Werksartikelnummer Katalog> can be compared to the factory article number**; however, special characters are used in the relevant print medium.

Content	Description	Structure
Werksartikelnummer Katalog	Blanks and special characters are possible; character set may deviate from the factory article number. Example: JKS_300/620 112 in the PDF document used	Text 35

3.1.3 Trade article number (Handelsartikelnummer)

Articles may be assigned another article number by the trade for internal administrative purposes. This <Handelsartikelnummer> is **only relevant in the relationship between trade and crafts** and is used there.

Content	Description	Structure
Handelsartikelnummer	Relevant in the trade/crafts relationship	Text 15

3.1.4 GTIN

The GTIN is the successor to the former EAN and describes an **unambiguous article key in the European area**. Stating the GTIN is an important quality characteristic for the actual products. There are some exceptions in the assortment (cf. chapter 1.2) where the GTIN is often missing.

Content	Description	Structure
GTIN (EAN)	GTIN consisting of 13 or 14 characters to identify the article within the catalogue	GTIN format

3.2 Article validities

Information on validities are to be understood as **combined article- and price validities of an article**. The validity information at article level may vary from the information in the header data, which refer to the entire data delivery.

These details are non-binding and may be changed in subsequent data deliveries.

3.2.1 Start of validity

Example: A new article will only be sold from 01/04/2020; start of validity of the entire data delivery is 01/04/2020.

Content	Description	Structure
Gültigkeit Artikel Beginn	Start of validity at article level: precedence over validity at header level. Example: 01042020	Date (DDMMYYYY)

3.2.2 End of validity

Example: An article will expire on 30/06/2019, but the end of validity of the entire data delivery in the header data is 31/12/2019.

Content	Description	Structure
Gültigkeit Artikel Ende	End of validity at article level: precedence over validity at header level. Example: 30062019	Date (DDMMYYYY)

3.3 Deletion of articles

Articles that are no longer distributed by the manufacturer should be provided at least once with a deletion indicator. This deletion indicator should only be set for articles that have had a discontinuation indicator for at least 12 months (in relation to when the discontinuation indicator was set). Articles marked with a deletion indicator can be eliminated from the subsequent data delivery.

The delivery of “deleted” articles that had already been deleted causes no problems.

In case the article had no discontinuation indicator, it should be set first (if necessary, with a discontinuation date that corresponds to the data delivery date).

Furthermore, the following definitions for the delivery of discontinued articles and for setting the discontinuation date apply:

- Articles should only be discontinued, if they were marked as phasing out in the last delivery and the discontinuation date has been reached at the date of delivery.
- The discontinuation date should not exceed the start of validity date for more than 2 years at maximum.
- The discontinuation date of a not deleted article should not lie more than 2 years in the past.

As the discontinuation date is an estimated discontinuation date, it will be postponed in course of time. In this case the discontinuation date should be adapted with the next data supply.

Content	Description	Structure
Löschung	Labelling: Yes, No	Value list

3.4 Alternative articles, discontinued articles, and successor models

Alternative articles are articles that are **similar to the original article** and can be used in its stead. Consequently, alternative articles need to be available in the assortment.

A **discontinued article** is an article that **will be deleted from the assortment in the future**. It is assigned a discontinuation date in the data record. If there is a **successor model** to the discontinued article, it is **labelled accordingly**, and the factory article number of the successor model will be required.

If necessary, up to three successor models may be given. For discontinued articles, all data such as prices, images, dimensions and weights etc. must still be provided.

Content	Description	Structure
Alternativartikel	Indication of an article number => reference to an article from the assortment that can be used instead of the required article	Text 15
Auslaufartikel	Labelling: Yes, No, Yes with successor model	Value list
Auslaufdatum	Indication of the expected discontinuation date if labelled as a discontinued article Earliest possible deletion 12 months after discontinuation date	Date (DDMMYYYY)
Nachfolgeartikel	Article number of the successor model which needs to be stated in the data delivery. Indication is relevant if labelled as a discontinued article with successor model. Indication of 3 possible successor models max.	Text 15

For the mapping of alternative articles and successor models within the data provided by the wholesale trade for the craft trade, the typification of the references is optional. The typification is only relevant in the relationship between retail and the skilled trades and is not displayed by the ARGE systems. An industrial company cannot supply the type because it is not displayed in the corresponding interfaces and software systems.

3.5 Production period

Production periods can be stated for all articles in the assortment. For active articles, the start of production is stated. **If an article is discontinued** and ceases to be produced, stating the end of production makes this article a **<historical product>** (cf. chapter 11).

Content	Label	Structure
Baujahr von	Start of the production period	Date (DDMMYYYY)
Baujahr bis	End of the production period	Date (DDMMYYYY)
Baujahr Text	Notes/annotations regarding the years of manufacture	Text 35

3.6 Deep Link

Giving a Deep Link (URL) is a complement and redirects to a relevant webpage of the industrial company where further information on the article may be found. The organization is responsible for the function of the Deep Link. One Deep Link per article can be provided.

Content	Description	Structure
Deep Link URL	URL of a website to access further article information. Example: http://www.manufacturer.de/article/articlenumber/4711211	Text 256

3.7 Raw materials

Information on the raw materials of an article describes the **ingredients of a product**. Price-relevant raw materials of a products should be transmitted to the master data server. For each article, several raw materials with further information may be named:

Content	Description	Structure
Material	Raw material that the information refers to	Value list
Gewichtsbasis	Total weight of the article/product	Decimal number
Basiseinheit	Weight unit in line with the value list	Value list
Gewichtsanteil	Proportion of the raw material in question: e.g. per cent	Decimal number
Anteileinheit	Proportion unit of the raw material	Value list
Rohstoffnotierung	Commodity price based on which the price was calculated: in each case related to 100 kilograms of the raw material	Decimal number

3.8 Series

A series brings different products together under a common brand family. Hence, an article may be a part of a defined product series or range and is directly allocated to it.

Content	Description	Structure
Serie	Name of the product series the article in question belongs to	Text 80

3.9 Model number

The model number consists of a combination of digits and letters and serves to define a **precise version of an article**. For instance, the model series of an article may comprise several articles with different functions and different years of manufacture.

Content	Description	Structure
Modell	Model number assigned by the industrial company	Text 15

3.10 WELL label

The **WELL label** is a hitherto voluntary classification system used by the valve manufacturers that **classifies the energy consumption** (with a focus on warm water) **of fittings**. The WELL label is also used with flushing systems and accessories. The classification system can be compared to the energy label for electrical appliances; it differentiates between application in the public and the private sector. The WELL label may be stored as a complementary document with the article (cf. chapter 9.2.1).

3.11 Accessories

If one or more articles are available as **accessories to a product from the assortment** of the organization, they are allocated by means of the factory article number. All accessories listed need to be available in the assortment.

Content	Description	Structure
Zubehörartikel	Factory article number/trade article number of the accessory	String 15
Menge	Number of accessories allocated to a product	Decimal number

For the illustration of article accessories within the data provided by the wholesale trade for the trade, the typification of references is optionally possible. The typification is only relevant in the relationship between trade and craft trade and is not displayed via the ARGE systems. An industrial company cannot supply the type because it is not mapped in the corresponding interfaces and software systems.

3.12 Control indicators

Control indicators control the general display of an article on the appropriate platforms (e.g. *SHK-Branchenportal*). For instance, the following **indicators control the display of an article in the shop or the spare parts system** of the portal, facilitating the placement of an order directly with the organization.

Content	Description	Structure
Bestellfähigkeit unterdrücken	Control of the availability for order of an article in the ordering system. Please note: The service <Bestellung> (order) is another prerequisite in the rights structure of the <i>SHK-Branchenportal</i> for an article to become available for order.	Yes/No
Anzeige in	Control of the display of the article in the ordering- and spare parts system of the <i>SHK-Branchenportal</i> .	Value list

3.13 Packaging disposal

The information LUCID number and disposal service provider is given for products subject to packaging disposal in the communication between wholesaler and tradesman at article level. In data provision by the industry, the information is transferred at header level.

Content	Description	Structure
LUCID-Nummer	LUCID number	Text 40
Entsorgungsdienstleister	Name of the disposal service provider	Text 40

3.14 Match code

Within the data provided by the wholesale trade for the craft trades, the match code is optional. The match code is only relevant in the relationship between retail and the skilled trades and is not displayed via the ARGE systems. An industrial enterprise cannot supply the match code because it is not mapped in the corresponding interfaces and software systems.

Content	Description	Structure
Match code	Match code	Text 15

4 Product texts

As regards content, the texts to be provided that **describe precisely one article or a group of similar articles** can be short texts, long texts and dimension texts.

As an optional feature, additional product texts can be maintained for every article from the assortment. These text types give a comprehensive description of an HVAC industry product across all distribution levels. They provide advantages in the creation and use of texts and are optimized for involved processes.

In the medium term, the text types used so far (Chapters 0 thru 4.5) will be replaced by the short article summary, the article summary, the marketing text, and the application note.

4.1 Requirements on character set and formatting

As regards **common product texts**, such as short text 1 and 2, long text and dimension text, the following requirements on the character set apply to all:

- Alphanumeric upper-case and lower-case characters with umlauts and blanks
- Permitted special characters are: ! „ # \$ % & ' () * + , - . / : < = > ? @ ^ _ ` § ß

As regards **optional product texts**, such as short article summary, article summary, marketing text, and application note, **extended requirements on the character set apply** referring to UNICODE:

- U0020 – U007F Latin Basic without control characters
- U00A0 – U00FF Latin-1 Supplement without control characters
- U0100 – U017F Latin Extended-A
- U0370 – U03FF Greek, Coptic
- U0400 – U04FF Cyrillic
- U20A0 – U20CF Currency symbols
- U2000 – U206F Punctuation
- U2200 – U22FF Mathematical characters
- U2300 Diameter symbols

The formatted continuous texts, such as article summary, marketing text, and application note, are in HTML mode. The following tags can be used:

Paragraph, line break	<p>,
Bold, italics, underlined	, , <i>, <u>
Sorted and unsorted list	, ,
Font sizes (headlines)	<h1>, <h2>, <h3>, <h4>

In addition, line breaks (U000A and U000D) can be used.

4.2 Short text 1 and 2

The short text is needed for the description and identification of an article in the entire business process. This does not only apply to first-stage processing, but above all to further use of the short text without revision in downstream systems and e.g. in quotations or invoices.

It provides a **clear, legible, understandable** and **product-relevant limited description of an article**. The short text consists of 80 characters over two lines of 40 characters each. Due to this restriction, the **use of abbreviations according to the ARGE list of abbreviations is permitted**, with the primary objective of guaranteeing good legibility of the texts. The short text does not contain marketing aspects, duplicate texts are to be avoided.

Exception: In the case of spare parts, the article number may be included in the short text to ensure unambiguousness.

Content	Description	Structure
Kurztext 1	40 characters max.; observe attribute order	Text 40
Kurztext 2	40 characters max., logical separation from short text 1 without continuous text or hyphenation; observe attribute order	Text 40

4.3 Attribute order of the short texts

The following attribute order is recommended, if information can be provided on the attributes in question.

	Text attribute	Comment	Examples ¹
1	Hersteller	The manufacturer's name at the beginning of the short text is mandatory. The manufacturer is responsible for the presentation. If the manufacturer's name is abbreviated, this abbreviation has to be used consistently. The manufacturer's name has to be abbreviated using two letters; the abbreviations are not subject to the rules of the list of abbreviations. The directory of manufacturer's name abbreviations is kept by the ARGE, abbreviations are to be coordinated with the ARGE.	Friedrich Grohe => FG
2	Waren-bezeichnung	The product description is to be given in the singular. It can be assigned by the supplier at their discretion.	Wash basin mixer
3	Serie	To be written in the manufacturer's own style. The adopted style is to be used consistently.	Europlus
4	Modell-bezeichnung/ Modell-Nummer	There may be no line break in the model name/model number. For an unambiguous description of spare parts, the article number may be used in the short text.	33155
5	Eigenschaft	Technical particularities of the product are stated here.	Electronical
6	Maße	<u>Order of dimensions:</u> Sanitary – recommended: L/D x W x H Heating – recommended: H x W x L/D If dimensions are given in millimetres (mm), the unit can be omitted. With all dimensions that are not given in millimetres the unit has to be provided. The decimal character is the comma, without blank. The character for inch is “. Mixed fractions are permitted.	DN15
7	Erweiterte Eigenschaften	Indication of colour, surface, glass type, profile of the product or other features used for differentiation	Chrome

¹ The examples are not coherent. They should be seen as an example for a single text attribute only.

4.4 Long texts

Long texts describe articles in detail and represent **group texts in terms of content** that can generally be **assigned to a group of similar articles** (e.g. several products from one series). These texts are made available to the end customer too, in quotations or invoices. Long texts are no tender texts; they can at most be a part of such texts. 99 lines of 40 characters each are available for long text maintenance.

Content	Description	Structure
Langtext Nummer	Identification number	Text 8
Langtextzeilennummer	Consecutive line number of the long text 1-99	Integer 9
Langtext	Text content: 40 characters max. per line	Text 40

Consequently, long texts are not maintained on the article. Reference to the related long text is made by means of an unambiguous identification number that is allocated to the article.

Content	Description	Structure
Langtextnummer	Identification number, reference to the related long text	Text 8

4.5 Dimension texts

Dimension texts are a **product-specific complement**. 99 lines of 40 characters each are available for dimension text maintenance, e.g. to describe special **product features in detail** (extended short text) that do not apply to all products in the group.

Content	Description	Structure
Dimensionstextzeilennummer	Consecutive line number of the long text 1-99	Integer 2
Dimensionstextzeile	Text content: 40 characters max. per line	Text 40

4.6 Short article summary

The short article summary is an **article-identifying, unambiguous description** of a product as unformatted continuous text. The requirements are similar to the requirements for short text 1 and 2. Analogous to short text 1 and 2, the exception rule for spare parts applies that the article number of spare parts may be included in the short description of the article to ensure its unambiguousness. Due to the higher number of usable characters, abbreviations are only used in exceptional cases. This text type is used in all commercial documents and in incoming-goods processes.

Content	Description	Structure
Artikelkurzbeschreibung	Unformatted single-line short article summary	Text 256

4.7 Article summary

The article summary is a **comprehensive description of all technical features** of a product. It includes references to standards or safety instructions and information on components or mandatory accessories. The article summary is mainly intended for the user groups of specialized craftsmen and planners.

Content	Description	Structure
Artikelbeschreibung	Formatted product-related continuous text in HTML mode	Text 10000

4.8 Marketing text

The marketing text is a **user-oriented description of an article** as formatted continuous text. It is not intended to be exhaustive and does not generally provide technical details. This text type is for instance used when compiling price lists at the wholesaler's or in information offers directed at the specialized craftsman.

Content	Description	Structure
Vermarktungstext	Formatted marketing-oriented continuous text in HTML mode	Text 10000

4.9 Application note

The application note provides **advice on processing techniques that deviate from standard procedures** (e.g. reference to special tools). This text type is mainly intended for the user groups of wholesalers and specialized crafts businesses.

Content	Description	Structure
Verwendungshinweis	Formatted continuous text with application advice in HTML mode	Text 512

5 Attributes

Attributes are used to transmit the **extended characteristics and forms of an article**.

Through attributes various contents are mapped. These are:

- ETIM classification
- Keywords
- Assumption of Liability Agreement of the ZVSHK
- Allocation of fees to articles
- Regulations
 - ErP (heating label)
 - Energy efficiency categories
 - UBA Positive list
 - Hazardous good
 - REACH attribute
 - Information on hazardous substances
 - Battery information
 - Attribute ECHA data base
 - Disposal

Depending on the content different definitions apply for the fields being used. In the following, this is defined for the different contents.

Principally, the extended character set can be used within the attributes (see chapter 4.1 Requirements on character set and formatting).

Fields of the article attributes

Content	Description	Structure
Attributsystem	Stating the attribute system that the attribute refers to	Value list
Attributklasse	Allocation to an attribute class	Text 35
Attributname	Unambiguous name/characteristic of the attribute	Text 35
Attributwert	Value of the attribute	Text 35
Attributwert 2	Upper value of the attribute if it is an attribute of the RANGE type	Text 35
Attributeinheit	Unit of the attribute	Text 35
Attributwertbeschreibung	Complementary description of the attribute value	Text 35

5.1 ETIM classification

Using the attributes facilitates product classification in accordance with the **ETIM classification model** (Electrotechnical Information Model). Stating the ETIM class for the commodity groups agreed upon between ARGE, DGH and ZVSHK is required. For further information on ETIM please go to www.etim-international.com. The transfer of several ETIM versions is basically possible and desired. The two most current versions are always supported.

Content	Description	Structure
Attributsystem	Unambiguous name of the system: ETIM version “ETIM 7” or “ETIM 8”	Value list
Attributklasse	ETIM class ID according to the ETIM model	Text 60
Attributname	Name of the attribute when using the ETIM feature ID according to the ETIM model	Text 60
Attributwert	Value of the attribute; depending on the feature type in the ETIM model different information can be given <ul style="list-style-type: none"> Feature type “selection” -> value ID according to ETIM model Feature type “logical” -> “true” or “false” Feature type “numerical” -> numerical value Feature type “range” -> lower numerical value 	Text 256
Attributwert 2	Upper numerical value of the feature type “range”	Text 60
Attributeinheit	Is not used during the transfer, as the unit arises from the ETIM model.	Text 60
Attributwertbeschreibung	Complementary description of some attribute values in plain text: e.g. colour indication “polar white”, which is not subject to any DIN standard	Text 60

Example of ETIM classification: wash basin

Factory article number	Attribute system	Attribute class	Attribute name	Attribute value	Attribute value2	Attribute unit	Attribute value description
4711	ETIM 7	EC011550	EF002169	EV000572			
4711	ETIM 7	EC011550	EF001257	EV000154			
4711	ETIM 7	EC011550	EF000051	EV000396			
...							
4711	ETIM 7	EC011550	EF020706	1			
...							
4712	ETIM 7	EC011550	EF011666	540	543		
...							
4713	ETIM 7	EC011550	EF023790	true			
...							
4714	ETIM 7	EC011550	EF000040	135			

When transferring ETIM, the Attribute Unit field is not used because the unit is defined by the model. The field Attribute Value 2 may only be used for characteristics of type Range. No entry may be made for characteristics of type Logical, Selection and Numeric. The Attribute Value Description field may only be used in two application cases to specify the colour more precisely.

1. More precise specification of colours

Example: Attribute name: EF00007 (colour), attribute value1: EV000270 (grey);
attribute value description "dust grey"

2. The reason why an attribute value was indicated with a dash:

NA – Not applicable (this characteristic does not apply to this product in the context of the class)

MV – Missing Value (an alphanumeric characteristic is relevant, but there is no correct value in this ETIM version)

UN – Unknown (currently it is not possible for the data provider to provide a specific value, but in general it would be possible)

The provision of features being filled with „dash“ is not mandatory. If the feature is not applicable to this article, this should be made with the description „NA – Not applicable“.

5.2 Keywords

Keywords (also search terms, synonyms) generally mean nouns of pivotal importance that allow statements about a text content. Keywords are short and concise customary terms as an alternative to the short summary. They serve to make the search for products in electronic systems easier. They are **transmitted within the attributes** stating the **<INDIV> attribute system**. As attribute name „keyword“ has to be stated. Several keywords can be given for one article.

Example for keywords: tray base

Factory article number	Attribute system	Attribute class	Attribute name	Attribute value	Attribute value2	Attribute unit	Attribute value description
1	INDIV		Keyword	Tray base			

The specifications „Attribute class“, „Attribute value2“, „Attribute unit“ and „Attribute value description“ must not be stated.

5.3 Assumption of Liability Agreement of the ZVSHK

The Assumption of Liability Agreement (HÜV for short) is a contract between a manufacturer (accredited partner) and the ZVSHK in favour of the HVAC member companies (Art. 328 BGB [German Civil Code]). If the manufacturer's product causes a defect for the member company's customer (principal), the member company shall be entitled to claim damages against the manufacturer of the product. However, the principal's claim for defects only exists if the material/device/system was already defective at the time of acceptance under the contract for work (source: ZVSHK Assumption of Liability Agreement, February 2016 edition).

Transmission occurs within the Attributes, stating the attribute system <ZVSHK> and the attribute name "Haftungsübernahmevereinbarung" [Assumption of Liability Agreement]. Possible values: Yes, No, Not specified.

Example Assumption of Liability Agreement: Yes

Factory article number	Attribute system	Attribute class	Attribute name	Attribute value	Attribute value2	Attribute unit	Attribute value description
1	ZVSHK		Haftungsübernahmevereinbarung	Yes			

The specifications „Attribute class“, „Attribute value2“, „Attribute unit“ and „Attribute value description“ must not be stated.

5.4 Allocation of fees to articles (calibration fees)

For mapping the calibration fees for articles, such as water meters, an own article type is available. Through this article the fee is stated. The allocation, which „fee article“ belongs to an article, is made by the specification as detail at the article.

The mapping takes place within the attribute under the specification of the attribute system „Gebühren“. „Eichgebühren“ has to be stated as attribute name. The article number of the fee is stated as attribute value.

Example:

Specification of the allocation of the fee article (GEB-4711) as calibration fee to the article „Wasseruhr“ (4715).

Factory article number	Attribute system	Attribute class	Attribute name	Attribute value	Attribute value2	Attribute unit	Attribute value description
4715	Gebühren		Eichgebühren	GEB-4711			

The specifications „Attribute class“, „Attribute value2“, „Attribute unit“ and „Attribute value description“ must not be stated.

5.5 Regulations

The contents to regulations are transferred in a common attribute system „Regulations“ (Code „Regulations“). The differentiation of the single regulations/ranges is made by the attribute class.

The following classes are used:

- ERP heating label -> „ERP“
- Energy efficiency classes -> „ERP“
- UBA Positive list -> „UBA-Positivliste“
- Hazardous goods -> „Gefahrgut“
- REACH indication -> „REACH“
- Information on hazardous substances -> „Gefahrstoff“
- Battery information -> „Batteriekennzeichnung“
- Indication ECHA data base (SCIP) -> „ECHA-DB“
- Disposal -> „Entsorgung“
- Explosive substances regulation -> „Explosionsstoffverordnung“

5.5.1 ErP (Heating Label)

Energy values for composite systems: here, the basis for implementation is the interface documentation issued by the VDZ. They are **transmitted within the attributes** stating the **attribute system** **“Verordnungen”** and the attribute class „ERP 1.15“, „ERP 2.0“, „ERP 2.1“, „ERP 2.3“, „ERP 2.5“.

5.5.2 Energy efficiency classes

Energy efficiency is a measure of the amount of energy used to achieve a defined benefit from products. The labelling of the energy consumption of different products serves to support the purchase decision. It provides information about the energy efficiency during use (economic principle). A well-known example is the EU energy label for electrical appliances.

The following areas have been defined with the corresponding regulations. However, not all energy efficiency classes, e.g. for circulation pumps or fans, have been defined yet.

Sector: Boilers and combi-boilers (gas/oil/electric)

Regulation: Commission Regulation (EU) No 813/2013, Commission Regulation (EU) No 811/2013

Energy efficiency class description	Abbreviation / Attribute name
Class for seasonal space heating energy efficiency	jahresz. bed. Raumheizung
Class for seasonal space heating energy efficiency in medium-temperature applications (55 °C)	jahresz. bed. Raumheizung mitteltemp. 55C
Class for seasonal space heating energy efficiency in low-temperature applications (35 °C)	jahresz. bed. Raumheizung niedertemp. 35C
Class for water heating energy efficiency	Warmwasseraufbereitung
Class for seasonal space heating energy efficiency of the compound system consisting of room heater, temperature controller and solar device	jahresz. bed. Raumheizung Verbundanlage
Class for seasonal space heating energy efficiency of the compound system consisting of combination heater, temperature controller and solar device	jahresz. bed. Kombiheizung Verbundanlage
Class for water heating energy efficiency of the compound system consisting of combination heater, temperature controller and solar device	Warmwasseraufbereitung Verbundanlage

Sector: Water heater (gas/oil/electric)

Regulation: Commission Regulation (EU) No 814/2013, Commission Regulation (EU) No 812/2013

Energy efficiency class description	Abbreviation / Attribute name
Class for water heating energy efficiency	Warmwasseraufbereitung
Energy efficiency class of the hot water tank	Warmwasserspeicher

Sector: Air conditioning and ventilation technology in households

Regulation: Commission Regulation (EU) No 206/2012, Commission Regulation (EU) No 626/2011

Energy efficiency class description	Abbreviation / Attribute name
Class for energy efficiency – cooling	Kühlung
Class for energy efficiency – heating colder climate zone	Heizung kältere Klimazone
Class for energy efficiency – heating medium climate zone	Heizung mittlere Klimazone
Class for energy efficiency – heating warmer climate zone	Heizung wärmere Klimazone

Sector: Circulating pumps**Regulation:** Commission Regulation (EC) No 641/2009

Energy efficiency class description	Abbreviation / Attribute name
Not yet defined, possibly energy efficiency index	

Sector: Fans**Regulation:** Commission Regulation (EU) No 327/2011

Energy efficiency class description	Abbreviation / Attribute name
Not yet defined	

Sector: Water pumps**Regulation:** Commission Regulation (EU) No 547/2012

Energy efficiency class description	Abbreviation / Attribute name
Not yet defined	

Sector: Solid fuel boilers**Regulation:** Commission Regulation (EU) No 2015/1189, Commission Regulation (EU) No 2015/1187

Energy efficiency class description	Abbreviation / Attribute name
Energy efficiency class of the solid fuel boiler	Festbrennstoffkessel
Energy efficiency class of the compound system consisting of a solid fuel boiler, auxiliary heating equipment, temperature controller and solar equipment	Festbrennstoffe Verbundanlage

Sector: Household lighting, general lighting**Regulation:** Commission Regulation (EC) No 244/2009, Commission Regulation (EU) No 1194/2012, Commission Regulation (EU) No 874/2012, Commission Regulation (EU) No 2019/2015

Energy efficiency class description	Abbreviation / Attribute name
Energy efficiency class of the lamp	Lampe
Energy efficiency class chandelier approved from/to	Leuchter genehmigt von/bis
Energy efficiency class LED from/to	LED von/bis
Energy efficiency class of the illuminant	Leuchtmittel

Sector: Individual room heaters

Regulation: Commission Regulation (EU) No 2015/1188, Commission Regulation (EU) No 2015/1185, Commission Regulation (EU) No 2015/1186

Energy efficiency class description	Abbreviation / Attribute name
Energy efficiency class of the individual room heater	Einzelraumheizgerät

Sector: Hot-air central heating (without CHP)

Regulation: Commission Regulation (EU) No 2016/2281

Energy efficiency class description	Abbreviation / Attribute name
Not yet defined	

Sector: Air conditioning, ventilation technology

Regulation: Commission Regulation (EU) No 1253/2014, Commission Regulation (EU) No 1254/2014

Energy efficiency class description	Abbreviation / Attribute name
Energy efficiency class of the bi-directional ventilation unit	Zwei-Richtung-Lüftungsgerät

The mapping of the energy efficiency classes is made by the attribute system “Regulations” (Code “Regulations”) and the attribute class “ERP”.

Products that are integrated into different systems must be assigned to different energy efficiency classes depending on the application:

Factory article number	Attribute system	Attribute class	Attribute name	Attribute value	Attribute value2	Attribute unit	Attribute value description
4711	Regulations		EEK LED von/bis	A+	A+++		
4712	Regulations		EEK Einzelraumheizgerät	A+			
4713	Regulations		EEK jahresz. bed. Raumheizung	A			
4713	Regulations		EEK jahresz. bed. Raumheizung mitteltemp. 55°C	B			
4713	Regulations		EEK jahresz. bed. Raumheizung niedertemp. 35°C	A++			
4713	Regulations		EEK Warmwasseraufbereitung	A			
.....							

The specifications „Attribute unit“ and „Attribute value description“ must not be stated. The attribute value2 may only be stated for the energy efficiency classes “Leuchter genehmigt von/bis” and “LED von/bis”.

5.5.3 UBA positive list

The **Positive List** issued by the Federal Environment Agency (UBA) **refers to metallic materials** used to manufacture products that get in contact with drinking water.

Every article requires a general statement as to whether it is subject to the Positive List. If so, an additional statement is required as to whether the requirements of the Positive List are fulfilled. Supplementary documents may be stored for articles that are both subject to the Positive List and fulfil its requirements (cf. chapter 9.2.1).

Content	Description	Attribute name	Structure
Kennzeichen UBA-Positivliste	Indication as to whether the article is subject to the UBA Positive List. “true” -> The article is subject to the UBA Positive List. “false” -> The article is not subject to the UBA Positive List.	Kennzeichen UBA-Positivliste	Yes/No
Kennzeichen UBA- Anforderung	Indication as to whether the article fulfils the requirements of the UBA Positive List. “true” -> The article fulfils the requirements of the UBA Positive List. “false” -> The article fulfils not the requirements of the UBA Positive List.	Kennzeichen UBA- Anforderung	Yes/No

The mapping of the specifications is made in the article attributes within the attribute system “Regulations” (Code “**Regulations**”) and the attribute class “**UBA-Positivliste**”.

Factory article number	Attribute system	Attribute class	Attribute name	Attribute value	Attribute value2	Attribute unit	Attribute value description
4711	Regulations	UBA-Positivliste	Kennzeichen UBA-Positivliste	false			
...							
4712	Regulations	UBA-Positivliste	Kennzeichen UBA-Positivliste	true			
4712	Regulations	UBA-Positivliste	Kennzeichen UBA-Anforderung	true			
...							
4713	Regulations	UBA-Positivliste	Kennzeichen UBA-Positivliste	true			
4713	Regulations	UBA-Positivliste	Kennzeichen UBA-Anforderung	false			

The specifications „Attribute value2“, „Attribute unit“ and „Attribute value description“ must not be stated.

5.5.4 Hazardous goods (transport ADR)

If an article is classified as hazardous goods, information regarding the UN number, hazard class and transport category is usually required. In the field of the so-called mixed products, hazardous goods may be stated without further additional information.

Content	Description	Attribute name	Structure
Kennzeichen Gefahrgut	Labelling required if the article is hazardous goods	Kennzeichen	Yes/No
UN-Nummer	Article number of the hazardous goods	UN-Nummer	String 35
Gefahrenklasse	Indication of a hazard class: classification in hazard categories	Gefahrenklasse	String 35
Beförderungskategorie	Important information regarding the transportation of the article	Beförderungskategorie	Value list
Offizielle Benennung	Official designation according to the specification in the material safety data sheet	Offizielle Benennung	String 256
Technische Benennung	Technical designation according to the specification in the material safety data sheet	Technische Benennung	String 256
Gefahrenzettel	Hazard label according to the specification in the material safety data sheet	Gefahrenzettel	String 256
Verpackungsgruppe	Packaging group according to the specification in the material safety data sheet	Verpackungsgruppe	String 256
Anzahl der Versandstücke	Number of the shipped items according to the specification in the material safety data sheet	Anzahl der Versandstücke	String 256
Beschreibung der Versandstücke	Description of the shipped items according to the specification in the material safety data sheet	Beschreibung der Versandstücke	String 256
Tunnelbeschränkungscode	Tunnel restriction code according to the specification in the material safety data sheet	Tunnelbeschränkungscode	String 256
Wassergefahrgutklasse	Water dangerous good class according to the specification in the material safety data sheet	Wassergefahrgutklasse	String 256
Begrenzte Menge	Restricted amount according to the specification in the material safety data sheet	Begrenzte Menge	String 256

The mapping of the specifications is made in the article attributes within the attribute system “Regulations” (Code “**Regulations**”) and the attribute class “**Gefahrgut**”.

Factory article number	Attribute system	Attribute class	Attribute name	Attribute value	Attribute value2	Attribute unit	Attribute value description
4711	Regulations	Gefahrgut	Kennzeichen	true			
4711	Regulations	Gefahrgut	Kennzeichen UN-Nummer				
4711	Regulations	Gefahrgut	Gefahrenklasse				
4711	Regulations	Gefahrgut	Beförderungskategorie				

The specifications „Attribute value2“, „Attribute unit“ and „Attribute value description“ must not be stated.

5.5.5 REACH regulation

Articles and ingredients of articles that are listed as substances of very high concern under REACH have to be labelled in the data delivery. Regulation (EC) No 1907/2006 (REACH Regulation) is an EU chemicals regulation that came into force on 1 June 2007. REACH stands for the **R**egistration, **E**valuation, **A**uthorisation and **R**estriction of **C**hemicals. As an EU regulation, REACH is equally and directly applicable in all member states.

Content	Description	Attribute name	Structure
Kennzeichen REACH	<p>Labelling is required if an article or ingredient of an article (chemical) is subject to the REACH Regulation as a substance of very high concern.</p> <p>Possible values are:</p> <p>“true” -> The article has been checked and is subject of the list. The statement of the date and the SHVC substance have to be made.</p> <p>“false” -> The article has been checked and is not subject of the list. The statement of the date has to be made.</p> <p>“no data” -> The statement of the date is not required.</p>	Kennzeichen	Code list
Datum der letzten Überprüfung der REACH-Liste	Date of completion of the verification that an article is on the REACH list.	Datum	String 35
SVHC-Name	Statement of the SHVC substance, why the article has been classified as REACH relevant. In the attribute description the CAS number can be stated additionally.	SVHC-Name	String 256

The mapping of the specifications is made in the article attributes within the attribute system “Regulations” (Code “**Regulations**”) and the attribute class “**REACH**”.

Factory article number	Attribute system	Attribute class	Attribute name	Attribute value	Attribute value2	Attribute unit	Attribute value description
4711	Regulations	REACH	Kennzeichen	true			
4711	Regulations	REACH	Datum	20201131			
4711	Regulations	REACH	SVHC-Name	Blei			20837-86-9

The specifications „Attribute value2“, „Attribute unit“ and „Attribute value description“ must not be stated.

5.5.6 Information on hazardous substances

If an article is classified as a hazardous substance in the sense of substances and mixtures (“CLP Regulation”), this article must be labelled accordingly. In addition, relevant information must be provided for the processes in a structured manner in line with the Material Safety Data Sheet.

Content	Description	Attribute name	Structure
Kennzeichen Gefahrstoff	Indicates whether the article is a hazardous substance	Kennzeichen	Yes/No
Handelsname	Trade name of the dangerous substance (Section 1.1 in the Safety Data Sheet)	Handelsname	String 256
Ergänzende Informationen	Supplementary information on the hazardous substance	Ergänzende Informationen	String 256
Signalwort Achtung	Indicates whether the signal word “Achtung”/“Attention” must be specified. (Section 2.2 in the Safety Data Sheet)	Signalwort Achtung	Yes/No
Signalwort Gefahr	Indicates whether the signal word “Gefahr”/“Danger” must be specified. (Section 2.2 in the Safety Data Sheet)	Signalwort Gefahr	Yes/No
Lagerklasse	Storage class (Section 7.2 or Section 15 of the Safety Data Sheet)	Lagerklasse	Value list Storage classes
Kennzeichen nur gewerblich	Indicator: “commercial only”	Kennzeichen nur gewerblich	Yes/No
GHS-Gefahrenpiktogramm	Specification of the hazard pictograms relevant to the article (Section 2.2 in the Safety Data Sheet) Several specifications can be transferred per article.	GHS-Gefahrenpiktogramm	Value list
Gefahrenhinweis	Hazard statements / H statements (Sections 2.1 and 2.2 in the Safety Data Sheet) Several specifications can be transferred per article.	Gefahrenhinweis	Value list
Sicherheitshinweis	Precautionary statements / P statements (Sections 2.1 and 2.2 in the Safety Data Sheet) Several specifications can be transferred per article.	Sicherheitshinweis	Value list

The mapping of the specifications is made in the article attributes within the attribute system “Regulations” (Code “**Regulations**”) and the attribute class “**Gefahrstoff**”.

The specifications “Attribute class”, „Attribute unit“ and „Attribute value description“ must not be stated.

Example of hazardous substance information in the attributes:

Factory article number	Attribute system	Attribute class	Attribute name	Attribute value	Attribute value2	Attribute unit	Attribute value description
4711	Regulations	Gefahrstoff	Indication	true			
4711	Regulations	Gefahrstoff	Trade name				
4711	Regulations	Gefahrstoff	Supplementary information				
4711	Regulations	Gefahrstoff	Signal word Achtung/Attention	Yes			
4711	Regulations	Gefahrstoff	Signal word Gefahr/Danger	Yes			
4711	Regulations	Gefahrstoff	Storage class	8A			
4711	Regulations	Gefahrstoff	Indicator Commercial only	No			
4711	Regulations	Gefahrstoff	GHS hazard pictogram	GHS02			
4711	Regulations	Gefahrstoff	GHS hazard pictogram	GHS02			
4711	Regulations	Gefahrstoff	Hazard statement	H226			
4711	Regulations	Gefahrstoff	Hazard statement	H318			
4711	Regulations	Gefahrstoff	Precautionary statement	P210			
4711	Regulations	Gefahrstoff	Precautionary statement	P211			

5.5.7 Battery information

As from 1 January 2020, for lithium batteries and products incorporating them, the summary of the results of the required tests shall be made available to any natural or legal person in the supply chain.

Proof must be provided in the form of the standardized UN 38.3 report of the United Nations. The legislation here already covers products manufactured after 30 June 2003.

The building services sector also has corresponding products, such as electronic fittings with batteries, cosmetic mirrors with rechargeable batteries or pressing tools with rechargeable batteries. The necessary information could not be determined so far.

Articles that contain lithium batteries and are subject to mandatory labelling in accordance with the currently valid ADR must be labelled accordingly (Kennzeichen Lithiumbatterie/lithium battery label). For articles with labelling, the additional document <UN 38.3 Report> must be assigned to the article and transferred.

Furthermore, it must be indicated whether the article is labelled accordingly on dispatch (battery pictogram).

Content	Description	Attribute name	Structure
Kennzeichen Lithiumbatterie	Indicates whether this article requires a <UN 38.3 Report> test report.	Kennzeichen	Yes/No
Batteriepiktogramm	<p>Indication whether and which labelling is required</p> <p>Possible values are:</p> <p><Yes, UN 3480></p> <p><Yes, UN 3481></p> <p><Yes, UN 3091></p> <p><Yes, UN 3090></p> <p><No></p>	Batterie-piktogramm	Value list

The mapping of the specifications is made in the article attributes within the attribute system “Regulations” (Code “**Regulations**”) and the attribute class “**Batteriekennzeichnung**”.

Factory article number	Attribute system	Attribute class	Attribute name	Attribute value	Attribute value2	Attribute unit	Attribute value description
4711	Regulations	Batterie-kennzeichnung					
4711	Regulations	Batterie-kennzeichnung	Battery pictogram	Yes, UN 3481			

5.5.8 Indication ECHA data base

As from 1 January 2021 articles have to be registered in the ECHA data base. The indication states, if the article is deposited in the data base.

Content	Description	Attribute name	Structure
Kennzeichen ECHA Datenbank	<p>Indication, if this article is deposited in the ECHA data base.</p> <p>“true” -> Deposited in the ECHA data base. The statement of the SCIP number has to be made.</p> <p>“false” -> Not deposited in the ECHA data base. The statement of the SCIP number has not to be made.</p> <p>“no data” -> For this article the listing is made in the ECHA database actually or will be clarified by the manufacturer actually. The statement of the SCIP number has not to be made.</p>	Kennzeichen	Code list
SCIP Nummer	SCIP number that has been allocated by the “provider of the data” during the registration. The number serves for the simplified report by the wholesaler.	SCIP-Nummer	String 36

The mapping of the specifications is made in the article attributes within the attribute system “Regulations” (Code “**Regulations**”) and the attribute class “**ECHA-DB**”.

Example ECHA data base within the attributes:

Factory article number	Attribute system	Attribute class	Attribute name	Attribute value	Attribute value2	Attribute unit	Attribute value description
4711	Regulations	ECHA-DB	Kennzeichen	false			
4711	Regulations	ECHA-DB	SCIP-Number	e991422-239c-4b49-8a42-3f4730aa51a0			

The specifications „Attribute value2“, „Attribute unit“ and „Attribute value description“ must not be stated.

5.6 Disposal / WEEE registration number

The WEEE registration number is given for products that are subject to electrical disposal.

Content	Description	Structure
WEEE-Registrierungsnummer	WEEE registration number	Text 40

The mapping of the specifications is made in the article attributes within the attribute system “Regulations” (Code “**Regulations**”) and the attribute class “**Entsorgung**”.

Example disposal within the attributes:

Factory article number	Attribute system	Attribute class	Attribute name	Attribute value	Attribute value2	Attribute unit	Attribute value description
4711	Regulations	Entsorgung	WEEE-Registrierungsnummer	ABC1234			

„Attribute value2“, „Attribute unit“ and „Attribute value description“ must not be stated.

5.7 Explosive substances regulation

The specifications are given for products that are subject to the explosive substances regulation.

Content	Description	Structure
Klasse	Specification of the class according to the explosive substances regulation Possible values are: <ul style="list-style-type: none"> • I for class I • II for class II 	Value list

The mapping of the specifications is made in the article attributes within the attribute system “Regulations” (Code “**Regulations**”) and the attribute class “**Explosionsstoffverordnung**”.

In the attribute description the CAS number can be stated.

Example explosive substances regulation within the attributes:

Factory article number	Attribute system	Attribute class	Attribute name	Attribute value	Attribute value2	Attribute unit	Attribute value description
4711	Regulations	Explosionsstoffverordnung	Klasse	I			CAS number

„Attribute value2“ and „Attribute unit“ must not be stated.

6 Prices

The following price types have been defined for articles and can be stated:

- **Factory list price:** sales price ex works (industry). A factory list price has to be provided as soon as it is also available in other publications issued by the industrial company.
- **RRP without tax:** Recommended non-binding resale price to the end customer
- **Retail list price:** This price is only relevant in the relationship between trade and crafts and is not displayed in the ARGE systems. An industrial company cannot provide this price to or through the systems of the ARGE because it will not be displayed in the relevant interfaces and software systems.

As a rule, price information is transmitted exclusive of VAT. Any selected price type requires indication of the relevant detailed information such as price value, currency, price basis, and price quantity unit.

Content	Description	Structure
Preiswert	Price information according to different price types	Decimal number
Währung	Currency of the price value	Value list
Preisbasis	Quantity of the article the price refers to; possible values are 1, 10, 100, and 1000	Integer 9
Preismengeneinheit	Quantity unit of the article the price refers to, e.g. piece(s), set, litre, kilogram	Value list

6.1 Price on request

A price on request (POR) for articles of the article types <Maßanfertigung> (customization), <Dienstleistung> (service) or <Software> can be stated as long as it is also stated in other publications.

If an article is labelled <Preis auf Anfrage> (price on request), it is not possible to state further prices. An existing article must not be changed to <Preis auf Anfrage> (price on request) during its life cycle

Content	Description	Structure
Preis auf Anfrage	Indication as to whether a valid price will only be transmitted on request	Yes/No

6.2 Sales tax class

No concrete tax rate is used here; the different tax classes are entered via a value list. One valid VAT class for Germany is stated for each article. Also, information on the withholding method and on the reverse charge mechanism can be given.

Content	Description	Structure
Umsatzsteuer	Sales tax class of the article	Value list

6.3 Invoicing basis

Information from a value list as to the basis for invoicing. The invoicing basis is **only relevant in the relationship between trade and crafts** and is not displayed in the ARGE systems. An industrial company cannot provide this invoicing basis to or through the systems of the ARGE because it will not be displayed in the relevant interfaces and software systems.

Content	Description	Structure
Abrechnungsbasis	Indication of the basis for invoicing	Value list

6.4 Price lines

Content	Description	Structure
Bezeichnung	Designation of the price line. It serves for identification.	Text 40
Linienpreis_Preiswert	Indication of price	Decimal number
Linienpreis_Waehrung	Indication of the currency for the price value	Value list
Linienpreis_Preisbasis	Indication of quantity for the article the price refers to: Possible values are 1, 10, 100, 1000	Integer 9
Linienpreis_Preismengeneinheit	Indication of quantity unit for the article the price refers to: e.g. piece, set, litre, kilogramme	Value list

7 Groups

All articles are classified in different group structures. **Four group types** have been predefined, with the naming and classifying of the single groups being the organization's responsibility.

7.1 Commodity group

The commodity group assigns the article **to a specified upper group structure (e.g. bathtub, fitting, radiator) based on its intended use**, which ideally corresponds to the table of contents of the print catalogue. This first allocation is relevant for classifying the article under a category. Each defined commodity group is given a group code consisting of 3 characters max., and a descriptive text.

Content	Description	Structure
Gruppenart	Commodity group of the industry (upper, first classification)	Value list
Gruppennummer	Commodity group ID (code): e.g. 010	Text 3
Gruppenbezeichnung	Plain text for description of the category, e.g. "fittings"	Text 40

Every defined commodity group can be complemented by documents or images (cf. chapter 7.5).

An unambiguous identification number (ID) to be maintained on the article provides a reference to the related commodity group.

Content	Description	Structure
Warengruppen ID	Identification number, reference to the related commodity group: the article is assigned to this commodity group	Text 3

7.2 Product group

After categorization under a commodity group, the product group facilitates a **finer classification of the article with regard to e.g. brand-, range- or model names**. The definition of product groups and the classification as well as the allocation of group codes and descriptive texts are chosen by the organization.

Content	Description	Structure
Gruppenart	Product group of the industry (finer classification)	Value list
Gruppennummer	Product group ID (code): e.g. 010001	Text 10
Gruppenbezeichnung	Plain text for description of the finer classification, e.g. <i>Produkta</i> fittings series	Text 40

Every defined product group can be complemented by documents or images (cf. chapter 7.5.)

An unambiguous identification number (ID) to be maintained on the article provides a reference to the related product group.

Content	Description	Structure
Produktgruppen ID	Identification number, reference to the related product group: the article is assigned to this product group.	Text 10

7.3 Discount group

The discount group assigns the article to a **condition group** within the 3-level distribution channel. Only general information is to be transmitted, no percentages. The contents of the discounts and the coding are defined by the organization.

Content	Description	Structure
Gruppenart	Discount group of the data supplier (condition group)	Value list
Gruppennummer	Discount group ID (code): e.g. RG12	Text 4
Gruppenbezeichnung	Plain text for description of the classification, e.g. discount group 12	Text 40

Every defined discount group can be complemented by documents or images (cf. chapter 7.5).

An unambiguous identification number (ID) to be maintained on the article provides a reference to the related discount group.

Content	Description	Structure
Rabattgruppen ID	Identification number, reference to the related discount group: the article is assigned to this discount group	Text 4

7.4 Bonus group

Bonus groups allocate the articles to a possible **condition group depending on the purchase quantity** (e.g. payment of bonuses depends on specific purchase quantities). The contents of the bonus groups and the coding are defined by the organization. Only general information is to be transmitted, no percentages.

Content	Description	Structure
Gruppenart	Bonus group of the industry (condition group/purchase quantity)	Value list
Gruppennummer	Bonus group ID (code): e.g. BG1	Text 35
Gruppenbezeichnung	Plain text for description of the classification, e.g. bonus group 1	Text 40

Every defined bonus group can be complemented by documents or images (cf. chapter 7.5).

An unambiguous identification number (ID) to be maintained on the article provides a reference to the related bonus group.

Content	Description	Structure
Bonusgruppen ID	Identification number, reference to the related bonus group: the article is assigned to this bonus group	Text 35

7.5 Group document allocation

Every group can be complemented by documents or images. It is possible to store several documents per group. At this point, all media types can be allocated, just like on the article (cf. chapter 9), and also the **additional media type LO for logo**.

Content	Description	Structure
---------	-------------	-----------

Dokument	Name of the document file (observe file naming convention)	Text 35
Dokumententyp	Type selection from predefined value list (cf. chapter 9.1.3 and Chapter 9.2.1); in addition, LO	Value list
Bild Verwendung	Web image or printed image: only relevant to images	Value list
Dokument Bezeichnung	Detailed description of the content of the allocated documents	Text 40
Dokument Sortierreihenfolge	Definition of a sorting sequence in case of several documents being allocated to one group	Integer

7.6 Group structure trade to specialized crafts businesses

This additional classification of articles in a commodity group and a product group is **relevant to the relation trade to crafts**. It is possible to transmit product groups as a function of commodity groups relating to one article.

7.6.1 Commodity groups trade

The commodity group assigns the article to a specified upper group structure.

Content	Description	Structure
Hauptwarengruppenkennzeichen	3-digit commodity group ID	Text 3
Hauptwarengruppenbezeichnung	Plain text for description of the commodity group, e.g. "fittings"	Text 40

An unambiguous commodity group identification number (ID) to be maintained on the article provides a reference to the related commodity group.

Content	Description	Structure
Hauptwarengruppenkennzeichen	Reference to the related commodity group: the article is assigned to this commodity group	Text 3

7.6.2 Product groups trade

After categorization under a commodity group, articles can additionally be assigned to a subordinate product group.

Content	Description	Structure
Hauptwarengruppenkennzeichen	3-digit commodity group ID	Text 3
Warengruppenkennzeichen	10-digit product group ID	Text 10
Warengruppenbezeichnung	Plain text for description of the product group, e.g. wash basin tap	Text 40

An unambiguous product group identification number (ID) to be maintained on the article provides a reference to the related product group.

Content	Description	Structure
Warengruppenkennzeichen	Reference to the related product group: the article is assigned to this product group	Text 10

8 Logistics

Providing logistical data related to the articles is important for all market partners involved and therefore an integral part of the complete data record. This optimizes or even facilitates the planning of routes and calculation of storage space in the trade. Logistical data are **basic details regarding the dimensions and weights** of an article, **minimum order quantities** and **packaging units**.

These data also include information on durability, hazardous goods, bulk goods, and delivery times.

8.1 Net dimensions and weights

Net dimensions and net weights are basic details and refer to an unpacked article. Data maintenance has to be performed on every dimension, weight and volume of an article in accordance with the value list. Several net dimensions can be given, but each defined dimension can only be used once per article.

Content	Description	Structure
Maßangabe	e.g. weight, volume, dimensions of an article	Value list
Maßwert	Measurement/weight value: "0" values are not permitted	Decimal number
Maßeinheit	Unit of the measurement/weight information as per value list	Value list

8.2 Information on the content

About the information on the content, if the article is invoiced apiece and if the content can be stated.

Examples:

- Pipe -> Information that the pipe consists of 50 m
- Roof gutter -> Information that the gutter consists of 3 m
- Knob plate -> Information that the plate is 1.2 m²
- Canister solvent -> Information that the container contains 10 litre
- Sack spackle -> Information that the sack has 5 kg
- Package screws -> Information that 100 pieces are in the package

Content	Description	Structure
Inhaltsmenge	Specification of the quantity in the content unit related to the order quantity unit	Decimal number
Inhaltseinheit	Unit of the content	Value list

8.3 Basic article

The basic article corresponds to quantity 1 of the price quantity unit.

All articles being calculated with the basic units of piece, pair, set or dozen have to be provided with the dimensions and the weight of the basic article.

The lengths of the sides a, b, and c result from **a (notional) cuboid around the basic article**.

The gross weight has to be greater than or equal to the net weight. **When using bags, the maximum dimensions of the bag** (a, b, c) form the basis of the measurements.

The following dimensions and weights are to be provided:

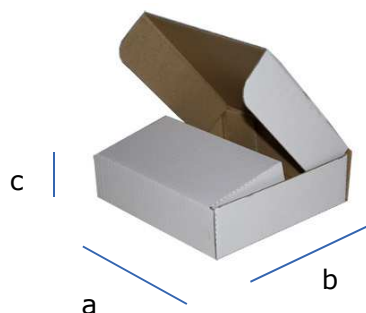
Content	Description	Structure
Maß a	Dimension a of the basic article incl. packaging	Decimal number
Einheit Maß a	Measurement unit for dimension a	Value list
Maß b	Dimension b of the basic article incl. packaging	Decimal number
Einheit Maß b	Measurement unit for dimension b as per code list	Value list
Maß c	Dimension c of the basic article incl. packaging	Decimal number
Einheit Maß c	Measurement unit for dimension c as per code list	Value list
Gewicht	Weight of the basic article	Decimal number
Einheit Gewicht	Measurement unit for the weight as per code list	Value list
Anzahl Packstücke	Quantity stating how many packages a basic article consists of, e.g. a shower screen is delivered in 2 boxes (=2 packages)	Integer

If the basic article is generally **individually packed**, the **dimensions and weight have to be stated including packaging**.

Illustration 1: Example tap (calculated per piece, individually packed by default)



basic article



Dimensions of the basic article in a (notional) cuboid

Relevant information for the example “tap”:

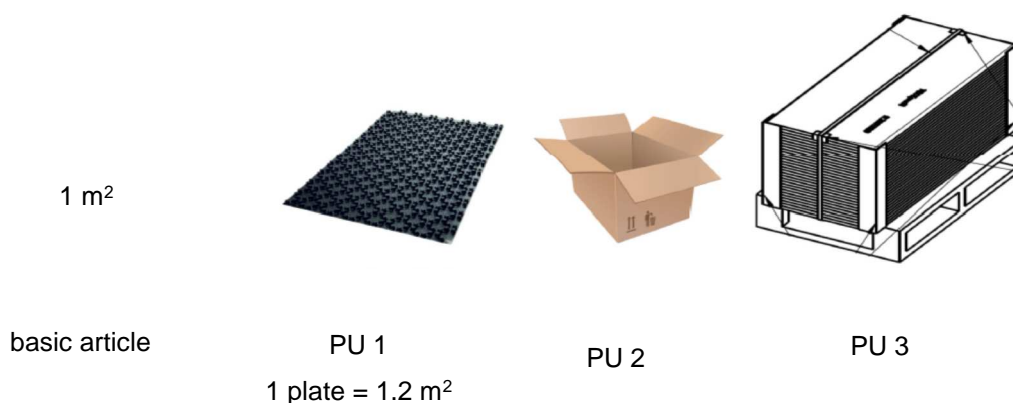
- Price unit: Piece
- Price basis: 1
- Minimum order quantity: 1
- Minimum order quantity unit: Piece
- Dimensions of basic article: Dimensions (a, b, c) of the packaging: 545 x 19 2x 73 mm
- Weight of basic article: Weight (g) incl. packaging: 2.1 kg
- PU 1: Box, 8 pieces; 575 x 370 x 365, weight of the box: 18.15 kg
- PU 2: Box, 16 pieces; 590 x 780 x 375, weight of the box: 37.45 kg

If the **basic article is generally unpacked** or not individually packed, **dimensions and weight have to be stated without packaging.**

Illustration 2: Example screw (calculated per piece, not individually packed by default)**Relevant information** for the example “screw”:

- Price unit: Piece
- Price basis: 1
- Minimum order quantity: 250
- Minimum order quantity unit: Piece
- Dimensions of basic article: Dimensions (a, b, c) of the single screw
- Weight of basic article: Weight (g) of the single screw
- PU 1: Box 250 pieces; 64 x 126 x 60, weight of the box
- PU 2: Box 4500 pieces; 304 x 205 x 198, weight of the box

For articles calculated by length, surface, volume or weight, stating the dimensions and weight of the basic article is not necessary.

Illustration 3: Example nub plate (calculated per square metre)**Relevant information** for the example “nub plate”:

- Price unit: m²
- Price basis: 1
- Minimum order quantity: 9.6
- Minimum order quantity unit: m²
- Dimensions of basic article: irrelevant
- Weight of basic article: irrelevant
- PU 1: plate 1.2 m²; 1440 x 800 x 70, weight of the plate
- PU 2: box 9.6 m²; 1510 x 890 x 380, weight of the box
- PU 3: pallet 57.6 m²; 1510 x 890 x 2300, weight of the pallet

For article consisting of several packages (number of packages unequal to 1), stating the dimensions and weight is not necessary. At present, the **dimensions of several packages cannot be transmitted**.

Recommendation: Transmission of the total weight of all packages and the dimensions of the notional cuboid around all packages.

8.4 Packaging units

Up to **five different packaging units** can be given for every article. For each packaging unit, the packaging type, the packaging quantity, and the packaging quantity unit are given. For each defined packaging unit, the required dimension- and weight details, and as a rule a separate GTIN, are given. The packaging units have to be given **without gap and in ascending quantity of the article contained therein**, with the quantity and weight getting bigger in ascending order (details re PU 2 need to be greater than those re PU 1, cf. examples). For articles calculated by length, surface, volume or weight, stating the smallest sales unit (irrespective of the minimum order quantity) as packaging type in PU 1 is required.

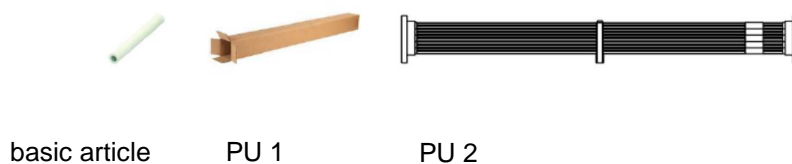
The statement of a GTIN at the packaging unit serves for the identification and has to correspond to the packaging unit. The GTIN of the article is only allowed to use, if the quantity of the packaging unit is stated with “1”. In this case the GTIN has also to be stated at the article. If a GTIN is stated at the PU, a GTIN has to be in place at the article as well. Excluded are articles, which are invoiced as per length, surface, volume or weight as well as articles (e.g. package screws) which are not individually wrapped as standard.

Example of a correct display of the packaging units:

Content	PU 1	PU 2	PU 3	PU 4	PU 5
VPE: Verpackungsart	CT	CT	PN		
VPE: Menge	6	12	240		
VPE: GTIN					
Maß a der Verpackungseinheit	305	605	1210		
Einheit Maß a	mm	mm	mm		
Maß b der Verpackungseinheit	405	405	810		
Einheit Maß b	mm	mm	mm		
Maß c der Verpackungseinheit	105	105	525		
Einheit Maß c	mm	mm	mm		
Gewicht der Verpackungseinheit	6.2	12.4	260		
Einheit Gewicht	kg	kg	kg		

Example of an incorrect display of the packaging units:

Content	PU 1	PU 2	PU 3	PU 4	PU 5
VPE: Verpackungsart	CT		PN	CT	
VPE: Menge	6		240	12	
VPE: GTIN					
Maß a der Verpackungseinheit	305		1210	605	
Einheit Maß a	mm		mm	mm	
Maß b der Verpackungseinheit	405		810	405	
Einheit Maß b	mm		mm	mm	
Maß c der Verpackungseinheit	105		525	105	
Einheit Maß c	mm		mm	mm	
Gewicht der Verpackungseinheit	6.2		260	12.4	
Einheit Gewicht	kg		kg	kg	

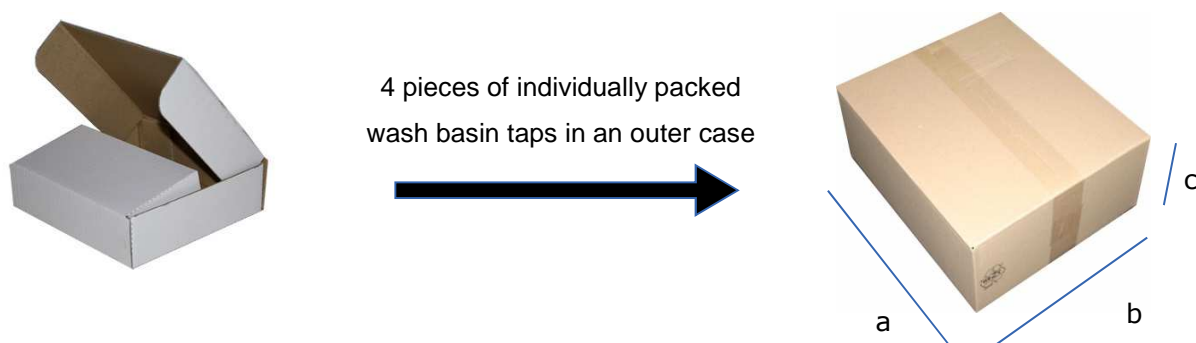
Illustration 4: Example tube (calculated by metres):

Basic article: 1 metre of tube (not supplied by the metre!)

PU 1: box with 1 rod of 5 m

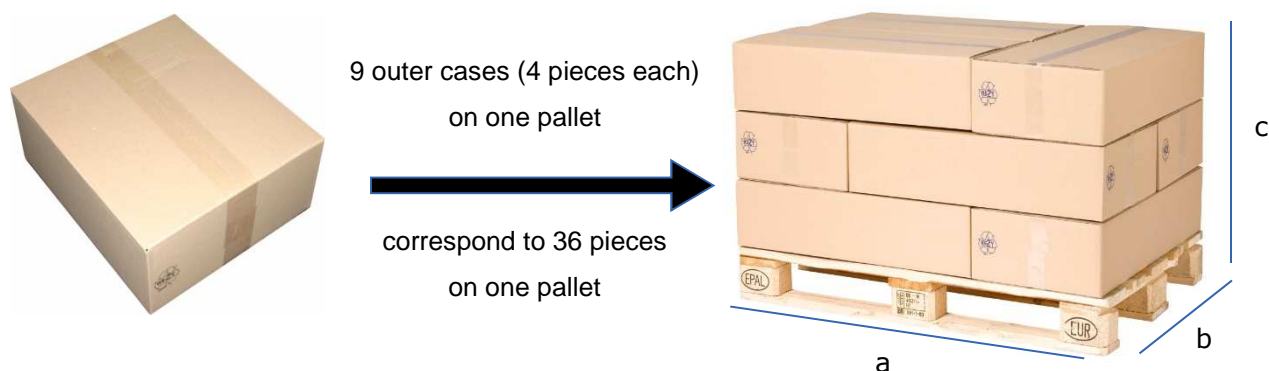
PU 2: box with 20 rods of 5 m each

Content	Description	Structure
VPE: Verpackungsart	Definition of the packaging type, e.g. box, basket...	Value list
VPE: Menge	Number of basic articles contained in the packaging unit	Decimal number
VPE: GTIN	Assignment of a new GTIN for the packaging unit. This GTIN is not identical with the GTIN of the article.	GTIN
Maß a der Verpackungseinheit	Dimension a of the packaging unit	Decimal number
Einheit Maß a	Measurement unit of dimension a	Value list
Maß b der Verpackungseinheit	Dimension b of the packaging unit	Decimal number
Einheit Maß b	Measurement unit of dimension b	Value list
Maß c der Verpackungseinheit	Dimension a of the packaging unit	Decimal number
Einheit Maß c	Measurement unit of dimension c	Value list
Gewicht der Verpackungseinheit	Weight of the packaging unit	Decimal number
Einheit Gewicht	Measurement unit of the weight of the packaging unit	Value list

Illustration 5: Example of a packaging unit 1 (PU 1)

PU 1 corresponds to a PU quantity of 4 with the PU quantity unit CT (box).

Illustration 6: Example of a packaging unit 2 (PU 2)



PU 2 corresponds to a PU quantity of 36 with the PU quantity unit PAL (pallet).

8.5 Minimum order quantity

The minimum order quantity of an article is relevant information and contains the smallest quantity of an article that is available for order. The stated **quantity may correspond to the content of packaging unit 1** (cf. chapter 4). The quantity units are defined in a value list.

Content	Description	Structure
Mindestbestellmenge	Minimum order quantity: always greater than 0 e.g. quantity/number of pieces (5) or length specifications (2.5)	Decimal number
Mindestbestellmenge Einheit	Unit of the minimum order quantity, e.g. PCE for piece, MTR for metre	Value list

8.6 Article sets

An article set is a **compilation of article numbers of one or more articles** that are combined in a **complete package**. Article sets are consequently composed of the set articles (“sub-articles”) and jointly form the outbound article or a package with a new factory article number (cf. chapter 1.2). All set articles have to exist in the assortment and be separately available for order. The commercial and logistic processes (e.g. ordering and delivering) are made by the components of the set.

Additionally, the following definitions apply:

- Articles containing allocation of set articles must have the article type “Paket / Set” (PAK).
- Articles of the article type “Paket / Set” (PAK) must contain allocations of set articles.
- The article set consisting of one single article with the quantity “1”, is not allowed.
- Within a set it is not allowed to allocate articles of the type “Paket / Set” (PAK), “Sonderartikel” (SON), “Gebühr” (GEB) or “Packstück” (PKS).
- Logistic sets (LOS) can be used as a component of sets.
- The components (referenced article or quantity) of an article set must not be changed.

Content	Description	Structure
Zugeordneter Artikel	Article number of the associated article. Example: JKS300620112	String 15
Menge	Number of associated articles for the article set/package in question, e.g. 5	Decimal number

8.7 Logistic sets

In the case that articles are provided in more than one component, where the subarticles all or partly are not orderable, it is a logistic set. The commercial processes (e.g. ordering) are made by the logistic set. The logistic processes (e.g. delivering) are made by the components. All stated components must be available within the assortment.

Additionally, the following definitions apply:

- The number of package has to be greater than “1”.
- Articles containing allocations of components (set articles) and **not all being orderable** must have the article type “Logistic Sets” (LOS).
- Articles of the article type “Logistic Sets” (LOS) have to contain allocations of components (set articles)
- Logistic sets consisting of a component with the quantity “1” are not allowed.
- Within a “Logistic Set” it is not allowed to allocate of the type “Paket / Set” (PAK), “Sonderartikel” (SON) or “Gebühr” (GEB).
- The components (referenced article or quantity) of a logistic set must not be changed.

Content	Description	Structure
Zugeordneter Artikel	Article number of the associated article. Example: JKS300620112	String 15
Menge	Number of associated articles for the logistic set in question, e.g. 5	Decimal number

Example:

Logistic Set (4713) (Type Logistsiches Set)

- 4711 condensing device (not individually orderable) (type package)
- 4712 tank (individually orderable (type standard article)

Example of the usage of a logistic set within an article set:

Set incl. exhaust system (4720) (type PAK)

- Logistic set (4713) (type logistic set)
- Exhaust system (4721) (type standard article)

8.8 Durability

Stating a durability period is useful with certain products, above all if they (partly) lose their function after a certain period of time (e.g. self-adhesive pipe insulation).

This **detail does not provide any information** on possible **warranty claims**, potential temporary storage of an article or legal requirements.

Content	Description	Structure
Haltbarkeitszeitraum	Indication of the period in months 1-99; 99 stands for unlimited durability	Integer

8.9 Standard delivery period

The delivery period is the **non-binding period of time** between order creation and arrival or availability of the goods at the market partner's for a standard purchase order. Standard purchase order means an order without indication of delivery times. This does not apply to scheduled orders.

At the wholesalers' the standard delivery period is used as information for stock management.

Content	Description	Structure
Standardlieferzeit	Indication of a period given in workdays (1 week has 5 workdays) The statement "0" days is not allowed.	Integer

8.10 Exportable articles

An article is labelled as exportable if it is generally approved for exportation, irrespective of the importing country. Exportable articles require the **indication of a country of origin** and a **commodity number**. As there is no commodity number for services and software and also no country of origin, this information cannot be provided for articles labelled accordingly.

Content	Description	Structure
Exportfähig	Indication as to whether the article is approved for exportation.	Yes/No
Warennummer	Information is necessary if the article is exportable : Statistical commodity group number required for customs- (import/export) and Intrastat declarations. Exception: Exportable services and software have no commodity number.	Integer 8
Ursprungsland	Optional indication of a country of origin (primarily relevant to export articles): Country of origin = the country where the article was manufactured or the last essential processing step was completed	Value list

9 Media data

Media data related to an article can be transmitted in the form of image data (colour images, line drawings, milieu images) and complementary documents (e.g. installation instructions, data sheets, videos, CAD drawings). Several images can be stored for one article.

The **file naming convention for image- and document files limits** the file name **to 35 characters max.** incl. dot and file extension. The permitted characters are alphanumeric including underscore and hyphen, with precisely one dot before the file extension. The file name may not contain any umlauts, special characters, blanks or further dots. The file name can be upper and/or lower case; for technical reasons, all will be converted to lower case after processing.

9.1 Images

All articles and spare parts from the assortment are allocated an image or a substitute image if necessary, which, as a rule, has to be marked in the data record as a substitute. Several images can be stored with one article.

With regard to the usage of image files, there is a distinction between web images and print images.

The following information on image files is required for allocating them to the article:

Content	Description	Structure
Dokument	Name of the document file (observe file naming convention)	Text 35
Dokumententyp	Type of document (image), cf. chapter 9.1.3	Value list
Bild Verwendung	Web image or print image	Value list
Stellvertreterkennzeichen	Indication as to whether the article depicted corresponds to the article or serves as a substitute.	Yes/No
Dokument Bezeichnung	Detailed description of the contents of documents: Example: 5 installation instructions for an article without differentiation; differentiation is possible in connection with the sorting sequence.	Text 40
Dokument Sortierreihenfolge	Pre-setting a sequence in case of several documents (incl. images) related to the article for optimal usability in the target systems	Integer

If more than one file is stated for an image type, the description and the sorting sequence should be used, in order to obtain a differentiation of the files and a unique indication.

9.1.1 Web images

Web images are primarily needed for **presenting the article in web applications**, such as displaying it in the shop and in the article search of the *SHK-Branchenportal* as well as in the in-house systems of the market partners. For this reason, the size of web images is limited to a maximum width of 640 pixels and a maximum height of 480 pixels at an **optimal resolution of 72 dpi minimum**.

Graphic formats that can be used for web images are JPEG and PNG.

9.1.2 Print images

Print images are **used in print media** and have a width of approx. 1500 pixels and a height of approx. 1500 Pixel at a size of 100 x 100 mm. Print image files are provided either in the RGB or in the CMYK colour space.

Graphic formats that can be used for print images are limited to JPEG, PNG, EPS, and TIFF.

9.1.3 Media types for images

The following media types are available for both web images and print images as defined in a value list:

Content (examples)	Description	Media type
Farbbilder	Cropped image (black & white or colour) of an article (without background, unpacked)	B_ S_
Strichzeichnungen	Image of an article consisting of lines	U_ V_
Milieu	Image of an article within an application scenario	MI
Detailbild	View of an article in detail	DT
Logo	Attention: Logos as media types are only permitted with groups, cf. chapter 7.5.	LO
Kein Bild	The specified file is a dummy image, since there is no article image. No image is used in other publications and web applications for this article.	KB
Bild folgt	The specified file is a dummy image. The picture will follow within the next 6 months.	BF

Examples of the media types Images:

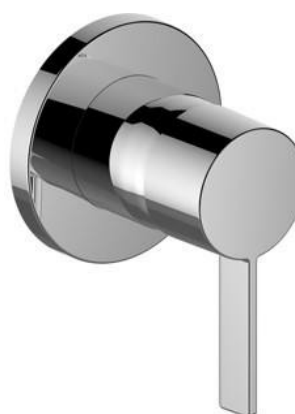
B_fotorealistisches_farbbild

B_photorealistic_colour_image

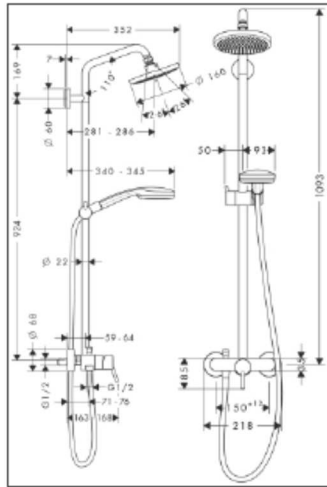


S_fotorealistisch_schwarzweiß_bild

S_photorealistic_black-and-white_image



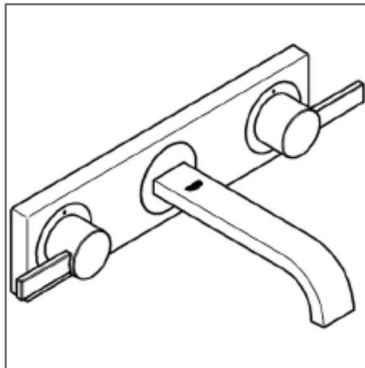
V_strichzeichnung_vermaßt
V_line_drawing_dimensioned



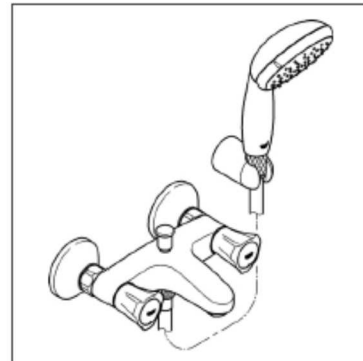
V_strichzeichnung_vermaßt
V_line_drawing_dimensioned



U_strichzeichnung_unvermaßt
U_line_drawing_undimensioned



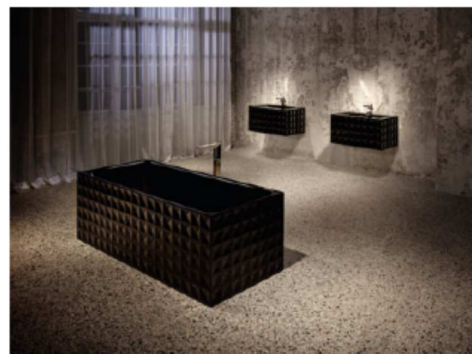
U_strichzeichnung_unvermaßt
U_line_drawing_undimensioned



DT_Detail
DT_detail



MI_Milieubild
MI_milieu_picture



9.2 Documents

All other media data that do not correspond to the <Bilddaten>/<image data> file type, are documents by definition. **Documents associated** to an article can be **complementary and informative** or **mandatory**, e.g. with hazardous goods in the form of a HAZMAT data sheet. Several documents of one document type can be stored with one article. Documents corresponding to several document types with regard to content can be assigned multiple times with the according document types.

Example: a PDF document containing a datasheet and assembly instructions.

Complementary documents can be provided to the master data server in standard formats, i.e. there is no limitation to particular formats.

Content	Description	Structure
Dokument	Name of the document file (observe file naming convention)	Text 35
Dokumententyp	Type of document, cf. chapter 9.2.1	Value list
Dokument Bezeichnung	Detailed description of the contents of documents: Example: 5 installation instructions (type MA) for an article without differentiation; differentiation is possible in connection with the sorting sequence.	Text 40
Dokument Sortierreihenfolge	Pre-setting a sequence in case of several documents of the same type for optimal usability in the target systems	Integer
Dokumentsprache	Specification of the language, in which the contents in the document are contained. Several languages can be stated.	Code list language

If more than one file is stated for an image type, the description and the sorting sequence should be used, in order to obtain a differentiation of the files and a unique indication.

9.2.1 Media types for documents

All documents of the different media types can be provided to the master data server in all current data formats. The following media types are available for documents:

Content	Description	Media type	Formats (mandatory)
2D-Draufsicht	2-D top view of the article	2D	No restrictions
2D-Frontale	2-D frontal view of the article	2F	
2D-Seitenansicht	2-D lateral view of the article	2S	
3D-Daten	3-D data	3C	
3D-Daten zur Darstellung im Browser	-	3A	No restrictions
Datenblatt	Technical details of the article, unless they are mapped in other, more specific document types, e.g. wiring diagram, installation instructions, etc.	DB	PDF
Gefahrgut-Datenblatt	Information on hazardous goods/Material Safety Data Sheet	GG	PDF

Instruktionen/ Bedienungsanleitung	Operating instructions for the article	IS	PDF
Montageanleitung	Installation instructions for craftsmen	MA	PDF
Wartungsanleitung	Information on the maintenance of the article	WA	PDF
Planungsanleitung	Information on planning and tendering	PA	PDF
Prospekte	Sales brochures B2B & B2C	PP	PDF
Zulassung	Approval of the article, if not mapped in other, more specific document types, e.g. fire protection, explosion protection etc.	ZL	PDF
Schulungsfolie	Training material for installation and use	SF	PDF
Leistungserklärung	Construction Products Directive	LE	PDF
Pflegeanleitung	Information on product care	PF	PDF
ErP Label	Energy label as energy labelling	EL	PDF
Schaltbild	Wiring diagram for installation	SB	PDF
Technische Zeichnung	Graphic description of the functions and characteristics of a product	TZ	PDF
UBA-Positivliste	List of the substances and materials used in articles suitable for contact with drinking water	UP	PDF
WELL-Label	WELL label as energy labelling	WL	PDF
Video	Film on the article	VI	No restrictions
Montagevideo	Film on the article / installation instructions	VM	
Tutorial	Training or instruction video	VT	
Einzelprospekt	Individual brochure for one article	EP	PDF
Brandschutz	General Building Approval issued by the <i>Deutsches Institut für Bautechnik</i> [German Institute for Structural Engineering] (certificate with approval no.) / fire protection	BS	PDF
Ex-Schutz	ATEX certification	EX	PDF
Korrosionsschutz	Proof of resistance to aggressive substances	KS	PDF
CE	CE Declaration of Conformity	CE	PDF
VDS-Zulassung	Certificates issued by the <i>Verband der Sachversicherer</i> [Property Insurer Association]	VD	PDF
Schallschutznachweis	Noise control inspection report and proof of suitability	SS	PDF
Prüfreport Lithiumbatterien	UN 38.3 Report	PL	PDF

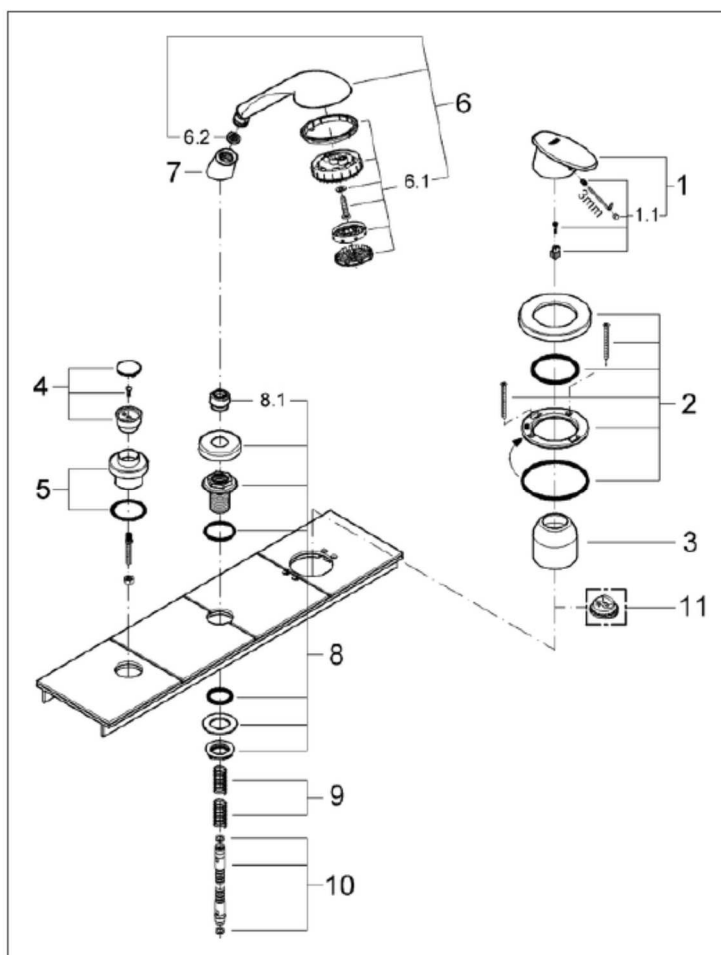
9.3 Exploded view drawing

An **exploded view drawing** (also exploded view, exploded assembly drawing) is a type of depiction with drawings and graphics that shows a complex object disassembled into its individual parts (in perspective, if appropriate). The individual parts or components of a product are depicted spatially separated and pulled apart from one another.

Several documents of the exploded-view drawing media type can be allocated to one article. Labelling as a substitute or differentiation between web image and print image is not possible.

Content	Description	Structure
Dokument	Name of the document file (observe file naming convention)	Text 35
Dokumententyp	Type of document: exploded-view drawing	X_

Example of an exploded view drawing:



10 Spare parts lists

A spare part is recognizable by the article type chosen (cf. chapter 1.2). Within one data delivery, spare parts lists can be defined and populated with spare parts.

If a **spare parts list for an article** is given, the **allocation of an exploded-view drawing** (with all existing components being numbered) will prove useful. The position numbers in the spare parts list correspond to those in the exploded-view drawing to make sure that spare parts needed in practice can be identified and found. Spare parts lists can also be maintained for historical products (cf. chapter 11) if spare parts for these products are still available for order.

Content	Label	Structure	ETA	ETT
Listennummer	Identification number (ID) of the spare parts list	Text 35	X	X
Zeilennummer	Consecutive line number of the spare parts list	Integer 3	X	X
Zeilenart	ETA = spare parts list line is a complete line set ETT = spare parts list line is descriptive text that structures the list	Value list	X	X
Positionsnummer	Indication of the position number in accordance with the associated exploded-view drawing	Text 10	X	X
Ersatzteil	Factory article number of the spare part	Text 15	X	
Preisgruppe	Indication of a price group	Text 5	X	
Text	Descriptive text re the spare part or re content-related structure of the spare parts list	Text 35	X	X
Baujahr von	Important information, especially with historical products	Date	X	
Artikelverweisart	A = active article HP = historical product	Value list	X	

Reference to an associated spare parts list is made by means of an unambiguous identification number (ID) allocated to the article.

Content	Description	Structure
Ersatzteillistennummer	Identification number, reference to an associated spare parts list: the article will be associated to this spare parts list.	Text 35

11 Historical products

A <Historisches Produkt>/<historical product> is an article that is not part of the assortment any more but still kept in this category so that spare parts lists with spare parts for this product that are still available for order can be maintained. **A historical product is marked by stating a production period.**

Production lines often contain redundant factory article numbers of current and historical products. The desired article or spare part can only be identified and found with a combination of the factory article number of the historical product and the start (or end) of a year of construction.

Content	Label	Structure
Historisches Produkt	Factory article number of the historical product	Text 15
Baujahr von	Start of the production period	Date
Baujahr bis	End of the production period	Date
Baujahr Text	Notes/annotations regarding the years of manufacture/production periods.	Text 35
Kurztext 1	Structure of short text 1 (cf. chapter 4.2)	Text 40
Kurztext 2	Structure of short text 2 (cf. chapter 4.2)	Text 40
GTIN	GTIN (cf. chapter 3.1.4) (13 or 14 characters)	GTIN format
Warengruppen ID	Reference to the commodity group (cf. chapter 7.1)	Text 3
Produktgruppen ID	Reference to the product group (cf. chapter 7.2)	Text 10
Ersatzteillistennummer	Reference to the defined spare parts list that has to be included in the data delivery (cf. chapter 10).	Text 35

11.1 Allocation of documents to historical products

Just like with active articles, complementary documents or images can also be allocated to the historical products. The pivotal document to be associated is the exploded-view drawing for potential spare parts orders. For clear identification, historical products also require the start of the production period.

Content	Description	Structure
Baujahr von	Start of the production period	Date
Dokument	Name of the document file (observe file naming convention)	Text 35
Dokumententyp	Type of document (cf. chapter 9.3)	Value list
Bild Verwendung	Web image/print image: indication only relevant with images	Value list
Stellvertreterkennzeichen	Indication as to whether the article depicted corresponds to the article or serves as a substitute	yes/no
Dokument Bezeichnung	Detailed description of the contents of documents	Text 40
Dokument Sortierreihenfolge	Pre-setting a sequence in case of several documents (incl. images) related to the article for optimal usability in the target systems	Integer

12 Typical applications

Further examples of the provision of logistics data regarding the basic article and packaging units:

Tube: bar commodity, invoiced by the metre			PU 1	PU 2
Price unit	m	Packaging type	bar	box
Price basis	1	Quantity	5	100
Minimum order quantity	100	Dimensions in mm	40x50x5000	400x100x5000
Minimum order quantity unit	m	Weight in kg	2.72	54.6
Dimensions/weight of basic article	irrelevant			

Tube: coil commodity, invoiced by the metre			PU 1	PU 2
Price unit	m	Packaging type	coil (roll)	pallet
Price basis	1	Quantity	50	600
Minimum order quantity	50	Dimensions in mm	700x700x150	700x700x1340
Minimum order quantity unit	m	Weight in kg	14.775	186.5
Dimensions/weight of basic article	irrelevant			

Nub plate, invoiced by the square metre		PU 1	PU 2	
Price unit	m²	Packaging type	plate	box
Price basis	1	Quantity	1.2	9.6
Minimum order quantity	9.6	Dimensions in mm	1440x800x70	1500x850x600
Minimum order quantity unit	m²	Weight in kg	2.5	20.224
Dimensions/weight of basic article	irrelevant			

Liquid, invoiced by the litre		PU 1		PU 2
Price unit	L	Packaging type	jerrican	box
Price basis	1	Quantity	5	20
Minimum order quantity	5	Dimensions in mm	250x200x100	260x410x210
Minimum order quantity unit	L	Weight in kg		
Dimensions/weight of basic article	irrelevant			

Putty, invoiced by the kilogram		PU 1	PU 2
Price unit	kg	Packaging type	sack (bag) box
Price basis	1	Quantity	5 30
Minimum order quantity	5	Dimensions in mm	100x100x200 650x150x250
Minimum order quantity unit	kg	Weight in kg	5.05 30.74
Dimensions/weight of basic article	irrelevant		

Tube, invoiced by the bar		PU 1	
Price unit	pcs	Packaging type	box
Price basis	1	Quantity	20
Minimum order quantity	1	Dimensions in mm	400x100x5000
Minimum order quantity unit	pcs	Weight in kg	54.6
Dimensions of basic article in mm	40x50x5000		
Weight of basic article in kg	2.72		

Tube, invoiced by the coil		PU 1	
Price unit	pcs	Packaging type	pallet
Price basis	1	Quantity	12
Minimum order quantity	1	Dimensions in mm	700x700x1340
Minimum order quantity unit	pcs	Weight in kg	186.5
Dimensions of basic article in mm	700x700x150		
Weight of basic article in kg	14.775		

Nub plate, invoiced by the plate		PU 1	PU 2
Price unit	pcs	Packaging type	box pallet
Price basis	1	Quantity	8 80
Minimum order quantity	8	Dimensions in mm	1500x850x600 1515x890x2300
Minimum order quantity unit	pcs	Weight in kg	20.224 212.5
Dimensions of basic article in mm	1440x800x70		
Weight of basic article in kg	2.5		

Liquid, invoiced by the jerrican		PU 1	
Price unit	pcs	Packaging type	box
Price basis	1	Quantity	4
Minimum order quantity	1	Dimensions in mm	260x410x210
Minimum order quantity unit	pcs	Weight in kg	20.5
Dimensions of basic article in mm	250x200x100		
Weight of basic article in kg	5.1		

Putty, invoiced by the sack/bag		PU 1	
Price unit	pcs	Packaging type	box
Price basis	1	Quantity	6
Minimum order quantity	1	Dimensions in mm	650x150x250
Minimum order quantity unit	pcs	Weight in kg	30,74
Dimensions of basic article in mm	100x100x200		
Weight of basic article in kg	5.05		

Transition sleeve Dim 16		PU 1	PU 2	PU 3	
Price unit	pcs	Packaging type	bag	box	pallet
Price basis	1	Quantity	10	100	12800
Minimum order quantity	10	Dimensions in mm	240x60x27	200x150x190	1200x800x1000
Minimum order quantity unit	pcs	Weight in kg	0.722	7.421	967.8
Dimensions of basic article in mm	42x26x26				
Weight of basic article in kg	0.069				

Transition sleeve Dim 63			PU 1	PU 2
Price unit	pcs	Packaging type	box	pallet
Price basis	1	Quantity	5	640
Minimum order quantity	1	Dimensions in mm	190x240x200	1200x800x1000
Minimum order quantity unit	pcs	Weight in kg	4.811	634.57
Dimensions of basic article in mm	93x70x70			
Weight of basic article in kg	0.937			

Grease separator	
Price unit	pcs
Price basis	1
Minimum order quantity	1
Minimum order quantity unit	pcs
Dimensions of basic article in mm	2100x800x2014
Weight of basic article in kg	160

Tap		PU 1	PU 2
Price unit	pcs	Packaging type	box
Price basis	1	Quantity	8
Minimum order quantity	1	Dimensions in mm	575x370x365
Minimum order quantity unit	pcs	Weight in kg	18.15
Dimensions of basic article in mm	545x192x73		37.45 kg
Weight of basic article in kg	2.1		

Panel screw		PU 1	PU 2
Price unit	pcs	Packaging type	box
Price basis	1	Quantity	250
Minimum order quantity	250	Dimensions in mm	64x126x60
Minimum order quantity unit	pcs	Weight in kg	0.51
Dimensions of basic article in mm	35x4x4		9.23
Weight of basic article in kg	0.002		