



Result of Research Project

SPECIFICATION

# **Product Related Environmental Data**

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Submodel Template of the Asset Administration Shell

## Imprint

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### Version history

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## Foreword

In today's world, the legal landscape surrounding environmental protection and sustainability has become increasingly stringent and complex. Governments around the globe are enacting and enforcing regulations that aim to mitigate climate change, conserve resources, and promote eco-friendly practices. Within this framework, facilities play a crucial role as significant contributors to environmental impact. As a result, the relevance of legally required environmental data has grown exponentially, shaping the operations and reporting obligations of companies operating in these sectors.

This preface explores the significance of legally required environmental data specifically and how its exchange can bring substantial economic benefits to companies mandated to report to governmental agencies.

Legally required environmental data pertains to the information that organizations are obligated to collect, analyse, and report in accordance with environmental regulations. This data encompasses various aspects, such as energy consumption, greenhouse gas emissions, waste generation, and compliance with specific environmental standards. It serves as a crucial tool for monitoring and assessing the environmental performance of facilities, ensuring compliance with legal requirements, and providing transparency to regulatory bodies.

The reporting obligations imposed by governmental agencies have become more stringent over time, as environmental concerns continue to escalate. Industries such as manufacturing, energy, transportation, and construction are particularly subject to these requirements. Compliance with legal reporting obligations necessitates the accurate and timely exchange of environmental data between companies and regulatory agencies. The effective exchange of this data streamlines the reporting process, minimizes administrative burdens, and reduces the risk of non-compliance and potential penalties.

However, the benefits of data exchange extend beyond mere regulatory compliance. The collection and analysis of legally required environmental data provide organizations with insights into their resource utilisation, emissions profile, and environmental impact. This knowledge enables companies to identify areas for improvement, optimise operations, and implement targeted strategies to reduce resource consumption, minimize waste generation, and lower emissions. Consequently, businesses can achieve cost savings through reduced energy bills, enhanced operational efficiency, and streamlined waste management processes.

In conclusion, the relevance of legally required environmental data is paramount in the context of buildings and facilities. The exchange of this data allows companies to comply with reporting obligations, streamline operations, and demonstrate their commitment to environmental responsibility. Beyond regulatory compliance, effective data exchange can bring substantial economic benefits, including cost savings, enhanced reputation, increased competitiveness, and access to new business opportunities. Embracing data exchange as a means to meet legal requirements not only ensures environmental compliance but also contributes to a more sustainable future while driving economic growth for companies operating within the regulatory framework.

# 1 General

## 1.1 About this document

This document is a part of a specification series. Each part specifies the contents of a Submodel template for the Asset Administration Shell (AAS). The AAS is described in [1-3] and [6]. First exemplary Submodel contents were described in [4], while the actual format of this document was derived by the "Administration Shell in Practice" [5]. The format aims to be very concise, giving only minimal necessary information for applying a Submodel template, while leaving deeper descriptions and specification of concepts, structures and mapping to the respective documents [1-6].

The target group of the specification are developers and editors of technical documentation and manufacturer information, which are describing assets in smart manufacturing by means of the Asset Administration Shell (AAS) and therefore need to create a Submodel instance with a hierarchy of SubmodelElements. This document especially details on the question, which SubmodelElements with which semantic identification shall be used for this purpose.

## 1.2 Scope of the Submodel

This Submodel template aims at interoperable provision of information describing product related environmental data in regard to the asset of the respective Asset Administration Shell. Central element is the provision of properties [7], ideally interoperable by the means of dictionaries such as ECLASS and IEC CDD (Common Data Dictionary). The purpose of this document is to make selected specifications of Submodels in such manner that information about assets can be exchanged in a meaningful way between partners in a value creation network. It targets the legally required reports according to European and German law.

The intended use-case is the provision of a standardized property structure for these reports, which enables a digital data exchange between reporter and legally specified receiver.

The referenced legal documents and regulations were evaluated in April 2023. All information referred here is related to the version of the relevant standard published at this time.

This concept can serve as a basis for standardizing the respective Submodel. The conception is based on existing norms, studies of common practices at enterprises, directives and standards so that a far-reaching acceptance can be achieved.

## 1.3 Relevant standards and sources of concepts for the Submodel template

According to [3], interoperable properties might be defined by standards, consortium specifications or manufacturer specifications.

So called property dictionaries are used identify information elements (see Terms and Definitions of [6]). Such property dictionaries include:

- ECLASS, see: <https://www.eclass.eu/>
- IEC CDD, see: <https://cdd.iec.ch/cdd/iec61987/iec61987.nsf> and <https://cdd.iec.ch/cdd/iec62683/cdddev.nsf>

In this document, properties are aimed to be described by ECLASS.

## 2 Information set for Submodel Contact Information

While defining Submodels the following three aspects must be considered as suggested in [5]:

### Use and economic relevance

The Submodel Product Related Environmental Data is designed for entities that are legally required to report information to bodies specified by law. The submodel aims to lower the effort and error potential of a non-machine-readable reporting.

Electronic data exchange of legally required environmental data brings economic benefits through reduced administrative costs, improved compliance, and enhanced transparency. These advantages enable companies to focus on their core operations, minimize financial risks, and capitalize on business opportunities in the evolving landscape of environmental sustainability.

### Property specification

See section 3 Submodel and Collections.

## 3 Submodel and Collections

### 3.1 Properties of the Submodel "Product Related Environmental Data"

The figure below shows the UML-diagram defining the relevant properties which need to be set. Table 1 describes the details of the Submodel structure combined with examples.

As the submodel is extensive, please refer to the provided PDF file displaying the UML-diagram for a higher quality display.

Figure 1: UML-Diagram for Submodel " Product Related Environmental Data "

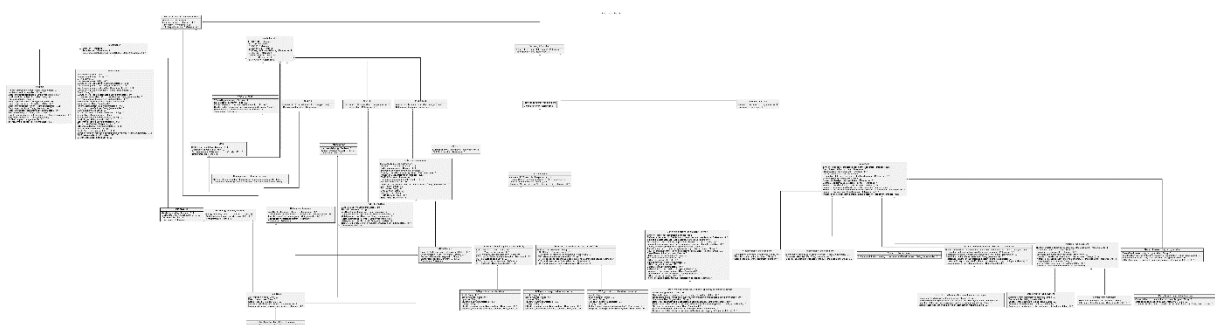


Table 1: Properties of Submodel "Product Related Environmental Data"

<b>idShort</b>	Product Related Environmental Data
<b>Class</b>	Submodel
<b>semanticId</b>	0173-EX-1#01-SJP912#001
<b>Parent</b>	
<b>Explanation</b>	

[SME type]	semanticId = [idType]value	[valueType]	card.
idShort	Description@en	example	
[SMC] Identification	[IRDI] 0173-EX-1#02-NAA871#001]	[SMC Reference]	1
[SMC] Time frame	[IRDI] 0173-EX-1#02-PWZ903#001]	[SMC Reference]	1
[SMC] legal information	[IRDI] 0173-EX-1#02-PAX941#001]	[SMC Reference]	1
[SMC] Voluntary information	[IRDI] 0173-EX-1#02-UMF411#001]	[SMC Reference]	1

### 3.2 Properties of the SMC “Voluntary information”

Table 2: Properties of SMC " Voluntary information "

<b>idShort</b>	<i>Voluntary information</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#01-SJP912#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Product Related Environmental Data		
<b>Explanation</b>			
[SME type]	semanticity = [idType]value	[valueType]	card.
idShort	Description@en	example	
[SMC] Industrial Environmental Footprint	[IRDI] 0173-EX-1#02-TYT345#001]	[SMC Reference]	1
[SMC] Information for use	[IRDI] 0173-EX-1#02-TYU623#001]	[SMC Reference]	1

### 3.1 Properties of the SMC “Information for use”

Table 3: Properties of SMC " Information for use "

<b>idShort</b>	<i>Information for use</i>
<b>Class</b>	SubmodelElementCollection
<b>semanticId</b>	0173-EX-1#02-TYU623#001



<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Voluntary Information		
<b>Explanation</b>			
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] Number of documents	[IRDI] 0173-1#02-ABG903#001 Multiplication element for dynamic multiplication of the property block 'document'	[INTEGER]	1
[SMC] Document	[IRDI] 0173-1#02-ABI461#001] Block that gives more details about documents	[SMC Reference]	0..*

### 3.2 Properties of the SMC "Document"

Table 4: Properties of SMC " Document "

<b>idShort</b>	<i>Document</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-1#02-ABI461#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Information for use		
<b>Explanation</b>	Block that gives more details about documents		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] Number of classes of the classification of the document	[IRDI] 0173-1#02-ABG904#001 Multiplication element for dynamic multiplication of the property block	[INTEGER]	1

	classification of the document		
[SMC] Classification of the document	[IRDI] 0173-1#02-ABI462#001] Block that gives more details about the metadata class that enables a structured description of documents	[SMC Reference]	0..*
[SMC] Identification of the document	[IRDI] 0173-1#02-ABI463#001] Block, that gives more details about the unique identification of a document	[SMC Reference]	0..*
[SMC] Domain of the document	[IRDI] 0173-1#02-ABI464#001] Block, that gives more details about the connection of a document with an area (a domain)	[SMC Reference]	0..*
[SMC] Description of the referenced object of the document	[IRDI] 0173-1#02-ABI465#001] Block, that provides details of an object (e.g. body, device, substance, equipment, software or service) in connection with a descriptive document	[SMC Reference]	0..*
[SMC] Version of the document	[IRDI] 0173-1#02-ABI467#001] Block, which gives more details about the version of the document	[SMC Reference]	0..*
[SMC] Named, involved party or organization	[IRDI] 0173-1#02-ABI471#001] Block, that gives more details about the person, group or organization involved	[SMC Reference]	0..*
[SMC] Certificate, approval, declaration or license	[IRDI] 0173-1#02-ABI472#001] written confirmation or approval from an accredited testing body certifying conformity with defined underlying laws,	[SMC Reference]	1

	standards, assumptions or procedures		
[Property] Number of the identification of the document	[IRDI] 0173-1#02-ABG906#001 Multiplication element for dynamic multiplication of the property block identification of the document	[INTEGER]	1
[Property] Number of information of the domain of the document	[IRDI] 0173-1#02-ABG907#001 Multiplication element for dynamic multiplication of the property block domain of the document	[INTEGER]	1
[Property] Number of the description of the referenced object of the document	[IRDI] 0173-1#02-ABG910#001 Multiplication element for dynamic multiplication of the property block Description of the referenced object of the document	[INTEGER]	1
[Property] Number of the versions of the document	[IRDI] 0173-1#02-ABG913#001 Multiplication element for dynamic multiplication of the property block Version of the document	[INTEGER]	1
[Property] Number of details about the named, involved party or organization	[IRDI] 0173-1#02-ABG918#001 Multiplication element for dynamic multiplication of the property block of the named, involved party or organization	[INTEGER]	1

### 3.3 Properties of the SMC “Certificate, approval, declaration or license”

Table 5: Properties of SMC " Certificate, approval, declaration or license "

<b>idShort</b>	<i>Certificate, approval, declaration or license</i>
<b>Class</b>	SubmodelElementCollection
<b>semanticId</b>	0173-1#02-ABI472#001

<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Document		
<b>Explanation</b>	written confirmation or approval from an accredited testing body certifying conformity with defined underlying laws, standards, assumptions or procedures		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] Number of reference documents	[IRDI] 0173-1#02-ABG919#001 Multiplication element for dynamic multiplication of the property block reference documents	[INTEGER]	1
[SMC] Reference document for Certificate, approval, declaration or license	[IRDI] 0173-1#02-ABI473#001 Publications of a standards or user organization that relate to the development, issuance, and maintenance of standards	[SMC Reference]	0..*
[Property] Type of the certificate, approval, declaration or license	[IRDI] 0173-1#02-ABG962#001 Classification of a confirmation according to the executing body or its underlying laws, standards, assumptions, or procedures	[STRING]	0..*
[Property] Subject area of the certificate, approval, declaration or license	[IRDI] 0173-1#02-ABG963#001 Characterization of a subject or thematic scope for which a corresponding document is intended	[STRING]	0..*
[Property] Basis of the certificate, approval, declaration or license	[IRDI] 0173-1#02-ABG964#001 Underlying defined requirement (e.g.	[STRING]	0..*

	standard, directive, guideline, regulation, standard, law) on the basis of which conformity is tested and, if necessary, a label is applied		
[Property] Country or territorial validity area of the document	[IRDI] 0173-1#02-ABG965#001] Spatially defined, identifiable states that recognize the purpose or objective of the document as valid	[STRING]	0..*
[Property] Jurisdiction, economic area or region of validity of the document	[IRDI] 0173-1#02-ABG966#001] Countries or regions that are linked by a common legal framework or economic agreements and that recognize the purpose or objective of the document as valid	[STRING]	0..*
[Property] Issuer or publisher of the certificate, approval, declaration or license	[IRDI] 0173-1#02-ABG967#001] name of the institution, company, independent, accredited body authorized by an authorized accreditation body to ensure and assess compliance with specified standards and regulations and to issue an official mark or declaration of conformity	[STRING]	0..*
[Property] Date of issue of the document	[IRDI] 0173-1#02-ABG968#001] Date on which a document was issued	[DATE]	0..*
[Property] Start of validity of the document	[IRDI] 0173-1#02-ABG969#001] Date from which a document becomes valid	[DATE]	0..*
[Property] End of validity of the document	[IRDI] 0173-1#02-ABG970#001] Date from which a document becomes invalid	[DATE]	0..*

[Property] [URL] of the document	[IRDI] 0173-1#02-ABG971#001] Link to the document, through the use of a Universal Resource Locator ([URL])	[URL]	0..*
[Property] Type of marking	[IRDI] 0173-1#02-ABG972#001] Alphanumeric character string used to designate a (usually graphic) identifier defined by requirements (e.g., of a standard, guideline, directive, regulation, standard, law) and indicating conformity with them	[STRING]	0..*
[Property] [URL] of the graphic marker	[IRDI] 0173-1#02-ABG973#001] Link or shortcut, through the use of a Universal Resource Locator ([URL]), to a graphical symbol defined by a particular policy, standard, or specification indicating its conformance	[URL]	0..*
[Property] Marking text	[IRDI] 0173-1#02-ABG974#001] Plain text on a device nameplate indicating conformity with a particular directive, standard or specification	[STRING]	0..*
[Property] additional text of the marking	[IRDI] 0173-1#02-ABG975#001] additional plain text on a device nameplate indicating conformity with a particular directive, standard or specification In the case of explosion protection, this indicates the type of protection and the zone in which it can operate	[STRING]	0..*

[Property] File name of the control drawing	[IRDI] 0173-1#02-ABG976#001] Alphanumeric string identifying a control drawing or reference drawing stored as a digital file in a file system	[STRING]	0..*
[Property] Designation of the control drawing	[IRDI] 0173-1#02-ABG977#001] alphanumerische Zeichenfolge, die die Referenzzeichnung oder die Prüfzeichnung (control drawing) identifiziert	[STRING]	0..*
[Property] [URL] of the control drawing	[IRDI] 0173-1#02-ABG978#001] Link to a control drawing or reference drawing by using a Universal Resource Locator ([URL])	[URL]	0..*
[Property] Auditor of the certificate, approval, declaration or license	[IRDI] 0173-EX-1#02-SHO714#001] name of the auditor authorised by an accreditation body to ensure and assess compliance with specified standards and regulations and to issue an official mark or declaration of conformity	[STRING]	0..*

### 3.4 Properties of the SMC “Reference document for Certificate, approval, declaration or license”

Table 6: Properties of SMC " Reference document for Certificate, approval, declaration or license "

<b>idShort</b>	<i>Reference document for Certificate, approval, declaration or license</i>
<b>Class</b>	SubmodelElementCollection
<b>semanticId</b>	0173-1#02-ABI473#001
<b>isCaseOf</b>	

<b>AllowDuplicates</b>	True		
<b>Parent</b>	Certificate, approval, declaration or license		
<b>Explanation</b>	Publications of a standards or user organization that relate to the development, issuance, and maintenance of standards		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] Standards organization	[IRDI] 0173-1#02-ABG979#001] non-governmental, national or international organization whose main task is to develop, issue and maintain standards and norms	[STRING]	0..*
[Property] Standards organization reference document	[IRDI] 0173-1#02-ABG980#001] alphanumeric string identifying a document issued by a standardization organization	[STRING]	0..*
[Property] Issue status of the reference document of the standards organization	[IRDI] 0173-1#02-ABG981#001] alphanumeric string to identify the output status	[STRING]	0..*
[Property] Consortium/User Organization	[IRDI] 0173-1#02-ABG982#001] Non-governmental organization or association whose primary mission is to develop, issue, maintain and promote specifications and standards	[STRING]	0..*
[Property] Reference document of the consortium/user organization	[IRDI] 0173-1#02-ABG983#001] alphanumeric string identifying a document issued by a consortium/user organization	[STRING]	0..*



[Property] Issue status of the reference document of the consortium/user organization	[IRDI] 0173-1#02-ABG984#001] alphanumeric string to identify the output status	[STRING]	0..*
[Property] Name of the issuing company	[IRDI] 0173-1#02-ABG985#001] Name of a company that issues a document	[STRING]	0..*
[Property] Reference document of the issuing company	[IRDI] 0173-1#02-ABG986#001] alphanumeric string identifying a document issued by the company	[STRING]	0..*
[Property] Issue status of the reference document of the issuing company	[IRDI] 0173-1#02-ABG987#001] alphanumeric string identifying the output status	[STRING]	0..*

### 3.5 Properties of the SMC “Named, involved party or organization”

Table 7: Properties of SMC " Named, involved party or organization "

<b>idShort</b>	<i>Named, involved party or organization</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-1#02-ABI471#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Document		
<b>Explanation</b>	Block, that gives more details about the person, group or organization involved		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] Role of the involved party or organization	[IRDI] 0173-1#02-ABG958#001] Brief characterization of the function or task performed by the person, group or organization involved	[STRING]	0..*

[Property] Identification marking of the involved party or organization	[IRDI] 0173-1#02-ABG959#001] Alphanumeric string (also ID, code, identifier or number) by which a person, group or organization involved can be clearly identified	[STRING]	0..*
[Property] Name of the involved party or organization	[IRDI] 0173-1#02-ABG960#001] Common name by which a participating organization, company or other legal entity is usually named or described	[STRING]	0..*
[Property] Official name of the involved party or organization	[IRDI] 0173-1#02-ABG961#001] Official name of the participating organization, enterprise or legal entity	[STRING]	0..*

### 3.6 Properties of the SMC "Version of the document"

Table 8: Properties of SMC " Version of the document "

<b>idShort</b>	<i>Version of the document</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-1#02-ABI467#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Document		
<b>Explanation</b>	Block, which gives more details about the version of the document		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] Number of details about the description of the document	[IRDI] 0173-1#02-ABG914#001] Multiplication element for dynamic multiplication of the property block	[INTEGER]	1

	description of the document		
[SMC] Description of the document	[IRDI] 0173-1#02-ABI468#001] Block, containing information about the description of the document	[SMC Reference]	0..*
[SMC] Format of the document	[IRDI] 0173-1#02-ABI469#001] Block, providing information about the document file format	[SMC Reference]	0..*
[SMC] Life cycle and status of the document	[IRDI] 0173-1#02-ABI470#001] Block, that provides information about the life cycle and status of the document	[SMC Reference]	0..*
[Property] Number of details about the format of the document	[IRDI] 0173-1#02-ABG915#001] Multiplication element for dynamic multiplication of the property block format of the document	[INTEGER]	1
[Property] Number of details about the life cycle and status of the document	[IRDI] 0173-1#02-ABG916#001] Multiplication element for dynamic multiplication of the property block life cycle and status of the document	[INTEGER]	1
[Property] Language of the document	[IRDI] 0173-1#02-ABG936#001] Indication of the language or languages used, in the form of a language code, in which a document is written	[STRING]	0..*
[Property] Version of the document	[IRDI] 0173-1#02-ABG937#001] alphanumeric string that identifies a version that differs from the previous version in a few or many points	[STRING]	0..*

[Property] Number of pages of the document	[IRDI] 0173-1#02-ABG938#001 Specification describing the number of pages in a document	[INTEGER]	0..*
--------------------------------------------	-------------------------------------------------------------------------------------------	-----------	------

### 3.7 Properties of the SMC "Life cycle and status of the document"

Table 9: Properties of SMC " Life cycle and status of the document "

<b>idShort</b>	<i>Life cycle and status of the document</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-1#02-ABI470#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Version of the document		
<b>Explanation</b>	Block, that provides information about the life cycle and status of the document		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] Status of the document in the document life cycle	[IRDI] 0173-1#02-ABG946#001 Status value referring to a milestone in the document life cycle	[STRING]	0..*
[Property] Date of status change in document life cycle	[IRDI] 0173-1#02-ABG956#001 Date (format yyyy-mm-dd) when the current status value was set in the life cycle of the document	[DATE]	0..*
[Property] Comment on the status change in the document life cycle	[IRDI] 0173-1#02-ABG957#001 Brief, concise characterization of the changes that have been made in the execution of the change of status	[STRING]	0..*

### 3.8 Properties of the SMC "Format of the document"

Table 10: Properties of SMC " Format of the document "

<b>idShort</b>	<i>Format of the document</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-1#02-ABI469#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Version of the document		
<b>Explanation</b>	Block, providing information about the document file format		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] DE-12. BlmSchV: Anzahl der gefährlichen Stoffe/Gefahrenkategorien	[IRDI] 0173-EX-1#02-TT1168#001]	[INTEGER]	1
[SMC] DE-12. BlmSchV: Gefährliche Stoffe/Gefahrenkategorien	[IRDI] 0173-EX-1#02-JAK886#001]	[SMC Reference]	0..*

### 3.9 Properties of the SMC "Description of the document"

Table 11: Properties of SMC " Description of the document "

<b>idShort</b>	<i>Description of the document</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-1#02-ABI468#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Version of the document		
<b>Explanation</b>	Block, containing information about the description of the document		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	

[Property] Language of the document description	[IRDI] 0173-1#02-ABG939#001] Designation of the language in which the metadata (e.g. keywords, summary) of the document are described	[STRING]	0..*
[Property] Document title	[IRDI] 0173-1#02-ABG940#001] denotes the focus of the document and has a referential or communicative function, which is to refer to the content, subject matter or theme of the document	[STRING]	0..*
[Property] Subtitle of the document	[IRDI] 0173-1#02-ABG941#001] denotes one or more lines of text that add explanatory information to the main title (of the document)	[STRING]	0..*
[Property] Summary of the document	[IRDI] 0173-1#02-ABG942#001] Briefly abstracted, written description of the contents of a document, which is prepared for its subject indexing and is part of the document	[STRING]	0..*
[Property] Keywords or catchwords of the document	[IRDI] 0173-1#02-ABG943#001] Descriptor or keyword is usually a predefined designation that can be selected for describing the content and indexing the content of a document. The assignment of descriptors is also referred to as keywording or indexing. They usually originate from a controlled vocabulary in which it is specified which	[STRING]	0..*

	words are to be used for which subjects		
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### 3.10 Properties of the SMC “Description of the referenced object of the document”

Table 12: Properties of SMC " Description of the referenced object of the document "

<b>idShort</b>	<i>Description of the referenced object of the document</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-1#02-ABI465#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Document		
<b>Explanation</b>	Block, that provides details of an object (e.g. body, device, substance, equipment, software or service) in connection with a descriptive document		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] Number of the descriptions on the identification of the reference object	[IRDI] 0173-1#02-ABG912#001 Multiplication element for dynamic multiplication of the property block description on the identification of the reference object	[INTEGER]	1
[SMC] Description on the identification of the reference object	[IRDI] 0173-1#02-ABI466#001 Block, which gives more details about the identification and individuality of the reference object	[SMC Reference]	0..*
[Property] Reference object ID to which the document refers	[IRDI] 0173-1#02-ABG927#001 alphanumeric character string (also ID, code, identifier or number) for a body, device, substance, equipment, software or	[STRING]	0..*

	service which is factually related to the document		
[Property] Description of the referenced object	[IRDI] 0173-1#02-ABG928#001] short, concise characterization of the referenced object in order to distinguish it from other objects	[STRING]	0..*
[Property] Reference identifier of the referenced object	[IRDI] 0173-1#02-ABG929#001] refers to a user-specific reference system or an agreed standard to identify and distinguish an object either as belonging to a group or as an individual (instance) object	[STRING]	0..*
[Property] User-specific equipment identification of the referenced object	[IRDI] 0173-1#02-ABG930#001] means a user or user-specific identifier to identify and distinguish an individual object or a group of objects	[STRING]	0..*
[Property] Project number of the referenced object	[IRDI] 0173-1#02-ABG931#001] Alphanumeric string that accompanies and uniquely identifies a planned undertaking (as the sum of all commercial and technical activities and the (reference) objects included with it) in the course of its creation up to delivery	[STRING]	0..*

### 3.11 Properties of the SMC “Description on the identification of the reference object”

Table 13: Properties of SMC " Description on the identification of the reference object "

<b>idShort</b>	<i>Description on the identification of the reference object</i>
<b>Class</b>	SubmodelElementCollection
<b>semanticId</b>	0173-1#02-ABI466#001



<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Description of the referenced object of the document		
<b>Explanation</b>	Block, which gives more details about the identification and individuality of the reference object		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] Type of entity/individuality of the referenced object	[IRDI] 0173-1#02-ABG932#001] Indicates whether the referenced object is an individual, unique object, or represents an object type	[STRING]	0..*
[Property] Identification marking of the individual object or the object type	[IRDI] 0173-1#02-ABG933#001] alphanumeric string (also ID, code, identifier, or number) that uniquely identifies an individual, unique object or object type	[STRING]	0..*
[Property] Indication of the worldwide uniqueness of the identification marking	[IRDI] 0173-1#02-ABG934#001] Indicates whether the object referenced by an alphanumeric string is globally unique and thus uniquely identified (or not)	[STRING]	0..*
[Property] More detailed description of the type of identification marking	[IRDI] 0173-1#02-ABG935#001] Brief, concise characterization of the identification system used to distinguish it from other identification systems	[STRING]	0..*

### 3.12 Properties of the SMC “Domain of the document”

Table 14: Properties of SMC " Domain of the document "

<b>idShort</b>	<i>Domain of the document</i>
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<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-1#02-ABI464#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Document		
<b>Explanation</b>	Block, that gives more details about the connection of a document with an area (a domain		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] Unique identification marking of the domain of the document	[IRDI] 0173-1#02-ABG926#001] Alphanumeric string (also ID, code or number) that uniquely identifies a document in connection with an area (a domain)	[STRING]	0..*
[SMC] DE-12. BlmSchV: Gefährliche Stoffe/Gefahrenkategorien	[IRDI] 0173-EX-1#02-JAK886#001]	[SMC Reference]	0..*

### 3.13 Properties of the SMC “Identification of the document”

Table 15: Properties of SMC "Identification of the document"

<b>idShort</b>	Identification of the document		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-1#02-ABI463#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Document		
<b>Explanation</b>	Block, that gives more details about the unique identification of a document		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	

[Property] Identification marking of an area or domain	[IRDI] 0173-1#02-ABG923#001 alphanumeric string (also ID, code, identifier or number) of a domain in which an identification character of a document is unique	[STRING]	0..*
[Property] Document identifier (ID)	[IRDI] 0173-1#02-ABG924#001 alphanumeric string (also ID, code, identifier or number) which uniquely identifies a document	[STRING]	0..*
[Property] Specify the unique prioritization of the ID of the document	[IRDI] 0173-1#02-ABG925#001] specifies the leading document identifier (ID) if a document has several identification markings (e.g. from different areas), as well as the further sequence, if necessary, in order to provide a unique referencing for the document management	[STRING]	0..*

3.14 Properties of the SMC “Classification of the document”

Table 16: Properties of SMC " Classification of the document "

<b>idShort</b>	<i>Classification of the document</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-1#02-ABI462#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Document		
<b>Explanation</b>	Block that gives more details about the metadata class that enables a structured description of documents		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>

idShort	Description@en	example	
[Property] Classification system for documents	[IRDI] 0173-1#02-ABG920#001] unique identification for a classification system for a designation of documents	[STRING]	0..*
[Property] Classification name for document	[IRDI] 0173-1#02-ABG921#001] Designation of classes for different types of documents related to the classification ID within a classification system for documents	[STRING]	0..*
[Property] Classification ID for the document	[IRDI] 0173-1#02-ABG922#001] unique ID of the class within a classification system for documents	[STRING]	0..*

### 3.15 Properties of the SMC “Industrial Environmental Footprint”

Table 17: Properties of SMC " Industrial Environmental Footprint "

<b>idShort</b>	<i>Industrial Environmental Footprint</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-TYT345#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Voluntary information		
<b>Explanation</b>			
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[SMC] Carbon Footprint	[IRDI] 0173-EX-1#02-ABI321#001] Carbon footprint is the total greenhouse gas emissions caused by an individual, event, organization, service, place or product, expressed as carbon dioxide equivalent. Greenhouse gases, including the carbon-containing gases carbon dioxide and methane, can be emitted through the burning of fossil fuels, land clearance and the production and consumption of food, manufactured goods, materials, wood, roads, buildings, transportation and other services	[SMC Reference]	1

### 3.16 Properties of the SMC “Carbon Footprint”

Table 18: Properties of SMC " Carbon Footprint "

<b>idShort</b>	<i>Carbon Footprint</i>
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<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-ABI321#001		
<b>isCaseOf</b>			
<b>AllowDuplications</b>	True		
<b>Parent</b>	Industrial Environmental Footprint		
<b>Explanation</b>	Carbon footprint is the total greenhouse gas emissions caused by an individual, event, organization, service, place or product, expressed as carbon dioxide equivalent. Greenhouse gases, including the carbon-containing gases carbon dioxide and methane, can be emitted through the burning of fossil fuels, land clearance and the production and consumption of food, manufactured goods, materials, wood, roads, buildings, transportation and other services		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] number of PCF methods	[IRDI] 0173-EX-1#02-ABG864#001 Multiplication element for dynamic multiplication of the feature block 'Product Carbon Footprint (PCF)'	[INTEGER]	1
[SMC] Product Carbon Footprint calculation (PCF)	[IRDI] 0173-EX-1#02-ABI325#001] Balance of greenhouse gas emissions along the entire life cycle of a product in a defined application and in relation to a defined unit of use	[SMC Reference]	0..*
[Property] number of TCF methods	[IRDI] 0173-EX-1#02-ABG865#001 Multiplication element for dynamic multiplication of the feature block 'Transport Carbon Footprint (TCF)'	[INTEGER]	1
[SMC] Transport Carbon Footprint Calculation (TCF)	[IRDI] 0173-EX-1#02-ABI326#001] Balance of greenhouse gas emissions generated by	[SMC Reference]	0..*

	a transport service of a product		
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### 3.17 Properties of the SMC “Transport Carbon Footprint Calculation (TCF)”

Table 19: Properties of SMC " Transport Carbon Footprint Calculation (TCF)"

<b>idShort</b>	<i>Transport Carbon Footprint Calculation (TCF)</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-ABI326#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Carbon Footprint		
<b>Explanation</b>	Balance of greenhouse gas emissions generated by a transport service of a product		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] TCF calculation method	[IRDI] 0173-EX-1#02-ABG859#001] Standard, method for determining the greenhouse gas emissions for the transport of a product	[STRING]	0..*
[Property] TCF CO2eq	[IRDI] 0173-EX-1#02-ABG860#001] Sum of all greenhouse gas emissions from vehicle operation	[FLOAT]	0..*
[Property] TCF quantity of measure for calculation	[IRDI] 0173-EX-1#02-ABG862#001] Quantity of the product to which the TCF information on the CO2 footprint refers	REAL_COUNT	0..*
[Property] TCF reference value for calculation	[IRDI] 0173-EX-1#02-ABG861#001] Amount of product to which the TCF carbon footprint statement relates	[STRING]	0..*
[Property] TCF processes for greenhouse gas	[IRDI] 0173-EX-1#02-ABG863#001]	[STRING]	0..*

emissions in a transport service	Processes in a transport service to determine the sum of all direct or indirect greenhouse gas emissions from fuel supply and vehicle operation		
[SMC] TCF goods transport address take-over	[IRDI] 0173-EX-1#02-ABI499#001] Indication of the place of receipt of goods	[SMC Reference]	1
[SMC] TCF goods transport address hand-over	[IRDI] 0173-EX-1#02-ABI498#001] Indicates the hand-over address of the goods transport	[SMC Reference]	1

### 3.18 Properties of the SMC “TCF goods transport address hand-over”

Table 20: Properties of SMC " TCF goods transport address hand-over "

<b>idShort</b>	<i>TCF goods transport address hand-over</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-ABI498#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Transport Carbon Footprint Calculation (TCF)		
<b>Explanation</b>	Indicates the hand-over address of the goods transport		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] street	[IRDI] 0173-EX-1#02-ABH956#001] Street indication of the place of transfer of goods	[STRING]	0..*
[Property] house number	[IRDI] 0173-EX-1#02-ABH957#001] Number for identification or differentiation of individual houses of a street	[STRING]	0..*



[Property] zip code	[IRDI] 0173-EX-1#02-ABH958#001] Zip code of the goods transfer address	[STRING]	0..*
[Property] city, town	[IRDI] 0173-EX-1#02-ABH959#001] Indication of the city or town of the transfer of goods	[STRING]	0..*
[Property] country	[IRDI] 0173-EX-1#02-AAO259#005] country where the product was manufactured	[STRING]	0..*
[Property] latitude (geographic coordinate system)	[IRDI] 0173-EX-1#02-ABH960#001] Latitude (B), also called geodetic latitude or latitude (Latin latitudo, English latitude, international abbreviation Lat. or LAT), is the northerly or southerly distance of a point on the earth's surface from the equator, given in angular measure in the unit of measurement degrees	REAL_COUNT	0..*
[Property] longitude (geographic coordinate system)	[IRDI] 0173-EX-1#02-ABH961#001] Geographic longitude, also called longitude (Latin longitudo, English longitude, international abbreviation long or LON), describes one of the two coordinates of a location on the earth's surface, namely its position east or west of a defined (arbitrarily determined) north-south line, the prime meridian	REAL_COUNT	0..*

## 3.19 Properties of the SMC “TCF goods transport address take-over”

Table 21: Properties of SMC " TCF goods transport address take-over "

<b>idShort</b>	<i>TCF goods transport address take-over</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-ABI499#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Transport Carbon Footprint Calculation (TCF)		
<b>Explanation</b>	Indication of the place of receipt of goods		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] zip code	[IRDI] 0173-EX-1#02-ABH958#001] Zip code of the goods transfer address	[STRING]	0..*
[Property] city, town	[IRDI] 0173-EX-1#02-ABH959#001] Indication of the city or town of the transfer of goods	[STRING]	0..*
[Property] country	[IRDI] 0173-EX-1#02-AAO259#005] country where the product was manufactured	[STRING]	0..*
[Property] latitude (geographic coordinate system)	[IRDI] 0173-EX-1#02-ABH960#001] Latitude (B), also called geodetic latitude or latitude (Latin latitudo, English latitude, international abbreviation Lat. or LAT), is the northerly or southerly distance of a point on the earth's surface from the equator, given in angular measure in the unit of measurement degrees	REAL_COUNT	0..*
[Property] longitude (geographic coordinate system)	[IRDI] 0173-EX-1#02-ABH961#001] Geographic longitude,	REAL_COUNT	0..*

	also called longitude (Latin longitudo, English longitude, international abbreviation long or LON), describes one of the two coordinates of a location on the earth's surface, namely its position east or west of a defined (arbitrarily determined) north-south line, the prime meridian		
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### 3.20 Properties of the SMC “Product Carbon Footprint calculation (PCF)”

Table 22: Properties of SMC " Product Carbon Footprint calculation (PCF)"

<b>idShort</b>	<i>Product Carbon Footprint calculation (PCF)</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-ABI325#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Industrial Environmental Footprint		
<b>Explanation</b>	Balance of greenhouse gas emissions along the entire life cycle of a product in a defined application and in relation to a defined unit of use		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] PCF calculation method	[IRDI] 0173-EX-1#02-ABG854#001] Standard, method for determining the greenhouse gas emissions of a product	[STRING]	0..*
[Property] PCF CO2eq	[IRDI] 0173-EX-1#02-ABG855#001] Sum of all greenhouse gas emissions of a product according to the quantification requirements of the standard	[FLOAT]	0..*

[Property] PCF reference value for calculation	[IRDI] 0173-EX-1#02-ABG856#001] Quantity unit of the product to which the PCF information on the CO2 footprint refers	[STRING]	0..*
[Property] PCF quantity of measure for calculation	[IRDI] 0173-EX-1#02-ABG857#001] Quantity of the product to which the PCF information on the CO2 footprint refers	REAL_COUNT	0..*
[Property] PCF life cycle phase	[IRDI] 0173-EX-1#02-ABG858#001] Life cycle stages of the product according to the quantification requirements of the standard to which the PCF carbon footprint statement refers	[STRING]	0..*
[SMC]PCF goods address hand-over	[IRDI] 0173-EX-1#02-ABI497#001] Indicates the place of hand-over of the goods	[SMC Reference]	1
[Property] PCF certificate	[IRDI] 0173-EX-1#02-IJB581#001]	[STRING]	0..1

### 3.21 Properties of the SMC “PCF goods address hand-over”

Table 23: Properties of SMC " PCF goods address hand-over "

<b>idShort</b>	<i>PCF goods address hand-over</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-ABI497#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Product Carbon Footprint calculation (PCF)		
<b>Explanation</b>	Indicates the place of hand-over of the goods		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	

[Property] street	[IRDI] 0173-EX-1#02-ABH956#001] Street indication of the place of transfer of goods	[STRING]	0..*
[Property] house number	[IRDI] 0173-EX-1#02-ABH957#001] Number for identification or differentiation of individual houses of a street	[STRING]	0..*
[Property] zip code	[IRDI] 0173-EX-1#02-ABH958#001] Zip code of the goods transfer address	[STRING]	0..*
[Property] city, town	[IRDI] 0173-EX-1#02-ABH959#001] Indication of the city or town of the transfer of goods	[STRING]	0..*
[Property] country	[IRDI] 0173-EX-1#02-AAO259#005] country where the product was manufactured	[STRING]	0..*
[Property] latitude (geographic coordinate system)	[IRDI] 0173-EX-1#02-ABH960#001] Latitude (B), also called geodetic latitude or latitude (Latin latitudo, English latitude, international abbreviation Lat. or LAT), is the northerly or southerly distance of a point on the earth's surface from the equator, given in angular measure in the unit of measurement degrees	REAL_COUNT	0..*
[Property] longitude (geographic coordinate system)	[IRDI] 0173-EX-1#02-ABH961#001] Geographic longitude, also called longitude (Latin longitudo, English longitude, international abbreviation long or LON), describes one of the two coordinates of a location on the earth's surface, namely its	REAL_COUNT	0..*

	position east or west of a defined (arbitrarily determined) north-south line, the prime meridian		
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### 3.22 Properties of the SMC “legal information”

Table 24: Properties of SMC " legal information "

<b>idShort</b>	<i>legal information</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-PAX941#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Product Related Environmental Data		
<b>Explanation</b>			
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[SMC] EU-REACH	[IRDI] 0173-EX-1#02-ZOF122#001 Information as to whether there is a mandatory requirement the product or product packaging contains substances, in accordance with Regulation No 1907/2006 - REACH Regulation - are registered	[SMC Reference]	1
[SMC] EU-CLP	[IRDI] 0173-EX-1#02-GJL998#001]	[SMC Reference]	1
[SMC] DE-SCIP	[IRDI] 0173-EX-1#02-ZQG924#001]	[SMC Reference]	1
[SMC] DE-ElektroG	[IRDI] 0173-EX-1#02-RIY161#001]	[SMC Reference]	1
[SMC] EU-Energy efficiency labelling	[IRDI] 0173-EX-1#02-TJD936#001]	[SMC Reference]	1
[SMC] DE-EVPG	[IRDI] 0173-EX-1#02-VNZ302#001]	[SMC Reference]	1

[SMC] DE-ElektroStoffV	[IRDI] 0173-EX-1#02-DSR450#001]	[SMC Reference]	1
[SMC] EU-POP	[IRDI] 0173-EX-1#02-FEM517#001]	[SMC Reference]	1
[SMC] EU-F-GAS-V	[IRDI] 0173-EX-1#02-PDU283#001]	[SMC Reference]	1

### 3.23 Properties of the SMC “EU-F-GAS-V”

Table 25: Properties of SMC " EU-F-GAS-V "

<b>idShort</b>	<i>EU-F-GAS-V</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-PDU283#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	legal information		
<b>Explanation</b>			
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>Example</b>	
[Property] Mandatory labeling	[IRDI] 0173-EX-1#02-QNQ546#001] whether labeling is mandatory	BOOLEAN	0..1
[Property] Online reference to label	[IRDI] 0173-EX-1#02-UGR070#001]	[URL]	0..*
[SMC] Time frame	[IRDI] 0173-EX-1#02-PWZ903#001]	[SMC Reference]	1

### 3.24 Properties of the SMC “EU-POP”

Table 26: Properties of SMC " EU-POP "

<b>idShort</b>	<i>EU-POP</i>
<b>Class</b>	SubmodelElementCollection
<b>semanticId</b>	0173-EX-1#02-FEM517#001
<b>isCaseOf</b>	

<b>AllowDuplicates</b>	True		
<b>Parent</b>	legal information		
<b>Explanation</b>			
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>Example</b>	
[Property] Number of substance information	[IRDI] 0173-EX-1#02-IUG962#001]	[INTEGER]	1
[SMC] Substance information	[IRDI] 0173-EX-1#02-KXU982#001]	[SMC Reference]	0..*

### 3.25 Properties of the SMC “Substance information”

Table 27: Properties of SMC " Substance information "

<b>idShort</b>	<i>Substance information</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-KXU982#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	EU-POP		
<b>Explanation</b>			
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>Example</b>	
[Property] Quantity of substance in stock	[IRDI] 0173-EX-1#02-ULF404#001] quantity of substance which is in stock	[FLOAT]	0..1
[Property] Concentration of substance in mixture/product	[IRDI] 0173-EX-1#02-AVY199#001] concentration of POP substance in product	[FLOAT]	0..1
[Property] Identification of substance/-group	[IRDI] 0173-EX-1#02-CMN839#001]	[STRING]	0..*
[Property] Concentration reference quantity	[IRDI] 0173-EX-1#02-RFS166#001] Quantity	[STRING]	0..*



	to which concentration refers		
[SMC] Time frame	[IRDI] 0173-EX-1#02-PWZ903#001]	[SMC Reference]	1

### 3.26 Properties of the SMC “DE-ElektroStoffV”

Table 28: Properties of SMC " DE-ElektroStoffV "

<b>idShort</b>	<i>DE-ElektroStoffV</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-DSR450#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	legal information		
<b>Explanation</b>			
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>Example</b>	
[Property] CE labelling mandatory	[IRDI] 0173-EX-1#02-XHS257#001] whether labelling with CE indication is mandatory	BOOLEAN	0..1
[Property] Declaration of conformity	[IRDI] 0173-EX-1#02-QVH187#001]	[FILE]	0..*
[Property] Online reference of declaration of conformity	[IRDI] 0173-EX-1#02-KAU643#001]	[URL]	0..*
[Property] Number of homogeneous materials concerned	[IRDI] 0173-EX-1#02-INQ694#001]	[INTEGER]	1
[SMC] Homogeneous materials concerned	[IRDI] 0173-EX-1#02-ABI633#001]	[SMC Reference]	0..*
[SMC] Time frame	[IRDI] 0173-EX-1#02-PWZ903#001]	[SMC Reference]	1

### 3.27 Properties of the SMC “Homogeneous materials concerned”

Table 29: Properties of SMC " Homogeneous materials concerned "

<b>idShort</b>	<i>Homogeneous materials concerned</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-ABI633#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Rechtlich relevante Informationen		
<b>Explanation</b>			
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>Example</b>	
[Property] Name or other description of concerned homogeneous material	[IRDI] 0173-EX-1#02-TLX076#001	[STRING]	0..*
[Property] Concentration of dangerous substance in homogeneous material	[IRDI] 0173-EX-1#02-TYU757#001	[STRING]	0..*

### 3.28 Properties of the SMC “DE-EVPG”

Table 30: Properties of SMC " DE-EVPG "

<b>idShort</b>	<i>DE-EVPG</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-VNZ302#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	legal information		
<b>Explanation</b>			
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] CE labelling mandatory	[IRDI] 0173-EX-1#02-XHS257#001 whether	BOOLEAN	0..1

	labelling with CE indication is mandatory		
[Property] Declaration of conformity	[IRDI] 0173-EX-1#02-QVH187#001]	[FILE]	0..*
[Property] Online reference of declaration of conformity	[IRDI] 0173-EX-1#02-KAU643#001]	[URL]	0..*
[SMC] Time frame	[IRDI] 0173-EX-1#02-PWZ903#001]	[SMC Reference]	1

### 3.29 Properties of the SMC “EU-Energy efficiency labelling”

Table 31: Properties of SMC " EU-Energy efficiency labelling "

<b>idShort</b>	<i>EU-Energy efficiency labelling</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-TJD936#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	legal information		
<b>Explanation</b>			
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] DE-12. BlmSchV: Anzahl der gefährlichen Stoffe/Gefahrenkategorien	[IRDI] 0173-EX-1#02-TT1168#001]	[INTEGER]	1
[SMC] DE-12. BlmSchV: Gefährliche Stoffe/Gefahrenkategorien	[IRDI] 0173-EX-1#02-JAK886#001]	[SMC Reference]	0..*

### 3.30 Properties of the SMC “DE-ElektroG”

Table 32: Properties of SMC " DE-ElektroG "

<b>idShort</b>	<i>DE-ElektroG</i>
<b>Class</b>	SubmodelElementCollection
<b>semanticId</b>	0173-EX-1#02-RIY161#001

<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	legal information		
<b>Explanation</b>			
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] Mandatory labeling	[IRDI] 0173-EX-1#02-QNQ546#001] whether labeling is mandatory	BOOLEAN	0..1
[Property] Online reference of document	[IRDI] 0173-EX-1#02-ISD746#001]	[URL]	0..1
[Property] Document file	[IRDI] 0173-EX-1#02-SPH988#001]	[FILE]	0..1
[SMC] Time frame	[IRDI] 0173-EX-1#02-PWZ903#001]	[SMC Reference]	1

### 3.31 Properties of the SMC "DE-SCIP"

Table 33: Properties of SMC " DE-SCIP "

<b>idShort</b>	<i>DE-SCIP</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-ZQG924#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	legal information		
<b>Explanation</b>			
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] Number of SVHC information	[IRDI] 0173-EX-1#02-MEM319#001]	[INTEGER]	1
[SMC] SVHC information	[IRDI] 0173-EX-1#02-WTU603#001]	[SMC Reference]	0..*

### 3.32 Properties of the SMC “EU-CLP”

Table 34: Properties of SMC " EU-CLP "

<b>idShort</b>	<i>EU-CLP</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-GJL998#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	legal information		
<b>Explanation</b>			
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] Number of CLP informations	[IRDI] 0173-EX-1#02-CPF503#001]	[INTEGER]	1
[SMC] CLP information	[IRDI] 0173-EX-1#02-QBQ328#001]	[SMC Reference]	0..*

### 3.33 Properties of the SMC “CLP information”

Table 35: Properties of SMC " CLP information "

<b>idShort</b>	<i>CLP information</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-QBQ328#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	EU-CLP		
<b>Explanation</b>			
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] Danger category	[IRDI] 0173-EX-1#02-STH634#001]	[STRING]	0..1
[Property] Hazard statements	[IRDI] 0173-1#02-AAR391#003] classification system	[STRING]	0..*

	describing possible chemical dangers		
[Property] Additional hazard warnings	[IRDI] 0173-EX-1#02-VDQ683#001] EUH statements	[STRING]	0..1
[Property] Safety instructions - Prevention	[IRDI] 0173-EX-1#02-BGW994#001]	[STRING]	0..1
[Property] Safety instructions - Reaction	[IRDI] 0173-EX-1#02-QQS981#001]	[STRING]	0..1
[Property] Safety instructions - Storage	[IRDI] 0173-EX-1#02-NIE133#001]	[STRING]	0..1
[Property] Safety instructions - Disposal	[IRDI] 0173-EX-1#02-SXO682#001]	[STRING]	0..1
[Property] Name or other description of substance/mixture	[IRDI] 0173-EX-1#02-DZX312#001]	[STRING]	0..*
[SMC] Time frame	[IRDI] 0173-EX-1#02-PWZ903#001]	[SMC Reference]	1

### 3.34 Properties of the SMC "EU-REACH"

Table 36: Properties of SMC " EU-REACH "

<b>idShort</b>	<i>EU-REACH</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-ZOF122#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	legal information		
<b>Explanation</b>	Information as to whether there is a mandatory requirement the product or product packaging contains substances, in accordance with Regulation No 1907/2006 - REACH Regulation - are registered		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] Number of substance information	[IRDI] 0173-EX-1#02-XOB424#001]	[INTEGER]	1

[SMC] information	Substance	[IRDI] 0173-EX-1#02-NSH857#001]	[SMC Reference]	0..*
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### 3.35 Properties of the SMC “Substance information”

Table 37: Properties of SMC " Substance information "

<b>idShort</b>	<i>Substance information</i>			
<b>Class</b>	SubmodelElementCollection			
<b>semanticId</b>	0173-EX-1#02-NSH857#001			
<b>isCaseOf</b>				
<b>AllowDuplicates</b>	True			
<b>Parent</b>	EU-REACH			
<b>Explanation</b>				
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>	
<b>idShort</b>	<b>Description@en</b>	<b>Example</b>		
[Property] registered	Substance [IRDI] 0173-EX-1#02-AUQ646#001] Registration number according to REACH, to be reported with registration, prior to placing on the market	[STRING]	0..1	
[Property] hazardous	Substance [IRDI] 0173-EX-1#02-AFQ515#001] Is substance hazardous according to REACH, to be reported with registration, prior to placing on the market	BOOLEAN	0..1	
[Property] required	Authorization [IRDI] 0173-EX-1#02-XRD378#001] Authorization required according to REACH annex XIV, to be reported with registration, prior to placing on the market	BOOLEAN	0..1	
[Property] subject to restriction	Substance [IRDI] 0173-EX-1#02-IKD659#001] to be reported with	BOOLEAN	0..*	

	registration, prior to placing on the market		
[Property] Quantity of substance to be registered	[IRDI] 0173-EX-1#02-PJA689#001] Amount of substance/mixture produced in or imported into the EU, to be reported with registration, prior to placing on the market	[FLOAT]	0..1
[Property] Number of SVHC information	[IRDI] 0173-EX-1#02-MEM319#001]	[INTEGER]	1
[SMC] SVHC information	[IRDI] 0173-EX-1#02-WTU603#001]	[SMC Reference]	0..*
[Property] Online reference security data sheet	[IRDI] 0173-EX-1#02-QTE602#001] Security indications for the contact with dangerous substances, to be reported with registration, prior to placing on the market	[URL]	0..*
[Property] Security data sheet	[IRDI] 0173-EX-1#02-GTF636#001] Security indications for the contact with dangerous substances, to be reported with registration, prior to placing on the market	[FILE]	0..1
[Property] Name or other description of substance/mixture	[IRDI] 0173-EX-1#02-DZX312#001]	[STRING]	0..*
[Property] CAS Name	[IRDI] 0173-EX-1#02-AGS781#001]	[STRING]	0..*
[Property] EC number	[IRDI] 0173-EX-1#02-CIJ821#001]	[STRING]	0..*
[Property] CAS number	[IRDI] 0173-EX-1#02-LIF101#001]	[STRING]	0..*
[Property] Index number	[IRDI] 0173-EX-1#02-CXQ471#001]	[STRING]	0..*
[Property] ECHA Subs ID	[IRDI] 0173-EX-1#02-NAW996#001]	[STRING]	0..*



[SMC] Time frame	[IRDI] 0173-EX-1#02-PWZ903#001]	[SMC Reference]	1
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### 3.36 Properties of the SMC “SVHC information”

Table 38: Properties of SMC " SVHC information "

<b>idShort</b>	<i>SVHC information</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-WTU603#001		
<b>isCaseOf</b>			
<b>AllowDuplications</b>	True		
<b>Parent</b>	Substance information		
<b>Explanation</b>			
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] Name of SVHC substance	[IRDI] 0173-1#02-AAO187#002] describes the forbidden substance	[STRING]	0..*
[Property] Concentration of SVHC substance	[IRDI] 0173-EX-1#02-JZP193#001] indication of concentration	[STRING]	0..1
[Property] Concentration reference quantity	[IRDI] 0173-EX-1#02-RFS166#001] Quantity to which concentration refers	[STRING]	0..*
[Property] Online reference to SCIP entry	[IRDI] 0173-EX-1#02-BFT576#001] Link to entry in SCIP database	[URL]	0..*
[SMC] Time frame	[IRDI] 0173-EX-1#02-PWZ903#001]	[SMC Reference]	1

### 3.37 Properties of the SMC “Time frame”

Table 39: Properties of SMC " Time frame "

<b>idShort</b>	<i>Time frame</i>
<b>Class</b>	SubmodelElementCollection

<b>semanticId</b>	0173-EX-1#02-PWZ903#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Rechtlich relevante Informationen		
<b>Explanation</b>			
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] Date of initial creation	[IRDI] 0173-EX-1#02-ZQB096#001]	[DATE]	0..1
[Property] Date of last update	[IRDI] 0173-EX-1#02-JOC397#001]	[DATE]	0..1
[Property] Date of legal information	[IRDI] 0173-EX-1#02-VWH927#001]	[DATE]	0..1

### 3.38 Properties of the SMC "Identification"

Table 40: Properties of SMC " Identification "

<b>idShort</b>	<i>Identification</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-NAA871#001		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Product Related Environmental Data		
<b>Explanation</b>			
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[SMC] Supplier	[IRDI] 0173-EX-1#02-AAQ376#008] Company/dealer who purchases the device/product from the manufacturer and sells it under his own name	[SMC Reference]	1

[SMC] Manufacturer	[IRDI] 0173-EX-1#02-AAQ373#009 Manufacturer of a device/product who produces it in his own manufacturing plants or in other facilities under contract manufacture and who distributes it under his own name	[SMC Reference]	1
[Property] Reference point according to legal base	[IRDI] 0173-EX-1#02-UPL710#001]	[STRING]	0..*

### 3.39 Properties of the SMC "Manufacturer"

Table 41: Properties of SMC "Manufacturer "

<b>idShort</b>	<i>Manufacturer</i>		
<b>Class</b>	SubmodelElementCollection		
<b>semanticId</b>	0173-EX-1#02-AAQ373#009		
<b>isCaseOf</b>			
<b>AllowDuplicates</b>	True		
<b>Parent</b>	Identification		
<b>Explanation</b>	Manufacturer of a device/product who produces it in his own manufacturing plants or in other facilities under contract manufacture and who distributes it under his own name		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] Date of manufacture	[IRDI] 0173-EX-1#02-AAR972#002] Date from which the production and / or development process is completed or from which a service is provided completely	[DATE]	0..*
[Property] Date of manufacture	[IRDI] 0173-EX-1#02-AAO686#001] Datum as of which a product, procedure, standard or similar entity is valid	[STRING]	0..*

[Property] GTIN	[IRDI] 0173-EX-1#02-AAO663#003] internationally unique and unambiguous article number for products and services (Global Trade Item Number)	[STRING]	0..*
[Property] Manufacturer name	[IRDI] 0173-EX-1#02-AAO677#002] legally valid designation of the natural or judicial person which is directly responsible for the design, production, packaging and labeling of a product in respect to its being brought into circulation	[STRING]	0..*
[Property] Manufacturer product family	[IRDI] 0173-EX-1#02-AAU731#001] 2nd level of a 3 level manufacturer specific product hierarchy	[STRING]	0..1
[Property] Manufacturer product root	[IRDI] 0173-EX-1#02-AAU732#001] Top level of a 3 level manufacturer specific product hierarchy	[STRING]	0..1
[Property] Manufacturer product order suffix	[IRDI] 0173-EX-1#02-AAU733#001] By the manufacturer awarded string for the identification of additional attributes, not by a structured manufacturer item number may be expressed	[STRING]	0..1
[Property] Manufacturer product description	[IRDI] 0173-EX-1#02-AAU734#001] Description of the product, it's technical features and implementation if needed (long text)	[STRING]	0..1
[Property] Brand	[IRDI] 0173-EX-1#02-AAO742#002] Part of the	[STRING]	0..*

	naming for the support and the recognition of the brand position of products and services consisting of words, numbers, letters or other characters. Registered brands and trademarks are indicated with the appropriate protective signs (® or TM)		
[Property] Manufacturer product designation	[IRDI] 0173-EX-1#02-AAW338#001] Short description of the product (short text)	[STRING]	0..1
[Property] supplement item order suffix of manufacturer	[IRDI] 0173-EX-1#02-AAM547#002] by the manufacturer issued string for the identification of additional attributes, which can not be expressed by a structured manufacturer item number	[STRING]	0..*
[Property] item name of manufacturer	[IRDI] 0173-EX-1#02-AAM552#002] by the manufacturer (or distribution) set brand name for a product where product is a synonym for property, object, or service	[STRING]	0..*
[Property] delivery time of manufacturer	[IRDI] 0173-EX-1#02-AAM555#002] duration per working days needed by the manufacturer to deliver the product beginning with the receipt of the order	[STRING]	0..*
[Property] serial number	[IRDI] 0173-EX-1#02-AAM556#002] unique combination of numbers and letters used to identify the device once it has been manufactured	[STRING]	0..*

[Property] National stock number	[IRDI] 0173-EX-1#02-AAN075#003] 13-digit numeric code, identifying all the standardized material items of supply as they have been recognized by the United States Department of Defense	[STRING]	0..*
[Property] item type of manufacturer	[IRDI] 0173-EX-1#02-AAN389#002] short name issued by the manufacturer or type detail as an additional detail to the product brand name, coded to be able to distinguish product items of a product family or special variants from each other	[STRING]	0..*
[Property] fabrication number	[IRDI] 0173-EX-1#02-AAO674#004] alphanumeric character sequence assigned to a fabricated product, which allows the date, time and circumstances of fabrication to be traced	[STRING]	0..*
[Property] product article number of manufacturer	[IRDI] 0173-EX-1#02-AAO676#003] unique product identifier of the manufacturer	[STRING]	0..*
[Property] product type of manufacturer	[IRDI] 0173-EX-1#02-AAO681#003] additional information for describing products of a manufacturer for the purpose of distinguishing between products from a product family or of a special design (variants)	[STRING]	0..*
[Property] product of designation of manufacturer	[IRDI] 0173-EX-1#02-AAO682#003] designation used by the manufacturer for his product	[STRING]	0..*

[Property] Product type	[IRDI] 0173-EX-1#02-AAO057#002] Characteristic to differentiate between different products of a product family or special variants	[STRING]	0..*
[Property] URI of the product	[IRDI] 0173-EX-1#02-AAY811#001] unique global identification of the product using an universal resource identifier (URI)	[STRING]	0..1
[Property] GLN of manufacturer	[IRDI] 0173-EX-1#02-AAY812#001] internationally unique identification number for the manufacturer of the device or the product and for the physical location	[INTEGER]	0..*
[Property] URI of manufacturer	[IRDI] 0173-EX-1#02-PWF299#001] unique global identification of the manufacturer using an universal resource identifier - URI	[STRING]	0..1
[Property] Address of manufacturer	[IRDI] 0173-EX-1#02-MQH794#001]	[STRING]	0..1
[Property] Article Name	[IRDI] 0173-EX-1#02-XFV159#001]	[STRING]	0..1
[Property] Superior component in case of composition of items	[IRDI] 0173-EX-1#02-JLK550#001]	[STRING]	0..1
[Property] SCIP reference link to information	[IRDI] 0173-EX-1#02-VNS590#001]	[URL]	0..1
[Property] Country of manufacturing	[IRDI] 0173-EX-1#02-QGG747#001]	[STRING]	0..*

### 3.40 Properties of the SMC "Supplier"

Table 42: Properties of SMC "Supplier "

<b>idShort</b>	<i>Supplier</i>
<b>Class</b>	SubmodelElementCollection

<b>semanticId</b>	0173-EX-1#02-AAQ376#008		
<b>isCaseOf</b>			
<b>AllowDuplications</b>	True		
<b>Parent</b>	Identification		
<b>Explanation</b>	Company/dealer who purchases the device/product from the manufacturer and sells it under his own name		
<b>[SME type]</b>	<b>semanticity = [idType]value</b>	<b>[valueType]</b>	<b>card.</b>
<b>idShort</b>	<b>Description@en</b>	<b>example</b>	
[Property] Charge number of supplier	[IRDI] 0173-EX-1#02-AAM553#001] Charge number used by the supplier for its product	[INTEGER]	1
[SMC] batch number from supplier	[IRDI] 0173-EX-1#02-AAT106#002] unique combination of numbers and letters that distinguishes a product from other products of a different fabrication process	[SMC Reference]	0..*
[Property] Supplier product designation	[IRDI] 0173-EX-1#02-AAM551#002] Short description of the product (short text)		
[Property] product article number of supplier	[IRDI] 0173-EX-1#02-AAO736#004] unique product order identifier of the supplier		
[Property] name of supplier	[IRDI] 0173-EX-1#02-AAO735#003] name of supplier which provides the customer with a product or a service		
[Property] Supplier product family	[IRDI] 0173-EX-1#02-AAU728#001] 2nd level of a 3 level supplier specific product hierarchy		
[Property] Supplier product root	[IRDI] 0173-EX-1#02-AAU729#001] Top level of a 3 level supplier		



	specific product hierarchy		
[Property] Supplier product description	[IRDI] 0173-EX-1#02-AAU730#001 Description of the product, it's technical features and implementation if needed (long text)		
[Property] Supplier product type	[IRDI] 0173-EX-1#02-AAW336#001 Characteristic to differentiate between different products of a product family or special variants		
[Property] Supplier product order suffix	[IRDI] 0173-EX-1#02-AAW337#001] By the supplier awarded string for the identification of additional attributes, not by a structured supplier item number may be expressed		
[Property] item type of supplier	[IRDI] 0173-EX-1#02-AAM549#002] additional information for describing products of a supplier for the purpose of distinguishing between products from a product family or of a special design (variants)		
[Property] supplement item order suffix of supplier	[IRDI] 0173-EX-1#02-AAM550#002] by the supplier issued text for the identification of additional attributes, which can not be expressed by a structured supplier item number		
[Property] item name of supplier	[IRDI] 0173-EX-1#02-AAM554#002] by the supplier (or distribution) established brand name		

	for a product where product is a synonym for property, object, or service		
[Property] GLN of supplier	[IRDI] 0173-EX-1#02-AAY813#001] internationally unique identification number for the supplier of the device or the product and for the physical location		
[Property] delivery time of supplier	[IRDI] 0173-EX-1#02-AAM548#004] duration per working days needed by the supplier to deliver the product beginning with the receipt of the order		

## Annex A: Explanations on used table formats

### General

The used tables in this document try to outline information as concise as possible. They do not convey all information on Submodels and SubmodelElements. For this purpose, the definitive definitions are given by a separate file in form of an AASX file of the Submodel template and its elements.

### Tables on Submodels and SubmodelElements

For clarity and brevity, a set of rules is used for the tables for describing Submodels and SubmodelElements.

- The tables follow in principle the same conventions as in [5].
- The table heads abbreviate 'cardinality' with 'card'.
- The tables often place two informations in different rows of the same table cell. In this case, the first information is marked out by sharp brackets [] from the second information. A special case are the semanticIds, which are marked out by the format (type)(local)[idType]value.
- The types of SubmodelElements are abbreviated: SME

SME type Submodel	Element type
Property	Property
MLP	MultiLanguageProperty
Range	Range
File	File
Blob	Blob
Ref	ReferenceElement
Rel	RelationshipElement
SMC	SubmodelElementCollection

- If an idShort ends with '{00}', this indicates a suffix of the respective length (here: 2) of decimal digits, in order to make the idShort unique. A different idShort might be chosen, as long as it is unique in the parent's context.
- The Keys of semanticId in the main section feature only idType and value, such as: [IRI]https://admin-shell.io/vdi/2770/1/0/DocumentId/Id. The attributes "type" and "local" (typically "ConceptDescription" and "(local)" or "GlobalReference" and "(no-local)") need to be set accordingly; see [6].
- If a table does not contain a column with "parent" heading, all represented attributes share the same parent. This parent is denoted in the head of the table.
- Multi-language strings are represented by the text value, followed by '@'-character and the ISO 639 language code: example@de.
- The [valueType] is only given for Properties.

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