



BatteryPass-Ready Data Model Documentation (Master)

Model: BatteryPass-Ready data model (Master)
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Preface

Purpose:

This document describes the BatteryPass-Ready data model. It provides an overview of the structure, components, and definition of the master schema and its associated data attributes.

Scope of the Data Model:

The data model includes all mandatory and voluntary data attributes as represented and described in detail in the BatteryPass-Ready [Data Attribute Longlist v1.3](#). The only exception is the data model for batteries without BMS: We have added a data model for batteries without a battery management system (BMS), following stakeholder requests.¹

There are thus five JSON schema files (EV, LMT, Stationary Industrial > 2 kWh, Other Industrial > 2 kWh and Without BMS), each defining the relevant subset of data elements² for its respective battery category.

For ease of understanding, this document only represents the master schema, which is used for the different battery categories. Within the “Components” section of this document it is indicated which data elements apply to which battery category; the documentation does not provide a complete or fully detailed specification for each individual battery category schema file. The battery category indication used in this document is summarized in the table below.

x	data element is mandatory for the respective battery category by the EU Battery Regulation and/or related secondary legislation
(x)	data element is mandatory for the respective battery category by the JTC-24 standardization drafts and/or ESPR
o	data element is voluntary for the respective battery category
n.a.	data element does not apply to the respective battery category

Structure of this document:

This documentation includes

¹ To ensure alignment and consistency, the category for batteries without a BMS will be formally incorporated in the next update of the Data Attribute List.

² In this document the term “data element” is used synonymously with “data attribute”. In the data model, each data element is further specified by its primitive data type, e.g. string, integer, as well as its unit, where applicable.

- **Structure** (structural diagram of the data model master class)
- **Guideline** (all data attributes by data element group indicating data types)
- **Components** (outlining all components within the data model, including data type specifications and battery category indication per data element)

Current Implementation Status:

Currently, only selected data element dimensions (i.e., columns within the data attribute longlist e.g., format, unit etc.) are implemented.

For each data element within the battery passport, the following dimensions are currently implemented in the data model

- unit
- format
- access rights

The remaining dimensions are documented within the data attribute longlist but are not yet part of the schema and are therefore not currently considered in the data validation function in the test environment for technical reasons.

The data model currently does not include:

- granularity level of each data element
- update requirements
- data element behavior (static/dynamic)

The data model will be updated accordingly in future iterations.³

Relation to Other Work

The BatteryPass-Ready Data Model is a new development and does not represent an updated version of the previous Battery Pass Data Model published on GitHub.

While the Data Model builds on the DIN DKE Spec 99100 as a basis, it incorporates more recent regulatory and standardisation developments as reflected in the BatteryPass-Ready Data Attribute Longlist v1.3 (published March 2026).

³ All of the dimensions and information represented in the data model and the data attribute longlist are subject to change and represent the most recent state, as of the date of publication. Updates of both resources are planned, as the regulatory and standardization framework is evolving

Structure

Occurrence	Element/Attribute
Battery_Passport_Master	
1 .. 1	Symbols, labels and documentation of conformity <i>Separate collection symbol</i> <i>Symbols for cadmium and lead</i> <i>Carbon footprint label</i> <i>Extinguishing agent</i> <i>Meaning of labels and symbols</i> <i>EU declaration of conformity</i> <i>Results of test reports proving compliance</i>
1 .. 1	Supply chain due diligence <i>Information of due diligence report</i> <i>Third party assurances of recognised schemes</i> <i>Supply chain indices</i>
1 .. 1	Performance and durability <i>Rated capacity</i> <i>Remaining capacity</i> <i>Capacity fade</i> <i>Certified usable battery energy</i> <i>Remaining usable battery energy</i> <i>State of certified energy (SOCE)</i> <i>State of Charge (SoC)</i> <i>Minimum voltage</i> <i>Maximum voltage</i> <i>Nominal voltage</i> <i>Original power capability</i> <i>Remaining power capability</i> <i>Power fade</i> <i>Maximum permitted battery power</i> <i>Ratio between nominal battery power and battery energy</i> <i>Initial round trip energy efficiency</i> <i>Round trip energy efficiency at 50% of cycle life</i> <i>Remaining round trip energy efficiency</i> <i>Energy round trip efficiency fade</i> <i>Initial self-discharge rate</i> <i>Current self-discharge rate</i> <i>Evolution of self-discharge rates</i> <i>Initial internal resistance of battery cell and pack (module recommended)</i> <i>Internal resistance increase of pack (cell and module recommended)</i> <i>Expected lifetime in calendar years</i> <i>Expected lifetime - Number of charge-discharge cycles</i> <i>Number of full charging and discharging cycles</i> <i>Cycle-life reference test</i> <i>C-rate of relevant cycle-life test</i> <i>Energy throughput</i> <i>Capacity throughput</i> <i>Capacity threshold for exhaustion</i> <i>Temperature information</i> <i>Temperature range idle state, lower boundary</i> <i>Temperature range idle state, upper boundary</i> <i>Time spent in extreme temperatures above boundary</i> <i>Time spent in extreme temperatures below boundary</i> <i>Time spent charging during extreme temperatures above boundary</i> <i>Time spent charging during extreme temperatures below boundary</i>

Bold = Simple Element, Bold on grey background = Complex Element, Italic = Attribute, Grey = Group

Occurrence	Element/Attribute
	- Number of deep discharge events - Number of overcharge events - Information on accidents
1 .. 1	Identifiers and product data - DPP schema version - DPP status - DPP granularity - Date-time of latest update of DPP - Battery model identifier - Unique battery passport identifier / unique DPP identifier - Unique battery identifier / unique product identifier - Battery serial number - Unique economic operator identifier - Unique manufacturer identifier - Unique facility identifier - Economic operator information - Manufacturer information - Manufacturing place - Manufacturing date - Date of putting the battery into service - Warranty period of the battery - Battery category - Battery mass - Battery status
1 .. 1	Circularity and resource efficiency - Dismantling information - Manuals for the removal and the disassembly of the battery - Part numbers for components - Information on sources of spare parts - Safety measures - Pre-consumer recycled nickel share - Pre-consumer recycled cobalt share - Pre-consumer recycled lithium share - Post-consumer recycled nickel share - Post-consumer recycled cobalt share - Post-consumer recycled lithium share - Recycled lead share - Renewable content share - Information on the role of end-users in contributing to waste prevention - Information on the role of end-users in contributing to the separate collection of waste - Information on battery collection, preparation for second life and on treatment at end of life
1 .. 1	Battery materials and composition - Battery chemistry - Critical raw materials - Hazardous substances - Materials used in cathode, anode and electrolyte - Impact of substances on environment, human health, safety, persons
1 .. 1	Battery carbon footprint - Battery carbon footprint per Functional Unit - Contribution of raw material acquisition and pre-processing lifecycle stage - Contribution of main product production lifecycle stage - Contribution of distribution lifecycle stage - Contribution of end of life and recycling lifecycle stage - Carbon footprint performance class - Web link to public carbon footprint study - Absolute battery carbon footprint

Bold = Simple Element, Bold on grey background = Complex Element, Italic = Attribute, Grey = Group

Guideline

Element/Attribute	Annotation ⁴
Battery_Passport_Master	
Symbols, labels and documentation of conformity	Occurrence 1 .. 1 Type Symbols, labels and documentation of conformity
— <i>Separate collection symbol</i>	Occurrence 0 .. 1 Type anyURI
— <i>Symbols for cadmium and lead</i>	Occurrence 0 .. 1 Type anyURI
— <i>Carbon footprint label</i>	Occurrence 0 .. 1 Type anyURI
— <i>Extinguishing agent</i>	Occurrence 0 .. 1 Type Extinguishing_agent_type
— <i>Meaning of labels and symbols</i>	Occurrence 0 .. 1 Type string
— <i>EU declaration of conformity</i>	Occurrence 0 .. 1 Type anyURI
— <i>Results of test reports proving compliance</i>	Occurrence 0 .. 1 Type anyURI
Supply chain due diligence	Occurrence 1 .. 1 Type Supply chain due diligence
— <i>Information of due diligence report</i>	Occurrence 0 .. 1 Type anyURI
— <i>Third party assurances of recognised schemes</i>	Occurrence 0 .. 1 Type string
— <i>Supply chain indices</i>	Occurrence 0 .. 1 Type string
Performance and durability	Occurrence 1 .. 1 Type Performance and durability
— <i>Rated capacity</i>	Occurrence 0 .. 1 Type amperehour_miliamperehour_integer
— <i>Remaining capacity</i>	Occurrence 0 .. 1 Type amperehour_miliamperehour_integer
— <i>Capacity fade</i>	Occurrence 0 .. 1 Type percent_decimal
— <i>Certified usable battery energy</i>	Occurrence 0 .. 1 Type kilowatthour_integer
— <i>Remaining usable battery energy</i>	Occurrence 0 .. 1 Type kilowatthour_integer
— <i>State of certified energy (SOCE)</i>	Occurrence 0 .. 1 Type percent_decimal
— <i>State of Charge (SoC)</i>	Occurrence 0 .. 1 Type percent_decimal
— <i>Minimum voltage</i>	Occurrence 0 .. 1 Type volt_celsius_decimal
— <i>Maximum voltage</i>	Occurrence 0 .. 1 Type volt_celsius_decimal
— <i>Nominal voltage</i>	Occurrence 0 .. 1 Type volt_celsius_decimal
— <i>Original power capability</i>	Occurrence 0 .. 1 Type watt_celsius_integer

⁴ Cardinality is shown as 0..1 for data elements, as all cardinality specifications are made on submodel level, due to different data element requirements for each battery category. This document outlines the master class

<i>Remaining power capability</i>	Occurrence	0 .. 1
	Type	watt_celsius_integer
<i>Power fade</i>	Occurrence	0 .. 1
	Type	percent_decimal
<i>Maximum permitted battery power</i>	Occurrence	0 .. 1
	Type	watt_celsius_integer_onevalue

Element/Attribute	Annotation	
<i>Ratio between nominal battery power and battery energy</i>	Occurrence	0 .. 1
<i>Initial round trip energy efficiency</i>	Type	watt_per_watt_hour_integer
<i>Round trip energy efficiency at 50% of cycle life</i>	Occurrence	0 .. 1
<i>Remaining round trip energy efficiency</i>	Type	percent_decimal
<i>Energy round trip efficiency fade</i>	Occurrence	0 .. 1
<i>Initial self-discharge rate</i>	Type	percent_decimal
<i>Current self-discharge rate</i>	Occurrence	0 .. 1
<i>Evolution of self-discharge rates</i>	Type	percent/month_decimal
<i>Initial internal resistance of battery cell and pack (module)</i>	Occurrence	0 .. 1
<i>Internal resistance increase of pack (cell and module recommended)</i>	Type	ohm_integer
<i>Expected lifetime in calendar years</i>	Occurrence	0 .. 1
<i>Expected lifetime - Number of charge-discharge cycles</i>	Type	percent_decimal
<i>Number of full charging and discharging cycles</i>	Occurrence	0 .. 1
<i>Cycle-life reference test</i>	Type	decimal
<i>C-rate of relevant cycle-life test</i>	Occurrence	0 .. 1
<i>Energy throughput</i>	Type	integer
<i>Capacity throughput</i>	Occurrence	0 .. 1
<i>Capacity threshold for exhaustion</i>	Type	ampere_per_ampere_hour_decimal
<i>Temperature information</i>	Occurrence	0 .. 1
<i>Temperature range idle state, lower boundary</i>	Type	kilowatthour_decimal
<i>Temperature range idle state, upper boundary</i>	Occurrence	0 .. 1
<i>Time spent in extreme temperatures above boundary</i>	Type	amperehour_miliamperehour_decimal
<i>Time spent in extreme temperatures below boundary</i>	Occurrence	0 .. 1
<i>Time spent charging during extreme temperatures above boundary</i>	Type	percent_decimal
<i>Time spent charging during extreme temperatures below boundary</i>	Occurrence	0 .. 1
	Type	celsius_integer
	Type	celsius_integer
	Type	celsius_integer
	Occurrence	0 .. 1
	Type	integer
	FractionDigits	0
	Occurrence	0 .. 1
	Type	integer
	FractionDigits	0
	Occurrence	0 .. 1
	Type	integer
	FractionDigits	0
	Occurrence	0 .. 1
	Type	integer
	FractionDigits	0

Bold = Element, Italic = Attribute, Grey = Group

BatteryPass-Ready_base_model; 1.0

Element/Attribute	Annotation
— <i>Number of deep discharge events</i>	Occurrence 0 .. 1 Type integer FractionDigits 0
— <i>Number of overcharge events</i>	Occurrence 0 .. 1 Type integer FractionDigits 0
— <i>Information on accidents</i>	Occurrence 0 .. 1 Type anyURI
Identifiers and product data	Occurrence 1 .. 1 Type Identifiers and product data
— <i>DPP schema version</i>	Occurrence 0 .. 1 Type string
— <i>DPP status</i>	Occurrence 0 .. 1 Type DPP_status_type
— <i>DPP granularity</i>	Occurrence 0 .. 1 Type string Fixed Item
— <i>Date-time of latest update of DPP</i>	Occurrence 0 .. 1 Type dateTime
— <i>Battery model identifier</i>	Occurrence 0 .. 1 Type string
— <i>Unique battery passport identifier / unique DPP identifier</i>	Occurrence 0 .. 1 Type anyURI
— <i>Unique battery identifier / unique product identifier</i>	Occurrence 0 .. 1 Type anyURI
— <i>Battery serial number</i>	Occurrence 0 .. 1 Type string
— <i>Unique economic operator identifier</i>	Occurrence 0 .. 1 Type string
— <i>Unique manufacturer identifier</i>	Occurrence 0 .. 1 Type string
— <i>Unique facility identifier</i>	Occurrence 0 .. 1 Type string
— <i>Economic operator information</i>	Occurrence 0 .. 1 Type Operator_information_type
— <i>Manufacturer information</i>	Occurrence 0 .. 1 Type Operator_information_type
— <i>Manufacturing place</i>	Occurrence 0 .. 1 Type string
— <i>Manufacturing date</i>	Occurrence 0 .. 1 Type date
— <i>Date of putting the battery into service</i>	Occurrence 0 .. 1 Type date
— <i>Warranty period of the battery</i>	Occurrence 0 .. 1 Type date
— <i>Battery category</i>	Occurrence 0 .. 1 Type Battery_category_type
— <i>Battery mass</i>	Occurrence 0 .. 1 Type gram_kg_decimal
— <i>Battery status</i>	Occurrence 0 .. 1 Type Battery_status_type
Circularity and resource efficiency	Occurrence 1 .. 1 Type Circularity and resource efficiency
— <i>Dismantling information - Manuals for the removal and the</i>	Occurrence 0 .. 1 Type anyURI
— <i>Part numbers for components</i>	Occurrence 0 .. 1 Type anyURI

Bold = Element, Italic = Attribute, Grey = Group

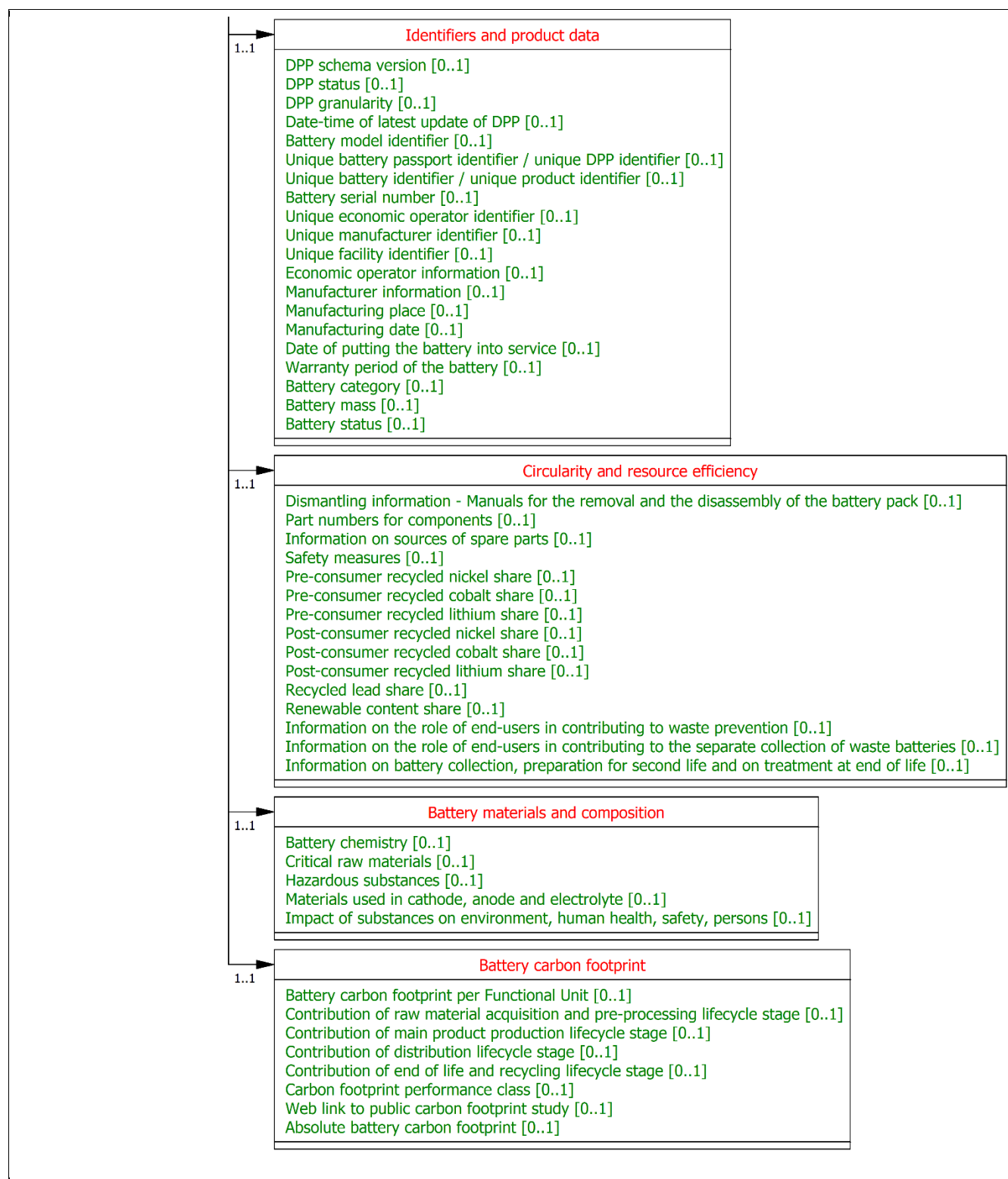
Element/Attribute	Annotation
Information on sources of spare parts	Occurrence 0 .. 1 Type anyURI
Safety measures	Occurrence 0 .. 1 Type anyURI
Pre-consumer recycled nickel share	Occurrence 0 .. 1 Type percent_decimal
Pre-consumer recycled cobalt share	Occurrence 0 .. 1 Type percent_decimal
Pre-consumer recycled lithium share	Occurrence 0 .. 1 Type percent_decimal
Post-consumer recycled nickel share	Occurrence 0 .. 1 Type percent_decimal
Post-consumer recycled cobalt share	Occurrence 0 .. 1 Type percent_decimal
Post-consumer recycled lithium share	Occurrence 0 .. 1 Type percent_decimal
Recycled lead share	Occurrence 0 .. 1 Type percent_decimal
Renewable content share	Occurrence 0 .. 1 Type percent_decimal
Information on the role of end-users in contributing to waste prevention	Occurrence 0 .. 1 Type anyURI
Information on the role of end-users in contributing to the	Occurrence 0 .. 1 Type anyURI
Information on battery collection, preparation for second life	Occurrence 0 .. 1 Type anyURI
Battery materials and composition	Occurrence 1 .. 1 Type Battery materials and composition
Battery chemistry	Occurrence 0 .. 1 Type Battery_chemistry_type
Critical raw materials	Occurrence 0 .. 1 Type string
Hazardous substances	Occurrence 0 .. 1 Type string
Materials used in cathode, anode and electrolyte	Occurrence 0 .. 1 Type string
Impact of substances on environment, human health, safety, persons	Occurrence 0 .. 1 Type string
Battery carbon footprint	Occurrence 1 .. 1 Type Battery carbon footprint
Battery carbon footprint per Functional Unit	Occurrence 0 .. 1 Type kg_CO2-equivalent_per_kilowatt_hour_decimal
Contribution of raw material acquisition and pre-processing	Occurrence 0 .. 1 Type kg_CO2-equivalent_per_kilowatt_hour_decimal
Contribution of main product production lifecycle stage	Occurrence 0 .. 1 Type kg_CO2-equivalent_per_kilowatt_hour_decimal
Contribution of distribution lifecycle stage	Occurrence 0 .. 1 Type kg_CO2-equivalent_per_kilowatt_hour_decimal
Contribution of end of life and recycling lifecycle stage	Occurrence 0 .. 1 Type kg_CO2-equivalent_per_kilowatt_hour_decimal
Carbon footprint performance class	Occurrence 0 .. 1 Type string
Web link to public carbon footprint study	Occurrence 0 .. 1 Type anyURI
Absolute battery carbon footprint	Occurrence 0 .. 1 Type kg_CO2-equivalent_integer

Bold = Element, Italic = Attribute, Grey = Group

BatteryPass-Ready_base_model; 1.0

Components





Battery carbon footprint		Class
Battery carbon footprint Battery carbon footprint per Functional Unit [0..1] Contribution of raw material acquisition and pre-processing lifecycle stage [0..1] Contribution of main product production lifecycle stage [0..1] Contribution of distribution lifecycle stage [0..1] Contribution of end of life and recycling lifecycle stage [0..1] Carbon footprint performance class [0..1] Web link to public carbon footprint study [0..1] Absolute battery carbon footprint [0..1]		
Attribute name	Description/Data Type ⁵	Fixed/Default
Battery carbon footprint per Functional Unit	Data types::kg_CO2-equivalent_per_kilowatt_hour_decimal EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Contribution of raw material acquisition and pre-processing lifecycle stage	Data types::kg_CO2-equivalent_per_kilowatt_hour_decimal EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Contribution of main product production lifecycle stage	Data types::kg_CO2-equivalent_per_kilowatt_hour_decimal EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Contribution of distribution lifecycle stage	Data types::kg_CO2-equivalent_per_kilowatt_hour_decimal EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Contribution of end of life and recycling lifecycle stage	Data types::kg_CO2-equivalent_per_kilowatt_hour_decimal EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Carbon footprint performance class	XSD Data Types::string EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	

⁵ The legend outlining the battery category notation can be found in the preface

Web link to public carbon footprint study	XSD Data Types::anyURI EV x	
Attribute name	Description/Data Type	Fixed/Default
	LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Absolute battery carbon footprint	Data types::kg_CO2-equivalent_integer EV o LMT o Other Industrial > 2kWh o Stationary Industrial > 2kWh o Industrial Without BMS o	

Battery materials and composition		Class
Battery materials and composition Battery chemistry [0..1] Critical raw materials [0..1] Hazardous substances [0..1] Materials used in cathode, anode and electrolyte [0..1] Impact of substances on environment, human health, safety, persons [0..1]		
Attribute name	Description/Data Type	Fixed/Default
Battery chemistry	Data types::Battery_chemistry_type EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Critical raw materials	XSD Data Types::string EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Hazardous substances	XSD Data Types::string EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Materials used in cathode, anode and electrolyte	XSD Data Types::string EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Impact of substances on environment, human health, safety, persons	XSD Data Types::string EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	

Circularity and resource efficiency

Class

Circularity and resource efficiency

Dismantling information - Manuals for the removal and the disassembly of the battery pack [0..1]
 Part numbers for components [0..1]
 Information on sources of spare parts [0..1]
 Safety measures [0..1]
 Pre-consumer recycled nickel share [0..1]
 Pre-consumer recycled cobalt share [0..1]
 Pre-consumer recycled lithium share [0..1]
 Post-consumer recycled nickel share [0..1]
 Post-consumer recycled cobalt share [0..1]
 Post-consumer recycled lithium share [0..1]
 Recycled lead share [0..1]
 Renewable content share [0..1]
 Information on the role of end-users in contributing to waste prevention [0..1]
 Information on the role of end-users in contributing to the separate collection of waste batteries [0..1]
 Information on battery collection, preparation for second life and on treatment at end of life [0..1]

Attribute name	Description/Data Type	Fixed/Default
Dismantling information - Manuals for the removal and the disassembly of the battery pack	XSD Data Types::anyURI EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Part numbers for components	XSD Data Types::anyURI EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Information on sources of spare parts	XSD Data Types::anyURI EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Safety measures	XSD Data Types::anyURI EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Pre-consumer recycled nickel share	Data types::percent_decimal EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Pre-consumer recycled cobalt share	Data types::percent_decimal EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	

Pre-consumer recycled lithium share	Data types::percent_decimal EV LMT	x x	
Attribute name	Description/Data Type		Fixed/Default
	Other Industrial > 2kWh Stationary Industrial > 2kWh Industrial Without BMS	x x x	
Post-consumer recycled nickel share	Data types::percent_decimal EV LMT Other Industrial > 2kWh Stationary Industrial > 2kWh Industrial Without BMS	x x x x x	
Post-consumer recycled cobalt share	Data types::percent_decimal EV LMT Other Industrial > 2kWh Stationary Industrial > 2kWh Industrial Without BMS	x x x x x	
Post-consumer recycled lithium share	Data types::percent_decimal EV LMT Other Industrial > 2kWh Stationary Industrial > 2kWh Industrial Without BMS	x x x x x	
Recycled lead share	Data types::percent_decimal EV LMT Other Industrial > 2kWh Stationary Industrial > 2kWh Industrial Without BMS	x x x x x	
Renewable content share	Data types::percent_decimal EV LMT Other Industrial > 2kWh Stationary Industrial > 2kWh Industrial Without BMS	x x x x x	
Information on the role of end-users in contributing to waste prevention	XSD Data Types::anyURI EV LMT Other Industrial > 2kWh Stationary Industrial > 2kWh Industrial Without BMS	x x x x x	
Information on the role of end-users in contributing to the separate collection of waste batteries	XSD Data Types::anyURI EV LMT Other Industrial > 2kWh Stationary Industrial > 2kWh Industrial Without BMS	x x x x x	
Information on battery collection, preparation for second life and on treatment at end of life	XSD Data Types::anyURI EV LMT Other Industrial > 2kWh Stationary Industrial > 2kWh Industrial Without BMS	x x x x x	

Data types::ampere per ampere hour		Data type
Type	custom unit codes	
Codes	Name/Description	
A/Ah	Ampere per ampere hour	
Data types::amperehour_miliamperehour		Data type
Type	custom unit codes	
Codes	Name/Description	
Ah	Ampere hour	
mAh	Miliampere hour	
Data types::amperehour_miliamperehour_decimal		Class
amperehour_miliamperehour_decimal amperehour miliamperehour value [1..1] amperehour miliamperehour [1..1]		
Attribute name	Description/Data Type	Fixed/Default
amperehour miliamperehour value	XSD Data Types::decimal	
amperehour miliamperehour	Data types::amperehour_miliamperehour	
Data types::amperehour_miliamperehour_integer		Class
amperehour_miliamperehour_integer amperehour miliamperehour value [1..1] ampere hour miliamperehour [1..1]		
Attribute name	Description/Data Type	Fixed/Default
amperehour miliamperehour value	XSD Data Types::integer	
ampere hour miliamperehour	Data types::amperehour_miliamperehour	
Data types::ampere_per_ampere_hour_decimal		Class
ampere_per_ampere_hour_decimal ampere per ampere hour value [1..1] ampere per ampere hour [1..1]		
Attribute name	Description/Data Type	Fixed/Default
ampere per ampere hour value	XSD Data Types::decimal	
ampere per ampere hour	Data types::ampere per ampere hour	
Data types::battery category codes		Data type
Type	string	
Codes	Name/Description	
LMT battery	codevalue for LMT batteries	
electric vehicle battery	codevalue for electric batteries	

industrial/non-stationary battery	codevalue for non-stationary industrial batteries with a capacity above 2kWh	
Codes	Name/Description	
industrial/stationary battery	codevalue for stationary industrial batteries with a capacity above 2kWh	
Data types::battery status codes		Data type
Type	string	
Codes	Name/Description	
original		
re-used		
remanufactured		
repurposed		
waste		
Data types::Battery_category_type		Class
Battery_category_type battery category value [1..1]		
Attribute name	Description/Data Type	Fixed/Default
battery category value	Data types::battery category codes	
Data types::Battery_chemistry_type		Class
Battery_chemistry_type additionally possible value [0..1] chemical code value [0..1]		
Attribute name	Description/Data Type	Fixed/Default
additionally possible value	XSD Data Types::string	
chemical code value	Data types::custom chemical codes	
Data types::Battery_status_type		Class
Battery_status_type battery status values [1..1]		
Attribute name	Description/Data Type	Fixed/Default
battery status values	Data types::battery status codes	
Data types::celsius_integer		Class
celsius_integer degree celsius [1..1] celsius value [1..1]		
Attribute name	Description/Data Type	Fixed/Default
degree celsius	Data types::degree celsius	
celsius value	XSD Data Types::integer	

Data types::custom chemical codes		Data type
Type	string	
Codes	Name/Description	
Li-ion LCO	Lithium ion LCO	
Li-ion LFP	Lithium ion LFP	
Li-ion LMO	Lithium ion LMO	
Li-ion NCA	Lithium ion NCA	
Li-ion NMC	Lithium ion NMC	
Li-metal	Lithium metal	
Na-ion	Sodium-ion	
Ni-Cd	Nickel cadmium	
Ni-MH	Nickel metal hydride	
Pb	Lead acid	
Data types::custom unit codes		Data type
Type	string	
Codes	Name/Description	
%	Per cent	
%/month	Per cent per month	
A/Ah	Ampere per ampere hour	
Ah	Ampere hour	
Ohm	Ohm	
V	Volt	
W	Watt	
W/Wh	Watt per watt hour	
Wh	Watt hour	
g	Gram	
kWh	Kilowatt hour	
kg	Kilogram	
kgCO ₂ -eq	Kilogram CO ₂ -equivalent	
kgCO ₂ -eq/kWh	Kilogram CO ₂ -equivalent per kilowatt hour	
mAh	Miliampere hour	
°C	Degree celsius	
Data types::degree celsius		Data type
Type	custom unit codes	
Codes	Name/Description	
°C	Degree celsius	
Data types::dpp status codes		Data type
Type	string	
Codes	Name/Description	
Active		
Archived		
Inactive		
Marked-for-deletion		
Data types::DPP_status_type		Class
DPP_status_type dpp status value [1..1]		

Attribute name	Description/Data Type	Fixed/Default
dpp status value	Data types::dpp status codes	
Data types::Extinguishing_agent_type		Class
Extinguishing_agent_type agent fire class [0..1] extinguishing agent [0..1]		
Attribute name	Description/Data Type	Fixed/Default
agent fire class	XSD Data Types::string	
extinguishing agent	XSD Data Types::string	
Data types::gram_kg		Data type
Type	custom unit codes	
Codes	Name/Description	
g	Gram	
kg	Kilogram	
Data types::gram_kg_decimal		Class
gram_kg_decimal gram kg [1..1] gram kg value [1..1]		
Attribute name	Description/Data Type	Fixed/Default
gram kg	Data types::gram_kg	
gram kg value	XSD Data Types::decimal	
Data types::kg CO2-equivalent		Data type
Type	custom unit codes	
Codes	Name/Description	
kgCO2-eq	Kilogram CO ₂ -equivalent	
Data types::kg CO2-equivalent per kilowatt hour		Data type
Type	custom unit codes	
Codes	Name/Description	
kgCO2-eq/kWh	Kilogram CO ₂ -equivalent per kilowatt hour	
Data types::kg_CO2-equivalent_integer		Class
kg_CO2-equivalent_integer kg CO2-equivalent value [1..1] kg CO2-equivalent [1..1]		
Attribute name	Description/Data Type	Fixed/Default
kg CO2-equivalent value	XSD Data Types::integer	
kg CO2-equivalent	Data types::kg CO2-equivalent	

Data types::kg_CO2-equivalent_per_kilowatt_hour_decimal			Class
kg_CO2-equivalent_per_kilowatt_hour_decimal kg CO2-equivalent per kilowatt hour value [1..1] kg CO2-equivalent per kilowatt hour [1..1]			
Attribute name	Description/Data Type	Fixed/Default	
kg CO2-equivalent per kilowatt hour value	XSD Data Types::decimal		
kg CO2-equivalent per kilowatt hour	Data types::kg CO2-equivalent per kilowatt hour		
Data types::kilowatt hour			Data type
Type	custom unit codes		
Codes	Name/Description		
kWh	Kilowatt hour		
Data types::kilowatthour_decimal			Class
kilowatthour_decimal kilowatt hour value [1..1] kilowatt hour [1..1]			
Attribute name	Description/Data Type	Fixed/Default	
kilowatt hour value	XSD Data Types::decimal		
kilowatt hour	Data types::kilowatt hour		
Data types::kilowatthour_integer			Class
kilowatthour_integer kilowatt hour value [1..1] kilowatt hour [1..1]			
Attribute name	Description/Data Type	Fixed/Default	
kilowatt hour value	XSD Data Types::integer		
kilowatt hour	Data types::kilowatt hour		
Data types::ohm			Data type
Type	custom unit codes		
Codes	Name/Description		
Ohm	Ohm		
Data types::ohm_integer			Class
ohm_integer ohm value [1..1] ohm [1..1]			
Attribute name	Description/Data Type	Fixed/Default	
ohm value	XSD Data Types::integer		

Attribute name	Description/Data Type	Fixed/Default		
ohm	Data types::ohm			
Data types::Operator_information_type		Class		
<table><tr><td>Operator_information_type</td></tr><tr><td>name [1..1] registered trade name or registered trademark [1..1] postal address [1..1] web address [0..1] e-mail address [0..1]</td></tr></table>			Operator_information_type	name [1..1] registered trade name or registered trademark [1..1] postal address [1..1] web address [0..1] e-mail address [0..1]
Operator_information_type				
name [1..1] registered trade name or registered trademark [1..1] postal address [1..1] web address [0..1] e-mail address [0..1]				
Attribute name	Description/Data Type	Fixed/Default		
name	XSD Data Types::string			
registered trade name or registered trademark	XSD Data Types::string			
postal address	XSD Data Types::string			
web address	XSD Data Types::anyURI			
e-mail address	XSD Data Types::string			
Data types::percent		Data type		
Type	custom unit codes			
Codes	Name/Description			
%	Per cent			
Data types::percent/month		Data type		
Type	custom unit codes			
Codes	Name/Description			
%/month	Per cent per month			
Data types::percent/month_decimal		Class		
<table><tr><td>percent/month_decimal</td></tr><tr><td>percent/month [1..1] percent/month value [1..1]</td></tr></table>			percent/month_decimal	percent/month [1..1] percent/month value [1..1]
percent/month_decimal				
percent/month [1..1] percent/month value [1..1]				
Attribute name	Description/Data Type	Fixed/Default		
percent/month	Data types::percent/month			
percent/month value	XSD Data Types::decimal			
Data types::percent_decimal		Class		
<table><tr><td>percent_decimal</td></tr><tr><td>percent [1..1] percentage value [1..1]</td></tr></table>			percent_decimal	percent [1..1] percentage value [1..1]
percent_decimal				
percent [1..1] percentage value [1..1]				
Attribute name	Description/Data Type	Fixed/Default		
percent	Data types::percent			
percentage value	XSD Data Types::decimal			
Data types::volt		Data type		
Type	custom unit codes			
Codes	Name/Description			
V	Volt			

Data types::volt_celsius_decimal			Class
volt_celsius_decimal volt value [1..1] volt [1..1] temperature range upper boundary [0..1] temperature range lower boundary [0..1] temperature range upper boundary value [0..1] temperature range lower boundary value [0..1]			
Attribute name	Description/Data Type	Fixed/Default	
volt value	XSD Data Types::decimal		
volt	Data types::volt		
temperature range upper boundary	Data types::degree celsius		
temperature range lower boundary	Data types::degree celsius		
temperature range upper boundary value	XSD Data Types::integer		
temperature range lower boundary value	XSD Data Types::integer		
Data types::watt			Data type
Type	custom unit codes		
Codes	Name/Description		
W	Watt		
Data types::watt per watt hour			Data type
Type	custom unit codes		
Codes	Name/Description		
W/Wh	Watt per watt hour		
Data types::watt_celcius_integer			Class
watt_celcius_integer watt value at 80% SoC [1..1] watt value at 20% SoC [1..1] watt [1..1] temperature range upper boundary value [0..1] temperature range lower boundary value [0..1] temperature range upper boundary [0..1] temperature range lower boundary [0..1]			
Attribute name	Description/Data Type	Fixed/Default	
watt value at 80% SoC	XSD Data Types::integer		
watt value at 20% SoC	XSD Data Types::integer		
watt	Data types::watt		
temperature range upper boundary value	XSD Data Types::integer		
temperature range lower boundary value	XSD Data Types::integer		
Attribute name	Description/Data Type	Fixed/Default	
temperature range upper boundary	Data types::degree celsius		

temperature range lower boundary	Data types::degree celsius	
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Data types::watt_celsius_integer_onevalue

Class

watt_celsius_integer_onevalue
watt value [1..1] watt [1..1] temperature range upper boundary value [0..1] temperature range lower boundary value [0..1] temperature range upper boundary [0..1] temperature range lower boundary [0..1]

Attribute name	Description/Data Type	Fixed/Default
watt value	XSD Data Types::integer	
watt	Data types::watt	
temperature range upper boundary value	XSD Data Types::integer	
temperature range lower boundary value	XSD Data Types::integer	
temperature range upper boundary	Data types::degree celsius	
temperature range lower boundary	Data types::degree celsius	

Data types::watt_per_watt_hour_integer

Class

watt_per_watt_hour_integer
watt per watt hour value [1..1] watt per watt hour [1..1]

Attribute name	Description/Data Type	Fixed/Default
watt per watt hour value	XSD Data Types::integer	
watt per watt hour	Data types::watt per watt hour	

Identifiers and product data

Class

Identifiers and product data
DPP schema version [0..1] DPP status [0..1] DPP granularity [0..1] Date-time of latest update of DPP [0..1] Battery model identifier [0..1] Unique battery passport identifier / unique DPP identifier [0..1] Unique battery identifier / unique product identifier [0..1] Battery serial number [0..1] Unique economic operator identifier [0..1] Unique manufacturer identifier [0..1] Unique facility identifier [0..1] Economic operator information [0..1] Manufacturer information [0..1] Manufacturing place [0..1] Manufacturing date [0..1] Date of putting the battery into service [0..1] Warranty period of the battery [0..1] Battery category [0..1] Battery mass [0..1] Battery status [0..1]

Attribute name	Description/Data Type	Fixed/Default
DPP schema version	XSD Data Types::string EV (x) LMT (x) Other Industrial > 2kWh (x) Stationary Industrial > 2kWh (x) Industrial Without BMS (x)	
DPP status	Data types::DPP_status_type EV (x) LMT (x) Other Industrial > 2kWh (x) Stationary Industrial > 2kWh (x) Industrial Without BMS (x)	
DPP granularity	XSD Data Types::string EV (x) LMT (x) Other Industrial > 2kWh (x) Stationary Industrial > 2kWh (x) Industrial Without BMS (x)	Item
Date-time of latest update of DPP	XSD Data Types::dateTime EV (x) LMT (x) Other Industrial > 2kWh (x) Stationary Industrial > 2kWh (x) Industrial Without BMS (x)	
Battery model identifier	XSD Data Types::string EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Unique battery passport identifier / unique DPP identifier	XSD Data Types::anyURI EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x	
Attribute name	Description/Data Type	Fixed/Default
	Industrial Without BMS x	
Unique battery identifier / unique product identifier	XSD Data Types::anyURI EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Battery serial number	XSD Data Types::string EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Unique economic operator identifier	XSD Data Types::string EV (x) LMT (x) Other Industrial > 2kWh (x) Stationary Industrial > 2kWh (x) Industrial Without BMS (x)	

Unique manufacturer identifier	XSD Data Types::string EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Unique facility identifier	XSD Data Types::string EV (x) LMT (x) Other Industrial > 2kWh (x) Stationary Industrial > 2kWh (x) Industrial Without BMS (x)	
Economic operator information	Data types::Operator_information_type EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Manufacturer information	Data types::Operator_information_type EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Manufacturing place	XSD Data Types::string EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Manufacturing date	XSD Data Types::date EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS n.a.	
Attribute name	Description/Data Type	Fixed/Default
Date of putting the battery into service	XSD Data Types::date EV o LMT x Other Industrial > 2kWh o Stationary Industrial > 2kWh x Industrial Without BMS n.a.	
Warranty period of the battery	XSD Data Types::date EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Battery category	Data types::Battery_category_type EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	

Battery mass	Data types::gram_kg_decimal	
	EV	x
	LMT	x
	Other Industrial > 2kWh	x
	Stationary Industrial > 2kWh	x
Battery status	Industrial Without BMS	x
	Data types::Battery_status_type	
	EV	x
	LMT	x
	Other Industrial > 2kWh	x
	Stationary Industrial > 2kWh	x
	Industrial Without BMS	x

Performance and durability

Class

Performance and durability

Rated capacity [0..1]
 Remaining capacity [0..1]
 Capacity fade [0..1]
 Certified usable battery energy [0..1]
 Remaining usable battery energy [0..1]
 State of certified energy (SOCE) [0..1]
 State of Charge (SoC) [0..1]
 Minimum voltage [0..1]
 Maximum voltage [0..1]
 Nominal voltage [0..1]
 Original power capability [0..1]
 Remaining power capability [0..1]
 Power fade [0..1]
 Maximum permitted battery power [0..1]
 Ratio between nominal battery power and battery energy [0..1]
 Initial round trip energy efficiency [0..1]
 Round trip energy efficiency at 50% of cycle life [0..1]
 Remaining round trip energy efficiency [0..1]
 Energy round trip efficiency fade [0..1]
 Initial self-discharge rate [0..1]
 Current self-discharge rate [0..1]
 Evolution of self-discharge rates [0..1]
 Initial internal resistance of battery cell and pack (module recommended) [0..1]
 Internal resistance increase of pack (cell and module recommended) [0..1]
 Expected lifetime in calendar years [0..1]
 Expected lifetime - Number of charge-discharge cycles [0..1]
 Number of full charging and discharging cycles [0..1]
 Cycle-life reference test [0..1]
 C-rate of relevant cycle-life test [0..1]
 Energy throughput [0..1]
 Capacity throughput [0..1]
 Capacity threshold for exhaustion [0..1]
 Temperature information [0..1]
 Temperature range idle state, lower boundary [0..1]
 Temperature range idle state, upper boundary [0..1]
 Time spent in extreme temperatures above boundary [0..1]
 Time spent in extreme temperatures below boundary [0..1]
 Time spent charging during extreme temperatures above boundary [0..1]
 Time spent charging during extreme temperatures below boundary [0..1]
 Number of deep discharge events [0..1]
 Number of overcharge events [0..1]
 Information on accidents [0..1]

Attribute name	Description/Data Type	Fixed/Default
Rated capacity	Data types::amperehour_miliamperehour_integer EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Remaining capacity	Data types::amperehour_miliamperehour_integer EV o LMT x Other Industrial > 2kWh o Stationary Industrial > 2kWh x Industrial Without BMS n.a.	
Capacity fade	Data types::percent_decimal EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x	

Attribute name	Description/Data Type	Fixed/Default
	Industrial Without BMS x	
Certified usable battery energy	Data types::kilowatthour_integer EV o LMT n.a. Other Industrial > 2kWh n.a. Stationary Industrial > 2kWh n.a. Industrial Without BMS n.a.	
Remaining usable battery energy	Data types::kilowatthour_integer EV o LMT n.a. Other Industrial > 2kWh n.a. Stationary Industrial > 2kWh n.a. Industrial Without BMS n.a.	
State of certified energy (SOCE)	Data types::percent_decimal EV x LMT n.a. Other Industrial > 2kWh n.a. Stationary Industrial > 2kWh n.a. Industrial Without BMS n.a.	
State of Charge (SoC)	Data types::percent_decimal EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Minimum voltage	Data types::volt_celsius_decimal EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Maximum voltage	Data types::volt_celsius_decimal EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Nominal voltage	Data types::volt_celsius_decimal EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Original power capability	Data types::watt_celcius_integer EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Remaining power capability	Data types::watt_celcius_integer EV o LMT x Other Industrial > 2kWh o Stationary Industrial > 2kWh x Industrial Without BMS n.a.	

Attribute name	Description/Data Type	Fixed/Default
Power fade	Data types::percent_decimal EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Maximum permitted battery power	Data types::watt_celsius_integer_onevalue EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Ratio between nominal battery power and battery energy	Data types::watt_per_watt_hour_integer EV o LMT o Other Industrial > 2kWh o Stationary Industrial > 2kWh o Industrial Without BMS o	
Initial round trip energy efficiency	Data types::percent_decimal EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Round trip energy efficiency at 50% of cycle life	Data types::percent_decimal EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Remaining round trip energy efficiency	Data types::percent_decimal EV n.a. LMT x Other Industrial > 2kWh n.a. Stationary Industrial > 2kWh x Industrial Without BMS n.a.	
Energy round trip efficiency fade	Data types::percent_decimal EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Initial self-discharge rate	Data types::percent/month_decimal EV n.a. LMT o Other Industrial > 2kWh n.a. Stationary Industrial > 2kWh o Industrial Without BMS n.a.	
Current self-discharge rate	Data types::percent/month_decimal EV n.a. LMT o Other Industrial > 2kWh n.a. Stationary Industrial > 2kWh o Industrial Without BMS n.a.	
Evolution of self-discharge	Data types::percent_decimal	

Attribute name	Description/Data Type	Fixed/Default
rates	EV n.a. LMT x Other Industrial > 2kWh n.a. Stationary Industrial > 2kWh x Industrial Without BMS n.a.	
Initial internal resistance of battery cell and pack (module recommended)	Data types::ohm_integer EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS n.a.	
Internal resistance increase of pack (cell and module recommended)	Data types::percent_decimal EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS n.a.	
Expected lifetime in calendar years	XSD Data Types::decimal EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Expected lifetime - Number of charge-discharge cycles	XSD Data Types::integer EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Number of full charging and discharging cycles	XSD Data Types::integer EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS n.a.	
Cycle-life reference test	XSD Data Types::string EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
C-rate of relevant cycle-life test	Data types::ampere_per_ampere_hour_decimal EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Energy throughput	Data types::kilowatthour_decimal EV n.a. LMT x Other Industrial > 2kWh n.a. Stationary Industrial > 2kWh x Industrial Without BMS n.a.	
Capacity throughput	Data types::amperehour_miliamperehour_decimal EV n.a.	

Attribute name	Description/Data Type	Fixed/Default
	LMT x Other Industrial > 2kWh n.a. Stationary Industrial > 2kWh x Industrial Without BMS n.a.	
Capacity threshold for exhaustion	Data types::percent_decimal EV x LMT n.a. Other Industrial > 2kWh n.a. Stationary Industrial > 2kWh n.a. Industrial Without BMS n.a.	
Temperature information	Data types::celsius_integer EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Temperature range idle state, lower boundary	Data types::celsius_integer EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Temperature range idle state, upper boundary	Data types::celsius_integer EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	
Time spent in extreme temperatures above boundary	XSD Data Types::integer EV n.a. LMT x Other Industrial > 2kWh n.a. Stationary Industrial > 2kWh x Industrial Without BMS n.a.	
Time spent in extreme temperatures below boundary	XSD Data Types::integer EV n.a. LMT x Other Industrial > 2kWh n.a. Stationary Industrial > 2kWh x Industrial Without BMS n.a.	
Time spent charging during extreme temperatures above boundary	XSD Data Types::integer EV n.a. LMT x Other Industrial > 2kWh n.a. Stationary Industrial > 2kWh x Industrial Without BMS n.a.	
Time spent charging during extreme temperatures below boundary	XSD Data Types::integer EV n.a. LMT x Other Industrial > 2kWh n.a. Stationary Industrial > 2kWh x Industrial Without BMS n.a.	
Number of deep discharge events	XSD Data Types::integer EV o LMT x	

Attribute name	Description/Data Type	Fixed/Default
	Other Industrial > 2kWh o Stationary Industrial > 2kWh x Industrial Without BMS n.a.	
Number of overcharge events	XSD Data Types::integer EV o LMT o Other Industrial > 2kWh o Stationary Industrial > 2kWh o Industrial Without BMS n.a.	
Information on accidents	XSD Data Types::anyURI EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x	

Supply chain due diligence		Class
Supply chain due diligence Information of due diligence report [0..1] Third party assurances of recognised schemes [0..1] Supply chain indices [0..1]		
Attribute name	Description/Data Type	Fixed/Default
Information of due diligence report	XSD Data Types::anyURI	
	EV	x
	LMT	x
	Other Industrial > 2kWh	x
	Stationary Industrial > 2kWh	x
Third party assurances of recognised schemes	Industrial Without BMS	x
	XSD Data Types::string	
	EV	o
	LMT	o
	Other Industrial > 2kWh	o
Supply chain indices	Stationary Industrial > 2kWh	o
	Industrial Without BMS	o
	XSD Data Types::string	
	EV	o
	LMT	o
	Other Industrial > 2kWh	o
	Stationary Industrial > 2kWh	o
	Industrial Without BMS	o

Symbols, labels and documentation of conformity			Class
Symbols, labels and documentation of conformity Separate collection symbol [0..1] Symbols for cadmium and lead [0..1] Carbon footprint label [0..1] Extinguishing agent [0..1] Meaning of labels and symbols [0..1] EU declaration of conformity [0..1] Results of test reports proving compliance [0..1]			
Attribute name	Description/Data Type	Fixed/Default	
Separate collection symbol	XSD Data Types::anyURI EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x		
Symbols for cadmium and lead	XSD Data Types::anyURI EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x		
Carbon footprint label	XSD Data Types::anyURI EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x		
Extinguishing agent	Data types::Extinguishing_agent_type EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x		
Meaning of labels and symbols	XSD Data Types::string EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x		
EU declaration of conformity	XSD Data Types::anyURI EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x		
Results of test reports proving compliance	XSD Data Types::anyURI EV x LMT x Other Industrial > 2kWh x Stationary Industrial > 2kWh x Industrial Without BMS x		
XSD Data Types::anyURI			Data type

XSD Data Types::date	Data type
XSD Data Types::dateTime	Data type
XSD Data Types::decimal	Data type
XSD Data Types::integer	Data type
Type decimal	
FractionDigits / TotalDigits 0 /	
XSD Data Types::string	Data type