ANNEX XIII
DATA FIELD REFERENCE CARD

Complete list of all data fields required in a Digital Battery Passport under EU Regulation 2023/1542

Applies to: EV batteries, Industrial batteries (>2 kWh), LMT batteries | Mandatory from: 18 February 2027

● MANDATORY ● EV ONLY ● IND/EV ● ALL TYPES

Responsible party codes: MFR = Manufacturer | SUP = Supplier | 3PV = Third-party verifier | OPR = Operator

1. GENERAL BATTERY INFORMATION

NO.	FIELD NAME	TYPE	FORMAT / UNIT	BY	SCOPE	NOTES
1.1	**Battery manufacturer name and address**	Text	Legal name + address	MFR	A	Must match CIPC/Gate 1 registration
1.2	**Battery model identifier**	Text	Alphanumeric string	MFR	A	Unique per model, not per unit
1.3	**Unique battery identifier (UID)**	Text	UUID or serial number	MFR	A	Unique per individual battery unit
1.4	**Battery category**	Enum	EV / Industrial / LMT / Portable	MFR	A	Per Article 3 definitions
1.5	**Cell chemistry**	Text	e.g. NMC, LFP, NCA, LCO	MFR	A	Cathode and anode active materials
1.6	**Cathode active material**	Text	Chemical name + CAS number	MFR	A	
1.7	**Anode active material**	Text	Chemical name + CAS number	MFR	A	
1.8	**Electrolyte**	Text	Chemical name + CAS number	MFR	A	
1.9	**Nominal capacity**	Number	Ah (ampere-hours)	MFR	A	At standard temperature
1.10	**Nominal voltage**	Number	V (volts)	MFR	A	
1.11	**Battery energy content**	Number	kWh	MFR	A	Nominal energy content
1.12	**Battery weight**	Number	kg	MFR	A	
1.13	**Battery dimensions**	Text	mm (L × W × H)	MFR	A	
1.14	**Operating temperature range**	Range	°C (min / max)	MFR	A	
1.15	**Date of manufacture**	Date	YYYY-MM	MFR	A	Month and year of manufacture
1.16	**Place of manufacture**	Text	City, Country	MFR	A	

2. CARBON FOOTPRINT

NO.	FIELD NAME	TYPE	FORMAT / UNIT	BY	SCOPE	NOTES
2.1	**Total carbon footprint**	Number	kg CO■e / kWh	MFR+3PV	E/I/L	Per kWh of total energy over service life
2.2	**Carbon footprint — raw material extraction**	Number	kg CO■e / kWh	MFR+3PV	E/I/L	Lifecycle stage breakdown
2.3	**Carbon footprint — battery manufacturing**	Number	kg CO■e / kWh	MFR+3PV	E/I/L	Lifecycle stage breakdown

2.4	**Carbon footprint — distribution**	Number	kg CO■e / kWh	MFR+3PV	E/I/L	Lifecycle stage breakdown
2.5	**Carbon footprint — use phase**	Number	kg CO■e / kWh	MFR+3PV	E/I/L	Lifecycle stage breakdown
2.6	**Carbon footprint — end-of-life**	Number	kg CO■e / kWh	MFR+3PV	E/I/L	Lifecycle stage breakdown
2.7	**Carbon footprint performance class**	Enum	A / B / C / D	MFR+3PV	E/I/L	Mandatory from Aug 2026 (EV), Aug 2027 (Ind)
2.8	**Carbon footprint study reference**	Text	Document reference number	3PV	E/I/L	Reference to third-party verification report
2.9	**Third-party verifier name**	Text	Legal name of verifier	3PV	E/I/L	Accredited verification body
2.10	**Third-party verifier accreditation number**	Text	Accreditation number	3PV	E/I/L	

3. RECYCLED CONTENT

NO.	FIELD NAME	TYPE	FORMAT / UNIT	BY	SCOPE	NOTES
3.1	**Recycled cobalt content**	Number	% by weight of active material	MFR+3PV	E/I/L	Target: 16% from 2031, 26% from 2036
3.2	**Recycled lithium content**	Number	% by weight of active material	MFR+3PV	E/I/L	Target: 6% from 2031, 12% from 2036
3.3	**Recycled nickel content**	Number	% by weight of active material	MFR+3PV	E/I/L	Target: 6% from 2031, 15% from 2036
3.4	**Recycled lead content**	Number	% by weight of active material	MFR+3PV	A	Target: 85% from 2031
3.5	**Recycled content methodology**	Text	Standard reference	MFR	E/I/L	Methodology used to calculate recycled %
3.6	**Recycled content verification reference**	Text	Document reference number	3PV	E/I/L	Reference to third-party verification report

4. MATERIAL COMPOSITION

NO.	FIELD NAME	TYPE	FORMAT / UNIT	BY	SCOPE	NOTES
4.1	**Cobalt content (total)**	Number	g (grams)	MFR	A	Total cobalt weight in battery
4.2	**Lithium content (total)**	Number	g (grams)	MFR	A	Total lithium weight in battery
4.3	**Nickel content (total)**	Number	g (grams)	MFR	A	Total nickel weight in battery
4.4	**Manganese content (total)**	Number	g (grams)	MFR	A	If present above threshold
4.5	**Lead content (total)**	Number	g (grams)	MFR	A	If present above threshold
4.6	**Natural graphite content**	Number	g (grams)	MFR	A	If present above threshold
4.7	**Hazardous substances list**	List	CAS number + name + concentration	MFR	A	All substances above declaration threshold
4.8	**Hazardous substance concentration range**	Enum	< 0.1% / 0.1–1% / > 1%	MFR	A	Per hazardous substance

4.9	**Hazardous substance location in battery**	Text	Component name	MFR	**A**	Where in the battery the substance is located

5. SUPPLY CHAIN DUE DILIGENCE

NO.	FIELD NAME	TYPE	FORMAT / UNIT	BY	SCOPE	NOTES
5.1	**Cobalt supplier name(s)**	Text	Legal name	MFR	E/I/L	All cobalt suppliers in supply chain
5.2	**Cobalt geographic origin**	Text	Country of mining + processing	MFR	E/I/L	
5.3	**Lithium supplier name(s)**	Text	Legal name	MFR	E/I/L	
5.4	**Lithium geographic origin**	Text	Country of mining + processing	MFR	E/I/L	
5.5	**Nickel supplier name(s)**	Text	Legal name	MFR	E/I/L	
5.6	**Nickel geographic origin**	Text	Country of mining + processing	MFR	E/I/L	
5.7	**Natural graphite supplier name(s)**	Text	Legal name	MFR	E/I/L	
5.8	**Natural graphite geographic origin**	Text	Country of mining + processing	MFR	E/I/L	
5.9	**Due diligence policy reference**	Text	Document reference / URL	MFR	E/I/L	Company due diligence policy document
5.10	**Due diligence report reference**	Text	Document reference / URL	MFR+3PV	E/I/L	Annual due diligence report
5.11	**Third-party audit body name**	Text	Legal name of auditor	3PV	E/I/L	Accredited supply chain auditor
5.12	**Third-party audit date**	Date	YYYY-MM-DD	3PV	E/I/L	Date of most recent audit

6. PERFORMANCE AND DURABILITY (EV AND INDUSTRIAL)

NO.	FIELD NAME	TYPE	FORMAT / UNIT	BY	SCOPE	NOTES
6.1	**State of health (SoH)**	Number	% of rated capacity	OPR	E/I	Updated throughout battery life
6.2	**State of charge (SoC)**	Number	% of current capacity	OPR	E/I	Updated throughout battery life
6.3	**Remaining useful life (RUL)**	Number	Cycles or calendar months	OPR	E/I	Estimated remaining life
6.4	**Capacity fade**	Number	% reduction from rated capacity	MFR	E/I	Measured at standard conditions
6.5	**Power fade**	Number	% reduction from rated power	MFR	E/I	Measured at standard conditions
6.6	**Round-trip energy efficiency**	Number	% (energy out / energy in)	MFR	E/I	At beginning of life
6.7	**Expected battery lifetime — cycles**	Number	Number of cycles	MFR	E/I	At standard charge/discharge conditions
6.8	**Expected battery lifetime — calendar**	Number	Years	MFR	E/I	At standard storage conditions
6.9	**C-rate of measurement**	Number	C (e.g. 1C, 0.5C)	MFR	E/I	Charge/discharge rate for measurements
6.10	**Depth of discharge (DoD)**	Number	% of nominal capacity	MFR	E/I	For cycle life measurement

7. REMOVABILITY AND REPLACEABILITY

NO.	FIELD NAME	TYPE	FORMAT / UNIT	BY	SCOPE	NOTES

7.1	**Removability rating**	Enum	Removable by user / Removable by professional / Not removable	MFR	A	Per Article 11
7.2	**Removal instructions**	Text / URL	Step-by-step instructions or URL	MFR	A	
7.3	**Required removal tools**	List	Tool names	MFR	A	Tools required for removal
7.4	**Safety precautions for removal**	Text	Safety instructions	MFR	A	
7.5	**Replacement battery availability**	Text	Availability statement	MFR	P	For portable batteries

8. END-OF-LIFE AND RECYCLING

NO.	FIELD NAME	TYPE	FORMAT / UNIT	BY	SCOPE	NOTES
8.1	**Waste prevention and management information**	Text / URL	Instructions or URL	MFR	A	
8.2	**Collection and recycling information**	Text / URL	Instructions or URL	MFR	A	How to return battery for recycling
8.3	**Dismantling instructions**	Text / URL	Step-by-step instructions or URL	MFR	E/I	For professional dismantlers
8.4	**Safety information for dismantling**	Text	Safety instructions	MFR	E/I	
8.5	**Recycled material recovery targets**	Number	% by weight	MFR	A	Targets per Annex XII
8.6	**Waste battery take-back scheme**	Text / URL	Scheme name or URL	MFR	A	Producer responsibility scheme