

Report No.: 68282261094201

TEST REPORT PPP 51110C:2026 TUV SUD Test Report for Technical requirements of Battery Regulation (EU) 2023/1542	
Report No.:	68282261094201
Date of issue:	2026-09-08
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Client:	SHENZHEN TRITEK LIMITED
Client number:	121847
Address:	No. 1601, Building A, Delux Silicon Valley, No. 8, Juhelu, Zhukeng Community, Longtian Street, Pingshan District 518118, Shenzhen City. PEOPLE'S REPUBLIC OF CHINA
Standard:	This TUV SUD test report form is based on the following requirements: (EU) 2023/1542: 2023-07-12 Amended by: (EU) 2026/1738:2026-07-24, Article 53 Implementing acts: - Delegated acts: - PPP 51110C:2026
TRF number and revision:	TRF PPP 51110C:2026 Rev. 0:2026
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Scheme:	☐ TUV Mark ☐ without certification ☒ AoC/CoC for EU-Directive / EU-Regulation:(EU) 2023/1542
Non-standard test method:	☐ No ☒ Yes, see details under <i>Summary of testing</i>
National deviations:	

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Number of pages <i>(Report)</i> :		33 Pages Photo Document 1 page	
Compiled by: (+ signature)	Sean Pan	Approved by: (+ signature)	Kevin Zou

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Test sample: Type of test object: Trademark:	Rechargeable Li-ion Battery LMT Batteries TRITEK TRITEK
Model and/ or type reference:	TP6136N200
Rating(s):	Voltage: 36Vd.c. Capacity: 16.5Ah
Manufacturer: Manufacturer number: Address:	Same as client Same as client Same as client
Name and address of factory(ies) Anhui tritekpower co., Ltd. Building 15, Gongtong Industrial Zone, No.9 Zimei Road, Suchu High-tech Industrial Park 239000 Chuzhou, Anhui. PEOPLE'S REPUBLIC OF CHINA Factory ID: 121013	
Sub-contractors / tests (clause):	N/A
Name:	N/A
Order description:	☒ Complete test according to TRF
	☐ Partial test according to manufacturer's specifications
	☐ Preliminary test
	☐ Spot check
	☐ Others:
Date of order:	2026-03-06
Date of receipt of test item:	2026-03-07
Date(s) of performance of test:	2026-03-07 to 2026-08-18
Test item particulars: Battery category: ☐ Portable Batteries, ☐ Portable batteries of general use, ☐ SLI batteries, ☒ LMT batteries, ☐ EV batteries, ☐ Industrial batteries ≤ 2kWh, ☐ Industrial batteries > 2kWh, ☐ Industrial batteries ≤ 2kWh - Stationary battery energy storage system, ☐ Industrial batteries > 2kWh - Stationary battery energy storage system	

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Type: ☐ battery cell, ☐ battery module, ☒ battery pack Rechargeability: ☒ rechargeable, ☐ non-rechargeable Capacity: 16.5Ah Chemistry: Li-ion NMC Weight: 3.15 kg
Purpose of the product (description of intended use): Rechargeable Li-ion Battery is intended to use on light electric vehicles (LEVs).
Characteristic data (not shown on the marking plate): N/A
Attachments: 1. Photo Documentation: 1 page
If additional information is necessary, please provide N/A

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Copy of marking plate:



TP6136ANACN2V1500D060001

Remark:

1, "YWW" in code "TP6136ANACN2V1500D060001" represents the manufacture date.

Where Y: Y=A-Z represents the year from 2023 to 2048, WW: represent the week. For example, "D06" means the sixth week of 2026.

2, The separate collection symbol covers at least 3% of the area of the largest battery surface and up to 5 x 5 cm and the CE marking with minimum 5 mm height.

3, The importer information will be determined before shipment.

4, Due to limited space of the battery surface, the information of battery category, factory, chemistry and hazardous substances will be provided on the packaging and/or the accompanying documents.

Pictures of the product:



Summary of testing:

The product meets the requirements of:

NOTE:

It is evaluated to the date of issuing of the report. Further additional applicable requirements may apply after issue of this report depending on the further published implementing and delegated acts to this regulation.

Category: LMT batteries			
Evaluated	Article	Requirement	Stage from
☒	Article 6(1)	Restriction of substances - REACH (EC)1907/2006 Annex XVII	2024-02-18
☒	Article 6 (Annex I point 1)	Restriction of substances – Mercury	2024-02-18
☐	Article 7(1)(c)	Carbon footprint declaration	2028-08-18 or *1 whichever is the latest
☐	Article 7(2)(c)	Carbon footprint labelling and technical documentation for value and performance class	2030-02-18 or *1 whichever is the latest
☐	Article 7(3)(c)	Carbon footprint declared value below MAX threshold	2031-08-18 or *1 whichever is the latest
☐	Article 8(1)	Recycled content documentation	2033-08-18
☐	Article 8(3)	Target of MIN percentage share achieved	2036-08-18
☒	Article 10(1)	Performance and durability - Documentation	2024-08-18
☐	Article 10(3)	Performance and durability	2028-08-18 or *1 whichever is the latest
☒	Article 13(1)	Labeling and marking – General information	2026-08-18 or *1 whichever is the latest
☒	Article 13(2)	Labeling and marking – Capacity label	2026-08-18 or *1 whichever is the latest
☒	Article 13(4)	Labeling and marking – Separate collection symbol	2025-08-18
☒	Article 13(5)	Labeling and marking – Cadmium or Lead information	2024-02-18
☐	Article 13(6)(a)	Labeling and marking – QR code - Article 77 and 78 Battery passport	2027-02-18
☒	Article 13(7)	Labeling and marking – Location	2024-02-18
☒	Article 14	Information of state of health and expected lifetime – LMT batteries	2024-08-18

*1 18 months after the date of entry into force of implementing or delegated act specified (not yet published)

☐ deviation(s) found

☒ no deviations found

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Additional information on non-standard test method(s)

Sub clause: N/A
Page: N/A
Rational: N/A

Possible test case verdicts:

test case does not apply to the test object: N/A (not applicable / not included in the order)
test object does meet the requirement: P (Pass)
test object does not meet the requirement: F (Fail)

General remarks:

"(see remark #)" refers to a remark appended to the report.
"(see appended table)" refers to a table appended to the report.
Throughout this report a ☐ comma / ☒ point is used as the decimal separator.
The test results presented in this report relate only to the object tested.
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Clause	Requirement + Test	Result – Remark	Verdict
1.	General		/
	The product shall be safe, see also Article 5(2)	Safety test report 68.282.26.03282.01 provided	P
2	Technical Requirements		/
Article 6	Restriction of substances (from 2024-02-18)		P
6(1)	In addition to the restrictions set out in Annex XVII to Regulation (EC) No 1907/2006 (REACH) and,.	Chemical Test Report 68.413.26.0031.01	P
	in Article 4(2), point (a), of Directive 2000/53/EC (End of life vehicle)		N/A
	batteries shall not contain substances for which Annex I to this Regulation contains a restriction unless the conditions of that restriction are complied with		P
Annex I	Restriction on substances		P
	1.Batteries shall not contain more than 0,0005% of mercury by weight	Chemical Test Report 68.413.26.0031.01	P
	2.1 Portable batteries, whether or not present in and incorporated into appliances, light means of transport or other vehicles, shall not contain more than 0,002 % of cadmium (expressed as cadmium metal) by weight (from 2024-02-18)	LMT battery	N/A
	2.2. Electric vehicle and SLI batteries, incorporated in vehicles, including special purpose vehicles, of the categories M ₁ and N ₁ as defined in Regulation (EU) 2018/858 shall not contain more than 0,01 % of cadmium (expressed as cadmium metal) by weight in homogeneous material (from 2026-08-13)		N/A
	2.3. Point 2.2 shall not apply to electric vehicle batteries used as spare parts for electric vehicles, including special purpose vehicles, of the categories M ₁ and N ₁ as defined in Regulation (EU) 2018/858 placed on the market before 31 December 2008 (from 2026-08-13)		N/A
	3.1.Portable batteries shall not contain more than 0,01% of lead by weight except portable zinc-air button cell (from 2024-08-18)	LMT battery	N/A
	3.2. Portable zinc-air button cell shall not contain more than 0,01% of lead by weight (from 2028-08-18)		N/A
	3.3 Portable batteries incorporated in vehicles, including special purpose vehicles,		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
	of the categories M ₁ and N ₁ as defined in Regulation (EU) 2018/858, shall not contain more than 0,1 % of lead (expressed as lead metal) by weight in homogeneous material. (from 2026-08-13)		
	3.4. Point 3.3 shall not apply to Portable Batteries incorporated in, or used as spare parts for, vehicles, including special purpose vehicles, of the categories M ₁ and N ₁ as defined in Regulation (EU) 2018/858, type approved before 1 January 2024 (from 2026-08-13)		N/A
	3.5. Electric vehicle batteries incorporated in vehicles, including special purpose vehicles, of the categories M ₁ and N ₁ as defined in Regulation (EU) 2018/858, shall not contain more than 0,1 % of lead (expressed as lead metal) by weight in homogeneous material. (from 2026-08-13)		N/A
	3.6. Point 3.5 shall not apply to: (a) electric vehicle batteries used in high voltage systems (>75V DC) incorporated in, or used as spare part for, in vehicles of the categories M ₁ and N ₁ , as defined in Regulation (EU) 2018/858 and type approved before 1 January 2019; (from 2026-08-13)		N/A
	3.6. Point 3.5 shall not apply to: (b) electric vehicle batteries not covered by point (a) of this point incorporated in or used as spare part for vehicles, including special purpose vehicles, of the categories M ₁ and N ₁ , as defined in Regulation (EU) 2018/858, and type approved before 1 January 2024. (from 2026-08-13)		N/A
	3.7. SLI batteries incorporated in vehicles, including special purpose vehicles, of the categories M ₁ and N ₁ as defined in Regulation (EU) 2018/858, shall not contain more than 0,1 % of lead (expressed as lead metal) by weight in homogeneous material. (from 2026-08-13)		N/A
	3.8. Point 3.7 shall not apply to: (a) SLI batteries used in 12 V applications for vehicles, including special purpose vehicles, of the categories M ₁ and N ₁ as defined in Regulation (EU) 2018/858(1); (from 2026-08-13)		N/A
	3.8. Point 3.7 shall not apply to: (b) SLI batteries used in 24 V applications in special purpose vehicles of the categories M ₁		N/A

Clause	Requirement + Test	Result – Remark	Verdict
	and N ₁ as defined in Regulation (EU) 2018/858(2); (from 2026-08-13)		
	3.8. Point 3.7 shall not apply to: (c) SLI batteries used in other applications than those covered by points (a) and (b) of this point in vehicles, including special purpose vehicles, of the categories M ₁ and N ₁ as defined in Regulation (EU) 2018/858 that are type approved before 1 January 2024. (from 2026-08-13)		N/A
	4. Batteries incorporated in vehicles, including special purpose vehicles, of the categories M ₁ and N ₁ as defined in Regulation (EU) 2018/858, shall not contain more than 0,1 % of hexavalent chromium, expressed as hexavalent chromium metal, by weight in homogeneous material. (from 2026-08-13)		N/A
Article 7	Carbon footprint of electric vehicle batteries, rechargeable industrial batteries and LMT batteries		N/A
7(1)	1. For electric vehicle batteries, rechargeable industrial batteries with a capacity greater than 2 kWh and LMT batteries a carbon footprint declaration shall be drawn up for each battery model per manufacturing plant, in accordance with the implementing act and containing, at least, the following information:		N/A
	a) administrative information about the manufacturer;		N/A
	(b) information about the battery model;		N/A
	(c) information about the geographic location of the battery manufacturing plant;		N/A
	(d) the carbon footprint of the battery, calculated as kg of carbon dioxide equivalent per one kWh of the total energy provided by the battery over its expected service life;		N/A
	(e) the carbon footprint of the battery differentiated according to life cycle stage as described in point 4 of Annex II;		N/A
	(f) the identification number of the EU declaration of conformity of the battery;		N/A
	(g) a web link giving access to a public version of the study supporting the carbon footprint values referred to in points (d) and (e).		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
	The carbon footprint declaration shall apply from:		/
	(a) for electric vehicle batteries (from 2025-02-18 or 12 months after the date of entry into force either of the delegated act or of the implementing act (not yet published) whichever is latest)		N/A
	(b) for rechargeable industrial batteries except those with exclusively external storage (from 2026-02-18 or 18 months after the date of entry into force either of the delegated act or of the implementing act (not yet published) whichever is latest))		N/A
	(c) for LMT batteries (from 2028-08-18 or 18 months after the date of entry into force either of the delegated act or of the implementing act (not yet published) whichever is the latest)		N/A
	(d) for rechargeable industrial batteries with external storage (from 2030-08-18 or 18 months after the date of entry into force either of the delegated act or of the implementing act (not yet published) whichever is the latest))		N/A
	Until it becomes accessible via the QR code referred to in Article 13(6), the carbon footprint declaration shall accompany the battery.		N/A
7(2)	2. Electric vehicle batteries, rechargeable industrial batteries with a capacity greater than 2 kWh and LMT batteries shall bear a conspicuous, clearly legible and indelible label indicating the carbon footprint of the battery, first subparagraph, point (d) and declaring the carbon footprint performance class to which the relevant battery model per manufacturing plant corresponds.		N/A
	For batteries referred to in the first subparagraph, the technical documentation shall demonstrate that the carbon footprint declared and the related classification into a carbon footprint performance class have been calculated in accordance with the methodology set out in the delegated acts adopted		N/A
	The carbon footprint performance class requirements shall apply from:		/
	(a) for electric vehicle batteries (from 2026-08-18 or 18 months after the date of entry into force either of the delegated act or of		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
	the implementing act (not yet published) whichever is the latest))		
	(b) for rechargeable industrial batteries except those with exclusively external storage (from 2027-08-18 or 18 months after the date of entry into force either of the delegated act or of the implementing act (not yet published) whichever is the latest))		N/A
	(c) for LMT batteries (from 2030-08-18 or 18 months after the date of entry into force either of the delegated act or of the implementing act (not yet published) whichever is the latest)		N/A
	(d) for rechargeable industrial batteries with external storage (from 2032-02-18 or 18 months after the date of entry into force either of the delegated act or of the implementing act (not yet published) whichever is the latest)		N/A
7(3)	3. For electric vehicle batteries, rechargeable industrial batteries with a capacity greater than 2 kWh and LMT batteries, the technical documentation shall demonstrate that the declared life cycle carbon footprint value for the relevant battery model per manufacturing plant, is below the maximum threshold established in the delegated act adopted		N/A
	The requirement for a maximum life cycle carbon footprint threshold shall apply as of:		/
	(a) for electric vehicle batteries (from 2028-02-18 or 18 months after the date of entry into force of the delegated act (not yet published) whichever is the latest)		N/A
	(b) for rechargeable industrial batteries except those with exclusively external storage (from 2029-02-18 or 18 months after the date of entry into force of the delegated act (not yet published) whichever is the latest)		N/A
	(c) for LMT batteries (from 2031-08-18 or 18 months after the date of entry into force of the delegated act (not yet published) whichever is the latest)		N/A
	(d) for rechargeable industrial batteries with external storage (from 2033-08-18 or 18 months after the date of entry into force		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
	of the delegated act (not yet published) whichever is the latest)		
Article 8	Recycled content in industrial batteries, electric vehicle batteries, LMT batteries and SLI batteries		N/A
8(1)	1. Industrial batteries with a capacity greater than 2 kWh, except those with exclusively external storage, electric vehicle batteries and SLI batteries that contain cobalt, lead, lithium or nickel in active materials, shall be accompanied by documentation containing information about the percentage share of cobalt, lithium or nickel that is present in active materials and that has been recovered from battery manufacturing waste or post-consumer waste, and the percentage share of lead that is present in the battery and that has been recovered from waste for each battery model per year and per manufacturing plant (from 2028-08-18 or 24 months after the date of entry into force of the delegated act (not yet published) whichever is the latest)		N/A
	LMT batteries that contain cobalt, lead, lithium or nickel in active materials (from 2033-08-18)		N/A
8(2)	2. For industrial batteries with a capacity greater than 2 kWh, except those with exclusively external storage, electric vehicle batteries and SLI batteries that contain cobalt, lead, lithium or nickel in active materials, the technical documentation shall demonstrate that those batteries contain, in active materials, the following minimum percentage share of, respectively, cobalt, lithium or nickel that has been recovered from battery manufacturing waste or post-consumer waste, and the minimum percentage share of lead that is present in the battery and that has been recovered from waste, for each battery model per year and per manufacturing plant: (from 2031-08-18)		N/A
	(a) 16 % cobalt		N/A
	(b) 85 % lead		N/A
	(c) 6 % lithium;		N/A
	(d) 6 % nickel.		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
8(3)	3. For industrial batteries with a capacity greater than 2 kWh, except those with exclusively external storage, electric vehicle batteries, LMT batteries and SLI batteries that contain cobalt, lead, lithium or nickel in active materials, the technical documentation referred to in Annex VIII shall demonstrate that those batteries contain, in the active materials, the following minimum percentage share of, respectively, cobalt, lithium or nickel that has been recovered from battery manufacturing waste or post-consumer waste, and the minimum percentage share of lead that is present in the battery and that has been recovered from waste, for each battery model per year and per manufacturing plant: (from 2036-08-18)		N/A
	(a) 26 % cobalt		N/A
	(b) 85 % lead		N/A
	(c) 12 % lithium;		N/A
	(d) 15 % nickel.		N/A
8(4)	4. Paragraphs 1, 2 and 3 shall not apply to batteries that have been subject to preparation for re-use, preparation for repurposing, repurposing or remanufacturing, if the batteries had already been placed on the market or put into service before undergoing such operations.		N/A
Article 9	Performance and durability - Portable batteries of general use (excluding button cells) (from 2028-08-18 or 24 months after the date of entry into force of the delegated act (not yet published) whichever is the latest)		N/A
9(1)	Portable batteries of general use excluding button cells declared and achieved electrochemical performance and durability parameters set out in Annex III		N/A
	Portable batteries of general use, excluding button cells, shall meet the minimum values for the electrochemical performance and durability parameters set out in Annex III as laid down in delegated act: ...	Evidence: Will be applicable once the delegated act is published Delegated act:	/
Annex III Part A	Parameters for non-rechargeable batteries		N/A
	Minimum average duration (t_{Avg}) :		N/A
	Delayed discharge performance (%) :		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
	Resistance to leakage – no escape of electrolyte, gas and other material:		N/A
Annex III Part B	Parameters for rechargeable batteries		N/A
	Rated capacity (%)		N/A
	Charge (capacity) retention (%) :		N/A
	Charge (capacity) recovery (%) :		N/A
	Endurance in cycles (cycles) :		N/A
	Resistance to leakage – no escape of electrolyte, gas and other material		N/A
Article 10	Performance and durability – Industrial batteries > 2kWh, LMT batteries, EV batteries (from 2024-08-18)		P
10(1)	1.rechargeable industrial batteries with a capacity greater than 2 kWh, LMT batteries and electric vehicle batteries shall be accompanied by a document containing values for the electrochemical performance and durability parameters set out in Part A of Annex IV (from 2024-08-18).	LMT battery	P
	For batteries referred to in the first subparagraph, the technical documentation referred to in Annex VIII shall contain an explanation of the technical specifications, standards and conditions used to measure, calculate or estimate the values for the electrochemical performance and durability parameters. That explanation shall include, at least, the elements set out in Part B of Annex IV.		P
	Tested data supporting declared electrochemical performance and durability parameters set out in Part A of Annex IV		P
10(2)	2.rechargeable industrial batteries with a capacity greater than 2 kWh, except those with exclusively external storage, shall meet the minimum values of Part A of Annex IV (from 2027-08-18 or 18 months after the date of entry into force of the delegated act (not yet published) whichever is the latest) as laid down in delegated act:	Evidence: Will be applicable once the delegated act is published Delegated act:	/
	3. LMT batteries shall meet the minimum values of Part A of Annex IV (from 2028-08-18 or 18 months after the date of entry into force of the delegated act (not yet	Evidence: Will be applicable once the delegated act is published Delegated act:	/

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	published) whichever is the latest) as laid down in delegated act:		
Annex IV Part A	Parameters related to electrochemical performance and durability		P
	1. Rated capacity (in Ah) and capacity fade (in %).		P
	2. Power (in W) and power fade (in %).		P
	3. Internal resistance (in Ω) and internal resistance increase (in %).		P
	4. Where applicable, energy round trip efficiency and its fade (in %).		P
	5. The expected life-time of the battery under the reference conditions for which it has been designed, in terms of cycles, except for non-cycle applications, and calendar years.	Cycles: Calendar year:	P
Annex IV Part B	Elements to explain the measurements for parameters listed in Part A		P
	1. Applied discharge rate and charge rate		P
	2. Ratio between nominal battery power (W) and battery energy (Wh)		P
	3. Depth of discharge in the cycle-life test		P
	4. Power capability at 80 % and 20 % state of charge		P
	5. Any calculations performed with the measured parameters, if applicable		P
Article 12	Safety of stationary battery energy storage systems (from 2024-08-18)		N/A
12(1)	1. Stationary battery energy storage systems placed on the market or put into service shall be safe during their normal operation and use.		N/A
12(2)	2. Technical documentation referred to in Annex VIII shall:		N/A
	a) demonstrate that the stationary battery energy storage systems are compliant with paragraph 1 and include evidence that they have been successfully tested for the safety parameters set out in Annex V, for which state-of-the-art testing methodologies shall be used. The safety parameters shall only apply in so far as a corresponding hazard exists for the stationary battery energy storage system in question when it is used under the conditions envisaged by the manufacturer;		N/A

Clause	Requirement + Test	Result – Remark	Verdict
	(b) include an assessment of possible safety hazards of the stationary battery energy storage system that are not addressed in Annex V;		N/A
	(c) include evidence that the hazards referred to in point (b) have been successfully mitigated and tested; state-of-the-art testing methodologies shall be used for such testing;		N/A
	(d) include mitigation instructions in case the identified hazards could occur, for example a fire or explosion.		N/A
Article 13	Labeling and marking (from 2024-02-18)		P
13(1)	1. Batteries shall bear a label containing the general information on batteries set out in Part A of Annex VI. (from 2026-08-18 or 18 months after the date of entry into force of implementing act (not yet published) whichever is the latest))		P
13(2)	2. Rechargeable portable batteries, LMT batteries and SLI batteries shall bear a label containing information on their capacity (from 2026-08-18 or 18 months after the date of entry into force of implementing act (not yet published) whichever is the latest))		P
13(3)	3. Non-rechargeable portable batteries shall bear a label containing information on their minimum average duration when used in specific applications and a label indicating 'non-rechargeable'. (from 2026-08-18 or 18 months after the date of entry into force of implementing act (not yet published) whichever is the latest))		N/A
13(4)	4. All batteries shall be marked with the symbol for separate collection of batteries ('separate collection symbol') as shown in Part B of Annex VI. (from 2025-08-18)		P
	The separate collection symbol shall cover at least 3 % of the area of the largest side of the battery up to a maximum size of 5 × 5 cm.		P
	In the case of cylindrical battery cells, the separate collection symbol shall cover at least 1,5 % of the surface area of the battery and shall have a maximum size of 5 × 5 cm.		N/A

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	Where the symbol would be smaller than 0,47 x 0,47 cm alternative: a separate collection symbol measuring at least 1 x 1 cm shall be printed on the packaging.		
13(5)	5. All batteries containing more than 0,002 % cadmium or more than 0,004 % lead, shall be marked with the chemical symbol for the metal concerned: Cd or Pb . (from 2024-02-18)	Below the limit, also see Chemical Test Report 68.413.26.0031.01.	N/A
	The relevant chemical symbol indicating the heavy metal content shall be printed beneath the separate collection symbol and shall cover an area of at least one-quarter the size of that symbol.		N/A
13(6)	6. All batteries shall be marked with a QR code as described in Part C of Annex VI. (from 2027-02-18)	See Annex 1	N/A
	(a) for LMT batteries, industrial batteries with a capacity > 2kWh and EV batteries, the battery passport in accordance with Article 77; (from 2027-02-18)		N/A
	(b) for other batteries, the applicable information referred to in paragraphs 1 to 5 of this Article, the declaration of conformity referred to in Article 18, the report referred to in Article 52(3) and the information regarding the prevention and management of waste batteries laid down in Article 74(1), points (a) to (f) (from 2027-02-18)		N/A
	(c) for SLI batteries, the amount of cobalt, lead, lithium or nickel recovered from waste and present in active materials in the battery, calculated in accordance with Article 8. (from 2027-02-18 or 24 months after the date of entry into force of the delegated act (not yet published) whichever is the latest)		N/A
	This information shall be complete, up-to-date and accurate.		N/A
13(7)	7. The labels and the QR code referred to in paragraphs 1 to 6 shall be printed or engraved visibly, legibly and indelibly on the battery. (from 2024-02-18 for labels, from 2027-02-18 for QR code)		P
	Where this is not possible or not warranted on account of the nature and size of the battery, the labels and the QR code shall	See page 5	P

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	be affixed to the packaging and to the documents accompanying the battery.		
Annex VI Part A	General information on batteries Information on the label of a battery shall comprise the following information regarding the battery:		P
	1. information identifying the manufacturer in accordance with Article 38(7);		P
	2. the battery category and information identifying the battery in accordance with Article 38(6);		P
	3. the place of manufacture (geographical location of a battery manufacturing plant);		P
	4. the date of manufacture (month and year);		P
	5. the weight;		P
	6. the capacity;		P
	7. the chemistry;		P
	8. the hazardous substances present in the battery, other than mercury, cadmium or lead;		P
	9. usable extinguishing agent;		P
	10. critical raw materials present in the battery in a concentration of more than 0,1 % weight by weight.		P
Annex VI Part B	Symbol for separate collection of batteries 		P
Annex VI Part C	The QR code shall be in high contrast to the background colour and of a size that is easily readable by a commonly available QR reader, such as those integrated in hand-held communication devices.		N/A
Article 14	Information of state of health and expected lifetime - Stationary battery storage systems, LMT batteries, EV batteries (from 2024-08-18)		P
14(1)	up-to-date data for the parameters for determining the state of health and expected lifetime of batteries as set out in Annex VII shall be contained in the battery management system of stationary battery energy storage systems, LMT batteries and electric vehicle batteries.		P
14(2)	Read-only access to the data for the parameters set out in Annex VII through the battery management system shall be provided, respecting the intellectual property rights of the battery manufacturer, on a non-discriminatory basis to the natural or legal person who has legally purchased		P

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	the battery, including independent operators or waste management operators, or any third party acting on their behalf at any time, for the purpose of:		
	(a) making the battery available to independent aggregators or market participants through energy storage;		P
	(b) evaluating the residual value or remaining lifetime of the battery and capability for further use, based on the estimation of the state of health of the battery;		P
	(c) facilitating the preparation for re-use, preparation for repurposing, repurposing or remanufacturing of the battery.		P
14(3)	The battery management system shall include a software reset function, in case economic operators carrying out preparation for re-use, preparation for repurposing, repurposing or remanufacturing need to upload different battery management system software.		P
	If the software reset function is used, the original battery manufacturer shall not be held liable for any breach of the safety or functionality of the battery that could be attributed to battery management system software uploaded after that battery was placed on the market.		P
Annex VII Part A	Parameters for determining the state of health of electric vehicle batteries, stationary battery energy storage systems and LMT batteries:		P
	For electric vehicle batteries: state of certified energy (SOCE).		N/A
	For stationary battery energy storage systems and LMT batteries:	LMT battery	P
	1. the remaining capacity;	See appended tables	P
	2. where possible, the remaining power capability;	See appended tables	P
	3. where possible, the remaining round trip efficiency;		N/A
	4. the evolution of self-discharging rates;	See appended tables	P
	5. where possible, the ohmic resistance.	See appended tables	P
Annex VII Part B	Parameters for determining the expected lifetime of stationary battery energy storage systems and LMT batteries:		P

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Clause	Requirement + Test	Result – Remark	Verdict
	1. the date of manufacture of the battery and, where appropriate, the date of putting into service;	See appended tables	P
	2. the energy throughput;	See appended tables	P
	3. the capacity throughput;	See appended tables	P
	4. the tracking of harmful events, such as the number of deep discharge events, time spent in extreme temperatures, time spent charging in extreme temperatures;	See appended tables	P
	5. the number of full equivalent charge-discharge cycles.	See appended tables	P

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Appendix 1 Digital Battery Passport (LMT batteries, industrial batteries > 2kWh and EV batteries)

Article 77	Battery Passport (from 2027-02-18)		N/A
77(1)	1. Each LMT battery, each Industrial battery with a capacity greater than 2 kWh and each Electric Vehicle battery placed on the market or put into service shall have an electronic record ('battery passport').		N/A
77(2)	2. The battery passport shall contain information relating to the battery model and information specific to the individual battery, including resulting from the use of that battery, as set out in Annex XIII.		N/A
77(3)	3. The battery passport shall be accessible through the QR code referred to in Article 13(6) which links to a unique identifier that the economic operator placing the battery on the market shall attribute to it. The QR code and the unique identifier shall comply with the ISO/IEC standards 15459-1:2014, 15459-2:2015, 15459-3:2014, 15459-4:2014, 15459-5:2014 and 15459-6:2014 or their equivalent.		N/A
77(4)	4. The economic operator placing the battery on the market shall ensure that the information in the battery passport is accurate, complete and up to date. It may give written authorisation to any other operator to act on its behalf.		N/A
77(5)	5. All information included in the battery passport shall be based on open standards and be in an interoperable format, transferable through an open interoperable data exchange network without vendor lock-in, machine-readable, structured and searchable, in accordance with the essential requirements laid down in Article 78.		N/A
77(6)	6. The access to information included in the battery passport shall be regulated in accordance with the essential requirements laid down in Article 78.		N/A
Article 78	The technical design and operation of the battery passport (from 2027-02-18)		N/A
	The technical design and operation of the battery passport shall comply with the following essential requirements:	Evidence: see Attachment x	N/A

Clause	Requirement + Test	Result – Remark	Verdict
	(a) the battery passport shall be fully interoperable with other digital product passports required by Union law concerning eco-design, in relation to the technical, semantic and organisational aspects of end-to-end communication and data transfer;		N/A
	(b) consumers, economic operators and other relevant actors shall have access to the battery passport free of charge and based on their respective access rights set out in Annex XIII and the implementing act adopted pursuant to Article 77(9);		N/A
	(c) the data included in the battery passport shall be stored by the economic operator, or by operators authorised to act on their behalf;		N/A
	(d) if the data included in the battery passport are stored or otherwise processed by operators authorised to act on behalf of the economic operator, those operators shall not be allowed to sell, re-use or process such data, in whole or in part, beyond what is necessary for the provision of the relevant storing or processing services;		N/A
	(e) the battery passport shall remain available after the economic operator ceases to exist or ceases its activity in the Union;		N/A
	(f) the rights to access, introduce, modify or update information in the battery passport shall be restricted based on the access rights specified in Annex XIII and the implementing act adopted pursuant to Article 77(9);		N/A
	(g) data authentication, reliability and integrity shall be ensured;		N/A
	(h) the battery passport shall be such that a high level of security and privacy is ensured and fraud is avoided.		N/A
Annex XIII	INFORMATION TO BE INCLUDED IN THE BATTERY PASSPORT		N/A
	1. PUBLICLY ACCESSIBLE INFORMATION RELATING TO THE BATTERY MODEL		N/A
	(a) the information specified in Part A of Annex VI;		N/A
	(b) the material composition of the battery, including its chemistry, hazardous substances present in the battery, other than		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
	mercury, cadmium or lead, and critical raw materials present in the battery;		
	(c) the carbon footprint information referred to in Article 7(1) and (2);		N/A
	(d) information on responsible sourcing as indicated in the report on battery due diligence policy referred to in Article 52(3);		N/A
	(e) recycled content information as contained in the documentation referred to in Article 8(1);		N/A
	(f) the share of renewable content;		N/A
	(g) rated capacity (in Ah);		N/A
	(h) minimal, nominal and maximum voltage, with temperature ranges when relevant;		N/A
	(i) original power capability (in Watts) and limits, with temperature range when relevant;		N/A
	(j) expected battery lifetime expressed in cycles, and reference test used;		N/A
	(k) capacity threshold for exhaustion (only for electric vehicle batteries);		N/A
	(l) temperature range the battery can withstand when not in use (reference test);		N/A
	(m) period for which the commercial warranty for the calendar life applies;		N/A
	(n) initial round trip energy efficiency and at 50 % of cycle-life;		N/A
	(o) internal battery cell and pack resistance;		N/A
	(p) c-rate of relevant cycle-life test.		N/A
	(q) the marking requirements laid down in Article 13(3) and (4);		N/A
	(r) the EU declaration of conformity referred to in Article 18;		N/A
	(s) the information regarding the prevention and management of waste batteries laid down in Article 74(1), points (a) to (f).		N/A
	2. INFORMATION RELATING TO THE BATTERY MODEL ACCESSIBLE ONLY TO PERSONS WITH A LEGITIMATE INTEREST AND THE COMMISSION		N/A
	(a) detailed composition, including materials used in the cathode, anode and electrolyte;		N/A
	(b) part numbers for components and contact details of sources for replacement spares;		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
	(c) dismantling information, including at least: — exploded diagrams of the battery system/pack showing the location of battery cells, — disassembly sequences, — type and number of fastening techniques to be unlocked, — tools required for disassembly, — warnings if risk of damaging parts exist, — amount of cells used and layout;		N/A
	(d) safety measures.		N/A
	3. INFORMATION ACCESSIBLE ONLY TO NOTIFIED BODIES, MARKET SURVEILLANCE AUTHORITIES AND THE COMMISSION		N/A
	— results of test reports proving compliance with the requirements laid down in this Regulation or any delegated or implementing act adopted pursuant to this Regulation.		N/A
	4. INFORMATION AND DATA RELATING TO AN INDIVIDUAL BATTERY ACCESSIBLE ONLY TO PERSONS WITH A LEGITIMATE INTEREST		N/A
	(a) the values for performance and durability parameters referred to in Article 10(1), when the battery is placed on the market and when it is subject to changes in its status;		N/A
	(b) information on the state of health of the battery pursuant to Article 14;		N/A
	(c) information on the status of the battery, defined as 'original', 'repurposed', 're-used', 'remanufactured' or 'waste';		N/A
	(d) information and data resulting from its use, including the number of charging and discharging cycles and negative events, such as accidents, as well as periodically recorded information on the operating environmental conditions, including temperature, and on the state of charge.		N/A

Clause	Requirement + Test	Result – Remark	Verdict
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Appended tables (Article 10):

Discharge at C/3 (rated capacity and capacity fade):

Item	Rated capacity (fresh battery)	25% life cycle	50% life cycle	75% life cycle	100% life cycle
Capacity (Ah)	16.50	15.72	15.12	14.57	13.95
Capacity fade	0.00%	4.72%	8.36%	11.68%	15.46%
Supplementary information: Capacity fade = (rated capacity – capacity measured at different life cycle) / rated capacity					

Discharge at C/3 (Energy round trip efficiency and its fade):

Item	Discharge energy (Wh)	Charge energy (Wh)	Energy round trip efficiency	Energy round trip efficiency fade	Remark
Fresh battery	590.892	614.872	96.1%	--	--
25% life cycle	556.558	585.850	95.0%	1.1%	--
50% life cycle	527.970	563.469	93.7%	2.4%	--
75% life cycle	500.154	543.055	92.1%	4.0%	--
100% life cycle	469.391	519.813	90.3%	5.8%	--
Supplementary information: Energy round trip efficiency = discharge energy / charge energy Energy round trip efficiency fade = [(discharge energy / charge energy) (measured at first life cycle) – (discharge energy / charge energy) (measured at different life cycle)]					

Discharge at C/3 to 80% SOC (fresh battery):

Time (s)	Applied current (A)	Voltage (V)	Current (A)	Power (W)	Internal resistance (Ω)
0	0	U0=40.6709	I0=0	P0=0	--
0,1	Max.=29.0	U1=37.5642	I1=28.8651	P1=1084.2944	--
2	Max.=29.0	U2=37.2404	I2=29.0012	P2=1080.0163	--
5	Max.=29.0	U3=37.0070	I3=28.9984	P3=1073.1438	--
10	Max.=29.0	U4=36.7583	I4=28.9964	P4=1065.8584	--
18	Max.=29.0	U5=36.4796	I5=28.9984	P5=1057.8500	--
18,1	75% Max.=21.75	U6=37.2499	I6=21.8108	P6=812.4501	--
20	75% Max.=21.75	U7=37.2767	I7=21.7516	P7=810.8279	--
30	75% Max.=21.75	U8=37.1624	I8=21.7493	P8=808.2562	--
60	75% Max.=21.75	U9=36.8444	I9=21.7478	P9=801.2846	--
90	75% Max.=21.75	U10=36.6114	I10=21.7488	P10=796.2540	R=0.1867
120	75% Max.=21.75	U11=36.4187	I11=21.7540	P11=792.2524	R=0.1955
160	0	U12=39.5512	I12=0	P12=0.0000	R=0.1440
Supplementary information: Calculation of power is not necessary if the battery charge/discharge system can measure the dynamic power, otherwise Power = U X I. For example, at 10s, the power = U4 X I4. Internal resistance is required to calculate at 90s and 120s.					

Clause	Requirement + Test	Result – Remark	Verdict
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Discharge at C/3 to 20% SOC (fresh battery):

Time (s)	Applied current (A)	Voltage (V)	Current (A)	Power (W)	Internal resistance (Ω)
0	0	U0=34.4442	I0=0.00	P0=0	--
0,1	Max.=29.0	U1=31.3304	I1=28.863	P1=904.2893	--
2	Max.=29.0	U2=31.0166	I2=29.0016	P2=899.5310	--
5	Max.=29.0	U3=30.7528	I3=28.9975	P3=891.7543	--
10	Max.=29.0	U4=30.4191	I4=29.0004	P4=882.1661	--
18	Max.=29.0	U5=29.9992	I5=29.0000	P5=869.9768	--
18,1	75% Max.=21.75	U6=30.7848	I6=21.8121	P6=671.4811	--
20	75% Max.=21.75	U7=30.7833	I7=21.7522	P7=669.6045	--
30	75% Max.=21.75	U8=30.5699	I8=21.7529	P8=664.9840	--
60	75% Max.=21.75	U9=30.0944	I9=21.7503	P9=654.5622	--
90	75% Max.=21.75	U10=29.7696	I10=21.7468	P10=647.3935	R=0.2150
120	75% Max.=21.75	U11=29.4928	I11=21.7485	P11=641.4242	R=0.2277
160	0	U12=32.9478	I12=0.00	P12=0.0000	R=0.1589

Supplementary information:

Calculation of power is not necessary if the battery charge/discharge system can measure the dynamic power, otherwise $Power = U \times I$. For example, at 10s, the power = $U_4 \times I_4$.

Internal resistance is required to calculate at 90s and 120s.

Discharge at C/3 to 80% SOC (25% life cycle battery):

Time (s)	Applied current (A)	Voltage (V)	Current (A)	Power (W)	Internal resistance (Ω)	Power fade
0	0	U0=40.6708	I0=0	P0=0	--	--
0,1	Max.=29.0	U1=37.4342	I1=28.8652	P1=1080.5457	--	0.346%
2	Max.=29.0	U2=37.0344	I2=29.0012	P2=1074.0420	--	0.553%
5	Max.=29.0	U3=36.6346	I3=28.9985	P3=1062.3484	--	1.006%
10	Max.=29.0	U4=36.2348	I4=28.9964	P4=1050.6788	--	1.424%
18	Max.=29.0	U5=35.8350	I5=28.9984	P5=1039.1577	--	1.767%
18,1	75% Max.=21.75	U6=36.6568	I6=21.8109	P6=799.5178	--	1.592%
20	75% Max.=21.75	U7=36.6768	I7=21.7516	P7=797.7791	--	1.609%
30	75% Max.=21.75	U8=36.5668	I8=21.7493	P8=795.3023	--	1.603%
60	75% Max.=21.75	U9=36.2209	I9=21.7478	P9=787.7249	--	1.692%
90	75% Max.=21.75	U10=35.9650	I10=21.7489	P10=782.1992	R=0.2167	1.765%
120	75% Max.=21.75	U11=35.7391	I11=21.7541	P11=777.4720	R=0.2267	1.866%
160	0	U12=39.0892	I12=0	P12=0.0000	R=0.1540	--

Supplementary information:

Calculation of power is not necessary if the battery charge/discharge system can measure the dynamic power, otherwise $Power = U \times I$. For example, at 10s, the power = $U_4 \times I_4$.

Internal resistance is required to calculate at 90s and 120s.

Power fade = [power (fresh battery) – power measured at different life cycle] / power (fresh battery)

Clause	Requirement + Test	Result – Remark	Verdict
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Discharge at C/3 to 20% SOC (25% life cycle battery):

Time (s)	Applied current (A)	Voltage (V)	Current (A)	Power (W)	Internal resistance (Ω)	Power fade
0	0	U0=34.4441	I0=0.00	P0=0	--	--
0,1	Max.=29.0	U1=31.2004	I1=28.864	P1=900.5683	--	0.411%
2	Max.=29.0	U2=30.7213	I2=29.0016	P2=890.9669	--	0.952%
5	Max.=29.0	U3=30.2422	I3=28.9975	P3=876.9482	--	1.660%
10	Max.=29.0	U4=29.7631	I4=29.0005	P4=863.1448	--	2.156%
18	Max.=29.0	U5=29.2840	I5=29.0001	P5=849.2389	--	2.384%
18,1	75% Max.=21.75	U6=30.0019	I6=21.8121	P6=654.4044	--	2.543%
20	75% Max.=21.75	U7=30.0119	I7=21.7522	P7=652.8249	--	2.506%
30	75% Max.=21.75	U8=29.8019	I8=21.7529	P8=648.2778	--	2.512%
60	75% Max.=21.75	U9=29.3840	I9=21.7504	P9=639.1138	--	2.360%
90	75% Max.=21.75	U10=29.1161	I10=21.7468	P10=633.1820	R=0.2450	2.195%
120	75% Max.=21.75	U11=28.8982	I11=21.7486	P11=628.4954	R=0.2550	2.016%
160	0	U12=32.5715	I12=0.00	P12=0.0000	R=0.1689	--

Supplementary information:

Calculation of power is not necessary if the battery charge/discharge system can measure the dynamic power, otherwise $\text{Power} = U \times I$. For example, at 10s, the power = $U_4 \times I_4$.

Internal resistance is required to calculate at 90s and 120s.

Power fade = $[\text{power (fresh battery)} - \text{power measured at different life cycle}] / \text{power (fresh battery)}$

Discharge at C/3 to 80% SOC (50% life cycle battery):

Time (s)	Applied current (A)	Voltage (V)	Current (A)	Power (W)	Internal resistance (Ω)	Power fade
0	0	U0=40.6707	I0=0	P0=0	--	--
0,1	Max.=29.0	U1=37.3042	I1=28.8651	P1=1076.7895	--	0.692%
2	Max.=29.0	U2=36.7720	I2=29.0012	P2=1066.4321	--	1.258%
5	Max.=29.0	U3=36.2398	I3=28.9985	P3=1050.8998	--	2.073%
10	Max.=29.0	U4=35.7075	I4=28.9964	P4=1035.3890	--	2.859%
18	Max.=29.0	U5=35.1753	I5=28.9985	P5=1020.0309	--	3.575%
18,1	75% Max.=21.75	U6=35.9831	I6=21.8108	P6=784.8202	--	3.401%
20	75% Max.=21.75	U7=36.0031	I7=21.7516	P7=783.1250	--	3.417%
30	75% Max.=21.75	U8=35.8931	I8=21.7494	P8=780.6534	--	3.415%
60	75% Max.=21.75	U9=35.5542	I9=21.7479	P9=773.2292	--	3.501%
90	75% Max.=21.75	U10=35.3053	I10=21.7487	P10=767.8444	R=0.2467	3.568%
120	75% Max.=21.75	U11=35.0864	I11=21.7540	P11=763.2695	R=0.2567	3.658%
160	0	U12=38.6541	I12=0	P12=0.0000	R=0.1640	--

Supplementary information:

Calculation of power is not necessary if the battery charge/discharge system can measure the dynamic power, otherwise $\text{Power} = U \times I$. For example, at 10s, the power = $U_4 \times I_4$.

Internal resistance is required to calculate at 90s and 120s.

Power fade = $[\text{power (fresh battery)} - \text{power measured at different life cycle}] / \text{power (fresh battery)}$

Clause	Requirement + Test	Result – Remark	Verdict
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Discharge at C/3 to 20% SOC (50% life cycle battery):

Time (s)	Applied current (A)	Voltage (V)	Current (A)	Power (W)	Internal resistance (Ω)	Power fade
0	0	U0=34.4440	I0=0.00	P0=0	--	--
0,1	Max.=29.0	U1=31.0740	I1=28.862	P1=896.8578	--	0.822%
2	Max.=29.0	U2=30.4607	I2=29.0016	P2=883.4090	--	1.792%
5	Max.=29.0	U3=29.8510	I3=28.9975	P3=865.6044	--	2.932%
10	Max.=29.0	U4=29.2413	I4=29.0004	P4=848.0094	--	3.872%
18	Max.=29.0	U5=28.63176	I5=29.0001	P5=830.3239	--	4.558%
18,1	75% Max.=21.75	U6=29.3496	I6=21.8122	P6=640.1793	--	4.662%
20	75% Max.=21.75	U7=29.3596	I7=21.7522	P7=638.6359	--	4.625%
30	75% Max.=21.75	U8=29.1496	I8=21.7529	P8=634.0883	--	4.646%
60	75% Max.=21.75	U9=28.7316	I9=21.7503	P9=624.9209	--	4.528%
90	75% Max.=21.75	U10=28.4636	I10=21.7469	P10=618.9951	R=0.2750	4.387%
120	75% Max.=21.75	U11=28.2456	I11=21.7486	P11=614.3023	R=0.2850	4.228%
160	0	U12=32.1364	I12=0.00	P12=0.0000	R=0.1789	--

Supplementary information:

Calculation of power is not necessary if the battery charge/discharge system can measure the dynamic power, otherwise Power = U X I. For example, at 10s, the power = U4 X I4.

Internal resistance is required to calculate at 90s and 120s.

Power fade = [power (fresh battery) – power measured at different life cycle] / power (fresh battery)

Discharge at C/3 to 80% SOC (75% life cycle battery):

Time (s)	Applied current (A)	Voltage (V)	Current (A)	Power (W)	Internal resistance (Ω)	Power fade
0	0	U0=40.6706	I0=0	P0=0	--	--
0,1	Max.=29.0	U1=37.1742	I1=28.8652	P1=1073.0407	--	1.038%
2	Max.=29.0	U2=36.5113	I2=29.0013	P2=1058.8752	--	1.957%
5	Max.=29.0	U3=35.8485	I3=28.9984	P3=1039.5491	--	3.130%
10	Max.=29.0	U4=35.1856	I4=28.9964	P4=1020.2557	--	4.278%
18	Max.=29.0	U5=34.5227	I5=28.9984	P5=1001.1031	--	5.364%
18,1	75% Max.=21.75	U6=35.3307	I6=21.8108	P6=770.5908	--	5.152%
20	75% Max.=21.75	U7=35.3507	I7=21.7516	P7=768.9343	--	5.167%
30	75% Max.=21.75	U8=35.2407	I8=21.7493	P8=766.4606	--	5.171%
60	75% Max.=21.75	U9=34.9017	I9=21.7476	P9=759.0282	--	5.274%
90	75% Max.=21.75	U10=34.6527	I10=21.7488	P10=753.6546	R=0.2767	5.350%
120	75% Max.=21.75	U11=34.4337	I11=21.7541	P11=749.0742	R=0.2867	5.450%
160	0	U12=38.2189	I12=0	P12=0.0000	R=0.1740	--

Supplementary information:

Calculation of power is not necessary if the battery charge/discharge system can measure the dynamic power, otherwise Power = U X I. For example, at 10s, the power = U4 X I4.

Internal resistance is required to calculate at 90s and 120s.

Power fade = [power (fresh battery) – power measured at different life cycle] / power (fresh battery)

Clause	Requirement + Test	Result – Remark	Verdict
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Discharge at C/3 to 20% SOC (75% life cycle battery):

Time (s)	Applied current (A)	Voltage (V)	Current (A)	Power (W)	Internal resistance (Ω)	Power fade
0	0	U0=34.4439	I0=0.00	P0=0	--	--
0,1	Max.=29.0	U1=30.9404	I1=28.863	P1=893.0328	--	1.245%
2	Max.=29.0	U2=30.2001	I2=29.0017	P2=875.8542	--	2.632%
5	Max.=29.0	U3=29.4598	I3=28.9975	P3=854.2606	--	4.204%
10	Max.=29.0	U4=28.7194	I4=29.0004	P4=832.8741	--	5.588%
18	Max.=29.0	U5=27.9791	I5=29.0000	P5=811.3939	--	6.734%
18,1	75% Max.=21.75	U6=28.6971	I6=21.8122	P6=625.9469	--	6.781%
20	75% Max.=21.75	U7=28.7071	I7=21.7522	P7=624.4426	--	6.745%
30	75% Max.=21.75	U8=28.4971	I8=21.7529	P8=619.8946	--	6.781%
60	75% Max.=21.75	U9=28.0791	I9=21.7504	P9=610.7317	--	6.696%
90	75% Max.=21.75	U10=27.8111	I10=21.7469	P10=604.8052	R=0.3050	6.578%
120	75% Max.=21.75	U11=27.5931	I11=21.7486	P11=600.1113	R=0.3150	6.441%
160	0	U12=31.7014	I12=0.00	P12=0.0000	R=0.1889	--

Supplementary information:

Calculation of power is not necessary if the battery charge/discharge system can measure the dynamic power, otherwise $\text{Power} = U \times I$. For example, at 10s, the power = $U_4 \times I_4$.

Internal resistance is required to calculate at 90s and 120s.

Power fade = $[\text{power (fresh battery)} - \text{power measured at different life cycle}] / \text{power (fresh battery)}$

Discharge at C/3 to 80% SOC (100% life cycle battery):

Time (s)	Applied current (A)	Voltage (V)	Current (A)	Power (W)	Internal resistance (Ω)	Power fade
0	0	U0=40.6703	I0=0	P0=0	--	--
0,1	Max.=29.0	U1=37.0442	I1=28.8651	P1=1069.2845	--	1.384%
2	Max.=29.0	U2=36.2507	I2=29.0012	P2=1051.3138	--	2.658%
5	Max.=29.0	U3=35.4571	I3=28.9984	P3=1028.1992	--	4.188%
10	Max.=29.0	U4=34.6636	I4=28.9964	P4=1005.1196	--	5.699%
18	Max.=29.0	U5=33.8700	I5=28.9984	P5=982.1758	--	7.154%
18,1	75% Max.=21.75	U6=34.6784	I6=21.8107	P6=756.3602	--	6.904%
20	75% Max.=21.75	U7=34.6984	I7=21.7517	P7=754.7492	--	6.916%
30	75% Max.=21.75	U8=34.5884	I8=21.7493	P8=752.2735	--	6.926%
60	75% Max.=21.75	U9=34.2492	I9=21.7477	P9=744.8413	--	7.044%
90	75% Max.=21.75	U10=34.0000	I10=21.7487	P10=739.4558	R=0.3067	7.133%
120	75% Max.=21.75	U11=33.7808	I11=21.7541	P11=734.8709	R=0.3167	7.243%
160	0	U12=37.7836	I12=0	P12=0.0000	R=0.1840	--

Supplementary information:

Calculation of power is not necessary if the battery charge/discharge system can measure the dynamic power, otherwise $\text{Power} = U \times I$. For example, at 10s, the power = $U_4 \times I_4$.

Internal resistance is required to calculate at 90s and 120s.

Power fade = $[\text{power (fresh battery)} - \text{power measured at different life cycle}] / \text{power (fresh battery)}$

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Clause	Requirement + Test	Result – Remark	Verdict
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Discharge at C/3 to 20% SOC (100% life cycle battery):

Time (s)	Applied current (A)	Voltage (V)	Current (A)	Power (W)	Internal resistance (Ω)	Power fade
0	0	U0=34.4437	I0=0.00	P0=0	--	--
0,1	Max.=29.0	U1=30.8104	I1=28.862	P1=889.2498	--	1.663%
2	Max.=29.0	U2=29.9395	I2=29.0016	P2=868.2934	--	3.473%
5	Max.=29.0	U3=29.0686	I3=28.9975	P3=842.9167	--	5.477%
10	Max.=29.0	U4=28.1976	I4=29.0003	P4=817.7389	--	7.303%
18	Max.=29.0	U5=27.3267	I5=29.0000	P5=792.4743	--	8.909%
18,1	75% Max.=21.75	U6=28.0448	I6=21.8121	P6=611.7160	--	8.900%
20	75% Max.=21.75	U7=28.0548	I7=21.7522	P7=610.2536	--	8.864%
30	75% Max.=21.75	U8=27.8448	I8=21.7529	P8=605.7051	--	8.914%
60	75% Max.=21.75	U9=27.4267	I9=21.7502	P9=596.5362	--	8.865%
90	75% Max.=21.75	U10=27.1586	I10=21.7467	P10=590.6099	R=0.3350	8.771%
120	75% Max.=21.75	U11=26.9405	I11=21.7484	P11=585.9128	R=0.3450	8.654%
160	0	U12=31.2663	I12=0.00	P12=0.0000	R=0.1989	--

Supplementary information:

Calculation of power is not necessary if the battery charge/discharge system can measure the dynamic power, otherwise $Power = U \times I$. For example, at 10s, the power = $U_4 \times I_4$.

Internal resistance is required to calculate at 90s and 120s.

Power fade = [power (fresh battery) – power measured at different life cycle] / power (fresh battery)

Life cycle test:

Item	Charge current (A)	Discharge current (A)	Cycle number at 80% rated capacity
Life cycle	4	15	500

Supplementary information:

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Clause	Requirement + Test	Result – Remark	Verdict
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Appended tables (Article 14):

Part A.1	The remaining capacity					P
The remaining capacity of the battery can be readable at different life cycles						
Item	Fresh battery	25% life cycle	50% life cycle	75% life cycle	100% life cycle	
Capacity (Ah)	16.50	15.72	15.12	14.57	13.95	
Supplementary information:						

Part A.4	The evolution of self-discharge rates					P
The self-discharge rates of the battery can be readable at different life cycles						
Item	Fresh battery	25% life cycle	50% life cycle	75% life cycle	100% life cycle	
Self-discharge rate	0.029%	0.054%	0.061%	0.065%	0.069%	
Supplementary information:						

Part B.1	The date of manufacture and the date of putting into service					P
The date of manufacture of the battery and the date of putting into service of the battery can be readable at different life cycles.						
Item	Fresh battery	25% life cycle	50% life cycle	75% life cycle	100% life cycle	
Date of manufacture	2025-12-20	2025-12-20	2025-12-20	2025-12-20	2025-12-20	
Date of putting into service	2026-01-05	2026-01-05	2026-01-05	2026-01-05	2026-01-05	
Supplementary information:						

Part B.2	The energy throughput					P
The energy throughput of the battery can be readable at different life cycles.						
Item	Fresh battery	25% life cycle	50% life cycle	75% life cycle	100% life cycle	
Total remaining charge energy (Wh)	307436.00	219693.75	140867.25	67881.87	0	
Total remaining discharge energy (Wh)	295446.00	208709.25	131992.50	62519.25	0	
Supplementary information:						

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Clause	Requirement + Test	Result – Remark	Verdict
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Part B.3	The capacity throughput					P
The capacity throughput of the battery can be readable at different life cycles.						
Item	Fresh battery	25% life cycle	50% life cycle	75% life cycle	100% life cycle	
Total remaining charge capacity (Ah)	8539.89	6102.60	3912.98	1885.61	0	
Total remaining discharge capacity (Ah)	8206.83	5797.48	3666.46	1736.64	0	
Supplementary information:						

Part B.4	The tracking of harmful events					P
The number of deep discharge events, time spent in extreme temperatures, time spent charging in extreme temperatures of the battery can be readable at different life cycles.						
Item	Fresh battery	25% life cycle	50% life cycle	75% life cycle	100% life cycle	
The number of deep discharge	0	125	250	375	500	
Time spent in extreme temperatures (discharge)	0	0	0	0	0	
Time spent charging in extreme temperatures	0	0	0	0	0	
Supplementary information:						

Part B.5	The number of full equivalent charge-discharge cycles					P
The number of full equivalent charge-discharge cycles can be readable at different life cycle						
Item	Fresh battery	25% life cycle	50% life cycle	75% life cycle	100% life cycle	
The number of full equivalent charge-discharge cycles	0	125	250	375	500	
Supplementary information:						

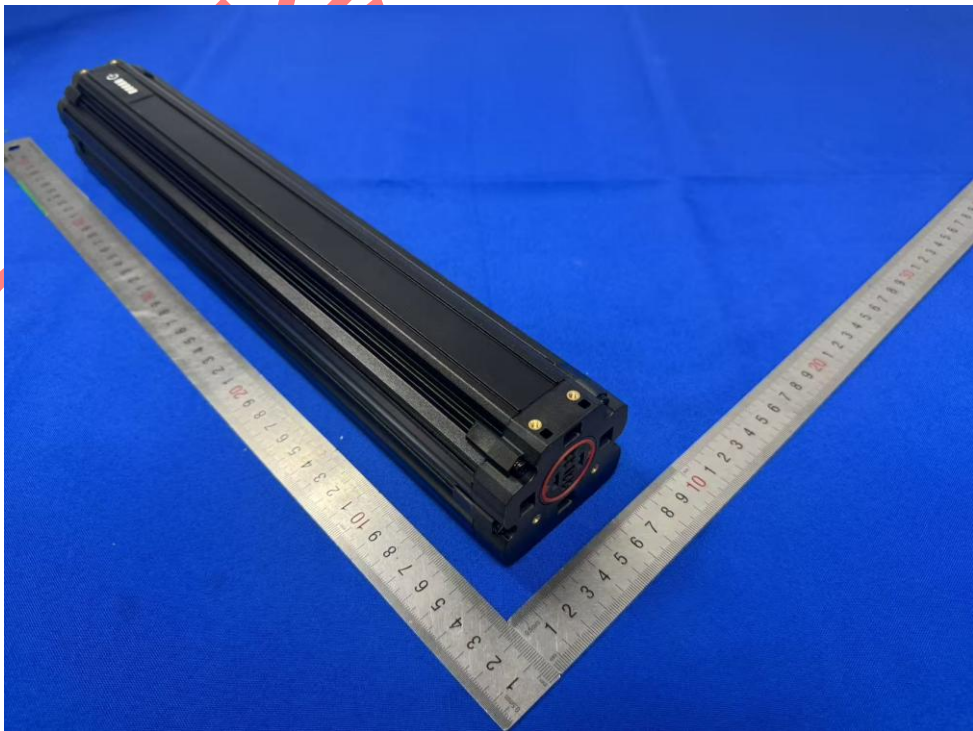
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Photo Documentation

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Details of:	Picture 1: View 1 of Rechargeable Li-ion Battery, model: TP6136N200 (Label is not final, see page 5 of TRF for final label)
	 A black, rectangular rechargeable Li-ion battery is shown lying on a blue surface. Two metal rulers are placed diagonally on either side of the battery to provide a scale. The battery has a label on its top surface with technical specifications and a warning symbol. The rulers are marked in centimeters and inches.

Details of:	Picture 2: View 2 of Rechargeable Li-ion Battery
	 A black, rectangular rechargeable Li-ion battery is shown from a different angle, lying on a blue surface. Two metal rulers are placed diagonally on either side of the battery to provide a scale. The battery has a label on its top surface with technical specifications and a warning symbol. The rulers are marked in centimeters and inches.

---END OF REPORT---