



Test Report No.: BAT2606WDG0024-1

Client

Name: PAK KO BATTERIES FACTORY LIMITED
Address: Unit 11, 9/F., Block A, Hoi Luen Industrial Center, No.55 Hoi Yuen Road,
Kwun Tung, Kowloon, Hong Kong

Test Item description: Alkaline Zinc Manganese Dioxide Button Cell

Identification: LR44, AG13, L1154C, A76, 357

Testing laboratory

Name: Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch
Address: No. 96, Guantai Road (Houjie Section), Houjie Town, Dongguan City,
Guangdong Province, 523942, People's Republic of China

Test specification

Standard: IEC 60086-5: 2021, EN IEC 60086-5: 2021/AC:2022-07
Primary batteries – Part 5: Safety of batteries with aqueous electrolyte

Test Result: The sample satisfies to the all clauses examined.

Prepared By:



Julius Wang/ Engineer
2026-06-05
Date

Approved By:



Jetter Yang/ Senior Engineer
2026-06-05
Date

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TEST REPORT

IEC/EN IEC 60086-5

Primary batteries – Part 5: Safety of batteries with aqueous electrolyte

Report Number.: BAT2606WDG0024-1

Date of issue: 2026-06-05

Total number of pages: 23

Name of Testing Laboratory

preparing the Report: Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch

No. 96, Guantai Road (Houjie Section), Houjie Town, Dongguan
City, Guangdong Province, 523942, People's Republic of China

Applicant's name: PAK KO BATTERIES FACTORY LIMITED

Address: Unit 11, 9/F., Block A, Hoi Luen Industrial Center, No.55 Hoi Yuen
Road, Kwun Tung, Kowloon, Hong Kong

Test specification:

Standard: IEC 60086-5: 2021, EN IEC 60086-5: 2021/AC:2022-07

Non-standard test method.....: N/A

Test Report Form No.: TEST REPORT IEC/EN 60086-5 VER.3

Test Report Form(s) Originator.....: Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch

Master TRF: Dated 2024-02

Test item description: Alkaline Zinc Manganese Dioxide Button Cell

Trade Mark: 

Manufacturer: PAK KO BATTERIES FACTORY LIMITED

Unit 11, 9/F., Block A, Hoi Luen Industrial Center, No.55 Hoi Yuen
Road, Kwun Tung, Kowloon, Hong Kong

Model/Type reference.....: LR44, AG13, L1154C, A76, 357

Ratings.....: 1.5V



List of Attachments (including a total number of pages in each attachment):

- Page 23(1 page of EUT photos)

Summary of testing:

Temperature: 20±5°C; Relative humidity: 60%.

The test samples were pre-production samples without serial number.

Tests performed (name of test and test clause):

- 6.3.2.1 Test A – Storage after partial use
- 6.3.2.2 Test B-1 – Transportation-shock
- 6.3.2.3 Test B-2 – Transportation-vibration
- 6.3.2.4 Test C – Climatic-temperature cycling
- 6.4.2.2 Test E – External short circuit
- 6.4.2.4 Test G – Free fall test

Testing location:

Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch

No. 96, Guantai Road (Houjie Section), Houjie Town, Dongguan City, Guangdong Province, 523942, People's Republic of China

Summary of compliance with National Differences: N/A



Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



Notes:

IEC designation 'LR44' marked on the cell.

Polarity of the positive '+' marked on the cell.

All other markings shown in 9.2 were given on the immediate packing instead of on the cell.



Test item particulars	
Classification of installation and use	Built-in and use in the fit battery compartment
Supply Connection.....	Positive negative connection
Possible test case verdicts:	
- test case does not apply to the test object	N/A
- test object does meet the requirement	P (Pass)
- test object does not meet the requirement	F (Fail)
Testing	
Date of receipt of test item	2024-08-12
Date (s) of performance of tests.....	2024-08-12 to 2024-09-24
General remarks:	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory. "(See Enclosure #)" refers to additional information 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.	
Name and address of factory (ies)	1. Guizhou Pak Ko Energy Technology Co., Ltd. Building A3, First Industrial Park, Xiaoba Town, Jinhaihu New District, Bijie City, Guizhou Province, P.R. China 2. Si Hui Pak Ko Batteries Co., Ltd. No. 88 Ji Guang Lu, Cang Feng Da Dao, Cheng Zhong Qu, Si Hui, Zhao Qing, Guangdong, China
General product information:	
(1) The equipment under test (EUT) is a Alkaline Zinc Manganese Dioxide Button Cell. (2) The battery Standardized chemical system letter is L, Chemical System is Zinc-Manganese Dioxide. (3) IEC designation is LR44 (customer model: LR44, AG13, L1154C, A76, 357), common designation is A76. (4) Dimension of the battery cell: (ø)11.6mm by (H) 5.4mm max. (5) The battery weight approx.: 2.002g.	
This report is copy report from previous test report No.: BAT2408WDG0096-1 dated on 2024-09-24.	



IEC/EN 60086-5			
Clause	Requirement + Test	Result - Remark	Verdict
4	REQUIREMENTS FOR SAFETY		P
4.1	Design		P
4.1.1	General		P
	Batteries shall be so designed that they do not present a safety hazard under conditions of normal (intended) use	(See Table 6.3.2.1 to 6.3.2.4)	P
4.1.2	Venting		P
	All batteries shall incorporate a pressure relief feature or shall be so constructed that they will relieve excessive internal pressure at a value and rate which will preclude explosion	The edge of cell can which next to the terminals was considered as the pressure relief mechanism, which can release the pressure during the abnormal operation.	P
	The battery case material and/or its final assembly shall be so designed that, in the event of one or more cells venting, the battery case does not present a hazard in its own right	Evaluate on the final product.	N/A
4.2	Quality plan		P
	The manufacturer shall prepare a quality plan defining the procedures for the inspection of materials, components, cells and batteries during the course of manufacture, to be applied to the total process of producing a specific type of battery	The manufacturer is in conformity with ISO 9001:2015 quality management system certification for production the alkaline battery.	P
5	SAMPLING		P
5.1	General	Complied.	P
	Samples should be drawn from production lots in accordance with accepted statistical methods and shall meet the requirements specified for dimensions and open circuit voltage set forth in IEC 60086-2.	Samples submitted by applicant sampling.	P
5.2	Sampling for type approval	Complied.	P
	The number of samples drawn for type approval is given in below,		P
	Open circuit voltage (n = 70) Dimensions (n = 70)		P
	Intended use A Partial use (n = 5) B-1 Transportation-shock (n = 5) B-2 Transportation-vibration (n = 5) C Climatic (n = 5)	Test D and Test F are not require for button cells.	P



IEC/EN 60086-5			
Clause	Requirement + Test	Result - Remark	Verdict
	Reasonably foreseeable A misuse D Incorrect installation (n = 20) E External short circuit (n = 5) F Overdischarge (n = 20) G Free fall (n = 5)		
5.3	Validity of testing		P
	Cells or batteries with aqueous electrolyte shall be subjected to the tests, as required in this document. Testing remains valid until a design change or requirement revision has been made. Retesting is required when:	Complied.	P
	a) a battery specification changes by more than 0,1 g or 20 % mass, whichever is greater, for the cathode, anode or electrolyte;		N/A
	b) a battery specification change would lead to a failure of any of the tests;		N/A
	c) there is an addition of new tests or requirements;		N/A
	d) there is a requirement change that would lead to a failure of any of the tests.		N/A
6	TESTING AND REQUIREMENTS		P
6.1	General		P
6.1.1	Applicable safety tests	Complied.	P
	Applicable safety tests are shown in Table 1		P
	The tests described in Tables 2 and 6 are intended to simulate conditions which the battery is likely to encounter during intended use and reasonably foreseeable misuse		P
6.1.2	Cautionary notice	Complied.	P
6.1.3	Ambient temperature		P
	Unless otherwise specified, these tests shall be carried out at (20 ± 5) °C		P
6.2	Evaluation of test criteria		P
6.2.1	Explosion	Considered.	P
	An explosion is considered to have occurred when there is an instantaneous release wherein solid matter from any part of the battery is propelled to a distance greater than 25 cm away from the battery.	Not occurred during test.	P
6.2.2	Fire	Considered.	P
	A fire is considered to have occurred if flames are emitted from a test cell or battery.	Not occurred during test.	P



IEC/EN 60086-5			
Clause	Requirement + Test	Result - Remark	Verdict
6.2.3	Leakage	Considered.	P
	Leakage is considered to have occurred if there is an unplanned escape of electrolyte from a cell or battery.	Not occurred during test.	P
6.2.4	Venting	Considered.	P
	Venting is considered to have occurred if there is a release of excessive internal pressure from a cell or battery in a manner intended by design to preclude explosion.	Not occurred during test.	P
6.3	Intended use		P
6.3.1	Intended use tests and requirements	Complied.	P
6.3.2	Intended use test procedures	See below.	P
6.3.2.1	Test A – Storage after partial use	Considered.	P
	An undischarged battery is discharged under an application or service output test condition, with the load defined in IEC 60086-2 resulting in the longest test duration until the service life falls by 50 % of the highest minimum average duration (MAD) value, followed by storage at $(45 \pm 2) ^\circ\text{C}$ for 30 days	Complied.	P
	Results: no leakage, no fire and no explosion	No leakage, no fire and no explosion.	P
6.3.2.2	Test B-1 – Transportation-shock	Considered.	P
	The shock test shall be carried out under the conditions defined in Table 3 and the sequence in Table 4	Complied.	P
	Results: no leakage, no fire and no explosion	No leakage, no fire and no explosion.	P
6.3.2.3	Test B-2 – Transportation-vibration	Considered.	P
	The vibration test shall be carried out under the following test conditions and the sequence in Table 5	Complied.	P
	Results: no leakage, no fire and no explosion	No leakage, no fire and no explosion.	P
6.3.2.4	Test C – Climatic-temperature cycling	Considered.	P
	Temperature cycling procedure (see 1) to 7) and/or Figure 2)	Complied.	P
	Result: no fire and no explosion	No fire and no explosion.	P
6.4	Reasonably foreseeable misuse		P
6.4.1	Reasonably foreseeable misuse tests and requirements	Complied.	P
6.4.2	Reasonably foreseeable misuse test procedures	See below.	P



IEC/EN 60086-5			
Clause	Requirement + Test	Result - Remark	Verdict
6.4.2.1	Test D – Incorrect installation (four batteries in series)		N/A
	The circuit were complete for - 24 hours elapsed, or		N/A
	- until the battery case temperature has returned to ambient		N/A
	Results: no fire and no explosion		N/A
6.4.2.2	Test E – External short circuit	Considered.	P
	The circuit were complete for - 24 hours elapsed, or		N/A
	- until the battery case temperature has returned to ambient	Complied.	P
	Results: no fire and no explosion	No fire and no explosion.	P
6.4.2.3	Test F – Overdischarge		N/A
	Results: no fire and no explosion		N/A
6.4.2.4	Test G – Free fall test	Considered.	P
	Results: no fire and no explosion	No fire and no explosion.	P
7	INFORMATION FOR SAFETY		P
7.1	Precautions during handling of batteries		P
	When used correctly, primary batteries with aqueous electrolyte provide a safe and dependable source of power. However, battery misuse or abuse may result in leakage, or in extreme cases, fire and/or explosion	Considered.	P
	a) Always insert batteries correctly with regard to the polarities (+ and –) marked on the battery and the equipment		P
	b) Do not short-circuit batteries		P
	c) Keep batteries out of the reach of children		P
	d) Do not charge batteries		P
	e) Do not force discharge batteries		P
	f) Do not mix old and new batteries or batteries of different types or brands		P
	g) Exhausted batteries should be immediately removed from equipment and properly disposed of		P
	h) Do not expose batteries to heat.		P
	i) Do not weld or solder directly to batteries		P
	j) Do not dismantle batteries		P
	k) Do not deform batteries		P



IEC/EN 60086-5			
Clause	Requirement + Test	Result - Remark	Verdict
	l) Do not dispose of batteries in fire		P
	m) Do not allow children to replace batteries without adult supervision		P
	n) Do not encapsulate and/or modify batteries		P
	o) Store unused batteries in their original packaging away from metal objects. If already unpacked, do not mix or jumble batteries		P
	p) Remove batteries from equipment if it is not to be used for an extended period of time unless it is for emergency purposes		P
7.2	Packaging		P
	The packaging shall be adequate to avoid mechanical damage during transport, handling and stacking		P
	The materials and packaging design shall be chosen so as to prevent the development of unintentional electrical contact, corrosion of the terminals and some protection from the environment		P
7.3	Handling of battery cartons		P
	Battery cartons should be handled with care. Rough handling might result in battery damage. This can cause leakage, explosion, or fire.		P
7.4	Display and storage		P
	a) Batteries shall be stored in well-ventilated, dry and cool conditions		P
	b) Battery cartons should not be piled up in several layers (or should not exceed a specified height)		P
	c) When batteries are stored in warehouses or displayed in retail stores, they should not be exposed to direct sun rays for a long time or placed in areas where they get wet by rain		P
	d) Do not mix unpacked batteries so as to avoid mechanical damage and/or short-circuit among each other		P
	e) See Annex A for additional details		P
7.5	Transportation		P
	When loaded for transportation, battery packages should be so arranged to minimise the risk of falling		P
7.6	Disposal		P
	a) Do not dismantle batteries		P
	b) Do not dispose of batteries in fire except under conditions of controlled incineration		P



IEC/EN 60086-5			
Clause	Requirement + Test	Result - Remark	Verdict
	c) Primary batteries may be disposed of via the communal refuse arrangements, provided that no local rules to the contrary exist		P
	d) The provision for the collection of used batteries		P
	Following should be considered:		P
	• Store collected batteries in a non-conductive container.		P
	• Store collected batteries in a well-ventilated area.		P
	• Do not mix collected batteries with other materials.		P
	• Consider protecting used battery terminals, particularly those batteries with high voltage		P
	• Failure to observe these recommendations may result in leakage, fire, and/or explosion.		P
8	INSTRUCTIONS FOR USE		P
	a) Always select the correct size and grade of battery most suitable for the intended use		P
	Information provided with the equipment to assist correct battery selection should be retained for reference		P
	b) Replace all batteries of a set at the same time		P
	c) Clean the battery contacts and also those of the equipment prior to battery installation		P
	d) Ensure that the batteries are installed correctly with regard to polarity (+ and -)		P
	e) Remove batteries from equipment which is not to be used for an extended period of time		P
	f) Remove exhausted batteries promptly		P
9	MARKING AND PACKAGING		P
9.1	General batteries	The EUTs are swallowable button cells.	N/A
	With the exception of small batteries (see 9.2), each battery shall be marked with the following information		N/A
	a) designation, IEC or common.....:		N/A
	b) expiration of a recommended usage period or year and month or week of manufacture		N/A
	c) polarity of the positive (+) terminal		N/A
	d) nominal voltage.....:		N/A
	e) name or trade mark of the manufacturer or supplier		N/A
	f) cautionary advice		N/A



IEC/EN 60086-5			
Clause	Requirement + Test	Result - Remark	Verdict
9.2	Swallowable button cells	See copy of marking plate.	P
	a) designation, IEC or common	IEC designation 'LR44' marked on the cell.	P
	b) expiration of a recommended usage period or year and month or week of manufacture		N/A
	c) polarity of the positive (+) terminal	Polarity of the positive '+' marked on the cell.	P
	d) nominal voltage		N/A
	e) name or trade mark of the manufacturer or supplier		N/A
	f) cautionary advice		N/A
	g) Caution for ingestion of swallowable batteries, see also 7.1 c) and Annex D		P
	h) Child resistant packaging	Not large than 16mm.	N/A
9.3	Safety pictograms	No safety pictograms were used.	N/A
	Safety pictograms that could be considered for use as an alternative to written cautionary advice are provided in Annex C.		N/A
Annex A	Additional information on display and storage	Consideration by battery manufacturers, distributors, users, and equipment designers.	P
	It takes the form of advice to battery manufacturers, distributors, users, and equipment designers		P
	Storage and stock rotation		P
Annex B	Battery compartment design guidelines	Consideration by battery- powered equipment designer.	N/A
B.1	Background		N/A
B.1.1	General		N/A
B.1.2	Battery failures resulting from poor battery compartment design		N/A
	Poor battery compartment design may lead to reversed battery installation or to short circuiting of the batteries		N/A
B.1.3	Potential hazards resulting from battery reversal		N/A
B.1.4	Potential hazards resulting from a short circuit		N/A
B.2	General guidance for appliance design		N/A
B.2.1	Key battery factors to be first considered		N/A
B.2.2	Other important factors to consider		N/A



IEC/EN 60086-5			
Clause	Requirement + Test	Result - Remark	Verdict
B.3	Specific measures against reversed installation		N/A
B.3.1	General		N/A
	To overcome the problems associated with the reversed placement of a battery, consideration should be given at the design stage to ensure that batteries cannot be installed incorrectly or, if so installed, will not make electrical contact		N/A
B.3.2	Design of the positive contact		N/A
B.3.3	Design of the negative contact		N/A
B.3.4	Design with respect to battery orientation		N/A
B.3.5	Dimensional considerations		N/A
B.4	Specific measures to prevent short-circuiting of batteries		N/A
B.4.1	Measures to prevent short-circuiting due to battery jacket damage		N/A
B.4.2	Measures to prevent external short-circuit of a battery caused when coiled spring contacts are employed for battery connection		N/A
B.5	Special considerations regarding recessed negative contacts		N/A
B.6	Waterproof and non-vented devices		N/A
B.7	Other design considerations		N/A
Annex C	Safety pictograms	No safety pictograms were used.	N/A
C.1	General		N/A
	Cautionary advice to fulfil the marking requirements in this standard has, on a historical basis, been in the form of written text		N/A
C.2	Pictograms		N/A
	The pictogram recommendations and cautionary advices are given in Table C.1		N/A
	 DO NOT CHARGE		N/A
	 DO NOT DEFORM / DAMAGE		N/A
	 DO NOT DISPOSE OF IN FIRE		N/A



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IEC/EN 60086-5			
Clause	Requirement + Test	Result - Remark	Verdict
	 DO NOT INSERT INCORRECTLY		N/A
	 KEEP OUT OF REACH OF CHILDREN		N/A
	 DO NOT MIX DIFFERENT TYPES OR BRANDS		N/A
	 DO NOT MIX NEW AND USED		N/A
	 DO NOT OPEN / DISMANTLE		N/A
	 DO NOT SHORT CIRCUIT		N/A
	 INSERT CORRECTLY		N/A
C.3	Recommendations for use		N/A
	The following instructions are provided for use of the pictograms		N/A
	a) Pictograms shall be clearly legible		N/A
	b) Whilst colours can be used, they should not detract from the information displayed. If colours are used, the background of pictograms E and J should be blue and the circle and diagonal bar of the other pictograms should be red.		N/A
	c) Not all of the pictograms need to be used together for a particular type or brand of battery. In particular, pictogram D and J are meant as alternatives for a similar purpose		N/A
Annex D	Use of the KEEP OUT OF REACH OF CHILDREN safety sign	No use of the KEEP OUT OF REACH OF CHILDREN safety sign.	N/A
D.1	General		N/A
D.2	Safety sign		N/A



IEC/EN 60086-5			
Clause	Requirement + Test	Result - Remark	Verdict
	When a safety sign is used to convey the message that these swallowable button cells (i.e. can fit in the ingestion gauge, see Figure 7) should be kept out of the reach of children, the following best practices apply. The safety sign recommendation and cautionary advice for use on battery packaging are given in Table C.1, safety pictogram E.		N/A
D.3	Best practices for marking the packaging		N/A
	Packaging of swallowable button cells (i.e. can fit in the ingestion gauge, see Figure 7) should be marked with the safety pictogram E of Table C.1 to alert the purchaser of the increased risk of such cells.		N/A
	a) Refer to Table 7 for marking requirements on packaging.		N/A
	b) The safety sign should be on contrasting background. The background should cover at least 50 % of the area of the pictogram.		N/A
	c) The size of the safety sign should be 6 mm in diameter or larger.		N/A
	d) If the text "KEEP OUT OF REACH OF CHILDREN" is used, it should contrast with the background colour on which it is printed.		N/A
Annex E	Child resistant packaging	Diameter less than 16mm.	N/A
E.1	General		N/A
E.1.1	General		N/A
E.1.2	Applicability		N/A
E.1.3	Packaging design		N/A
E.1.3.1	Single cell packaging		N/A
	The packaging for button cells should meet one of the following:		N/A
	a) packaging strength as described in E.1.3.3		N/A
	b) packaging requirements based on local legislation or standardization [8], [9], [10], if applicable.		N/A
E.1.3.2	Multi-cell packaging		N/A
	Each cell containment in a multi-cell packaging should meet the above requirements even when another cell containment is removed from the packaging.		N/A
E.1.3.3	Packaging strength		N/A
	The packaging strength should be such that the packaging passes the tests described in Clause E.2.		N/A
E.2	Packaging tests		N/A



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Clause	Requirement + Test	Result - Remark	Verdict
E.2.1	General		N/A
	The following test methods were developed based on the analysis of the behaviour of children in a test where they were required to try and open button cell packaging within a limited time. The tests should be conducted by an instructed person or, alternatively, if necessary, using suitable equipment.		N/A
E.2.2	Test items		N/A
	a) Bending test		N/A
	b) Torsion test		N/A
	c) Tearing test		N/A
	d) Pushing test		N/A
E.2.3	Test procedure		N/A
	The test procedure is conducted with ten sample packagings. Each sample is subjected to a series of tests in the order and frequency outlined in Table E.1.		N/A
E.2.4	Criteria		N/A
	Each test sample should meet the following criteria.		N/A
	a) each cell should be kept in its packaging until the end of the test series		N/A
	b) in order to prevent a child from pulling the cell out from its compartment, the packaging should not open too wide. The maximum allowable size of an opening in the packaging is 6 mm diameter for a round hole and 10 mm length for a slit. See Figure E.5 for maximum packaging openings.		N/A



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IEC/EN 60086-5			
Clause	Requirement + Test	Result - Remark	Verdict

6.3.2.1	TABLE: Test A – Storage after partial use					P
Model, Sample number	OCV at start of test (Vdc)	Lowest resistive load (Ω)	MAD (h)	Storage temperature ($45 \pm 2^\circ\text{C}$)	Results	
LR44-01	1.594	6.8K	340	45	No leakage, no fire, no explosion	
LR44-02	1.594	6.8K	340	45	No leakage, no fire, no explosion	
LR44-03	1.595	6.8K	340	45	No leakage, no fire, no explosion	
LR44-04	1.594	6.8K	340	45	No leakage, no fire, no explosion	
LR44-05	1.597	6.8K	340	45	No leakage, no fire, no explosion	

Supplementary information:

- No fire
- No explosion
- No leakage
- Fire
- Explosion
- Leakage
- Leakage
- Bulge
- Others (please explain)



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IEC/EN 60086-5			
Clause	Requirement + Test	Result - Remark	Verdict

6.3.2.2	TABLE: Test B-1 – Transportation-shock			P
Model, Sample number	Ambient (20 ± 5 °C)	OCV at start of test (Vdc)	Results	
LR44-06	22.5	1.594	No leakage, no fire, no explosion	
LR44-07	22.5	1.597	No leakage, no fire, no explosion	
LR44-08	22.5	1.596	No leakage, no fire, no explosion	
LR44-09	22.5	1.595	No leakage, no fire, no explosion	
LR44-10	22.5	1.595	No leakage, no fire, no explosion	

Supplementary information:

- No fire
- No explosion
- No leakage
- Fire
- Explosion
- Leakage
- Leakage
- Bulge
- Others (please explain)



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IEC/EN 60086-5			
Clause	Requirement + Test	Result - Remark	Verdict

6.3.2.3	TABLE: Test B-2 – Transportation-Vibration			P
Model, Sample number	Ambient (20 ± 5 °C)	OCV at start of test (Vdc)	Results	
LR44-11	23.0	1.590	No leakage, no fire, no explosion	
LR44-12	23.0	1.595	No leakage, no fire, no explosion	
LR44-13	23.0	1.597	No leakage, no fire, no explosion	
LR44-14	23.0	1.597	No leakage, no fire, no explosion	
LR44-15	23.0	1.594	No leakage, no fire, no explosion	

Supplementary information:

- No fire
- No explosion
- No leakage
- Fire
- Explosion
- Leakage
- Bulge
- Others (please explain)



IEC/EN 60086-5			
Clause	Requirement + Test	Result - Remark	Verdict

6.3.2.4	TABLE: Test C – Climatic-temperature cycling		P
Model, Sample number	OCV at start of test (Vdc)	Results	
LR44-16	1.595	No fire, no explosion	
LR44-17	1.598	No fire, no explosion	
LR44-18	1.595	No fire, no explosion	
LR44-19	1.594	No fire, no explosion	
LR44-20	1.595	No fire, no explosion	

Supplementary information:

- No fire
- No explosion
- No leakage
- Fire
- Explosion
- Leakage
- Bulge
- Others (please explain)

6.4.2.1	TABLE: Test D – Incorrect installation				N/A
Model, Sample number	Ambient (20 ± 5 °C)	OCV of reversed battery (Vdc)	Resistance of circuitry (Ω)	Maximum case temperature (°C)	Results
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Supplementary information:

- No fire
- No explosion
- No leakage
- Fire
- Explosion
- Leakage
- Bulge
- Others (please explain:)



IEC/EN 60086-5			
Clause	Requirement + Test	Result - Remark	Verdict

6.4.2.2	TABLE: Test E – External short circuit					P
Model, Sample number	Ambient (20 ± 5 °C)	OCV of reversed cell (Vdc)	Resistance of circuitry (Ω)	Maximum case temperature (°C)	Results	
LR44-21	23.0	1.597	0.05	51.3	No fire, no explosion	
LR44-22	23.0	1.596	0.03	53.9	No fire, no explosion	
LR44-23	23.0	1.598	0.06	56.9	No fire, no explosion	
LR44-24	23.0	1.596	0.06	53.5	No fire, no explosion	
LR44-25	23.0	1.595	0.02	51.2	No fire, no explosion	

Supplementary information:

- No fire
- No explosion
- No leakage
- Fire
- Explosion
- Leakage
- Bulge
- Others (please explain)

6.4.2.3	TABLE: Test F – Overdischarge					N/A
Model, Sample number	Ambient (20 ± 5 °C)	OCV at start of test (Vdc)	Highest MAD (h)	R1 (Ω)	Results	
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Supplementary information:

- No fire
- No explosion
- No leakage
- Fire
- Explosion
- Leakage
- Bulge
- Others (please explain:)



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Test Report No.: BAT2606WDG0024-1

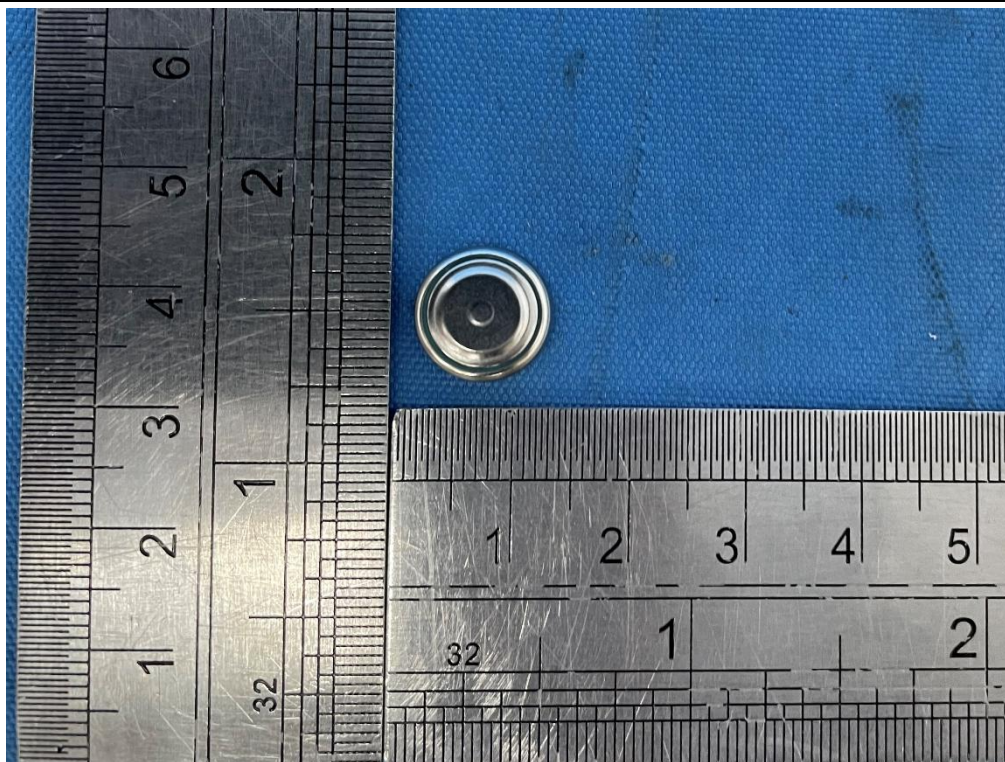
Test Report No. EN120000200021

IEC/EN 60086-5				
Clause	Requirement + Test		Result - Remark	Verdict
6.4.2.4	TABLE: Test G – Free fall test			P
Model, Sample number	Ambient (20 ± 5 °C)	OCV at start of test (Vdc)	Results	
LR44-26	23.5	1.582	No fire, no explosion	
LR44-27	23.5	1.580	No fire, no explosion	
LR44-28	23.5	1.581	No fire, no explosion	
LR44-29	23.5	1.584	No fire, no explosion	
LR44-30	23.5	1.580	No fire, no explosion	
Supplementary information: - No fire - No explosion - No leakage - Fire - Explosion - Leakage - Bulge - Others (please explain)				

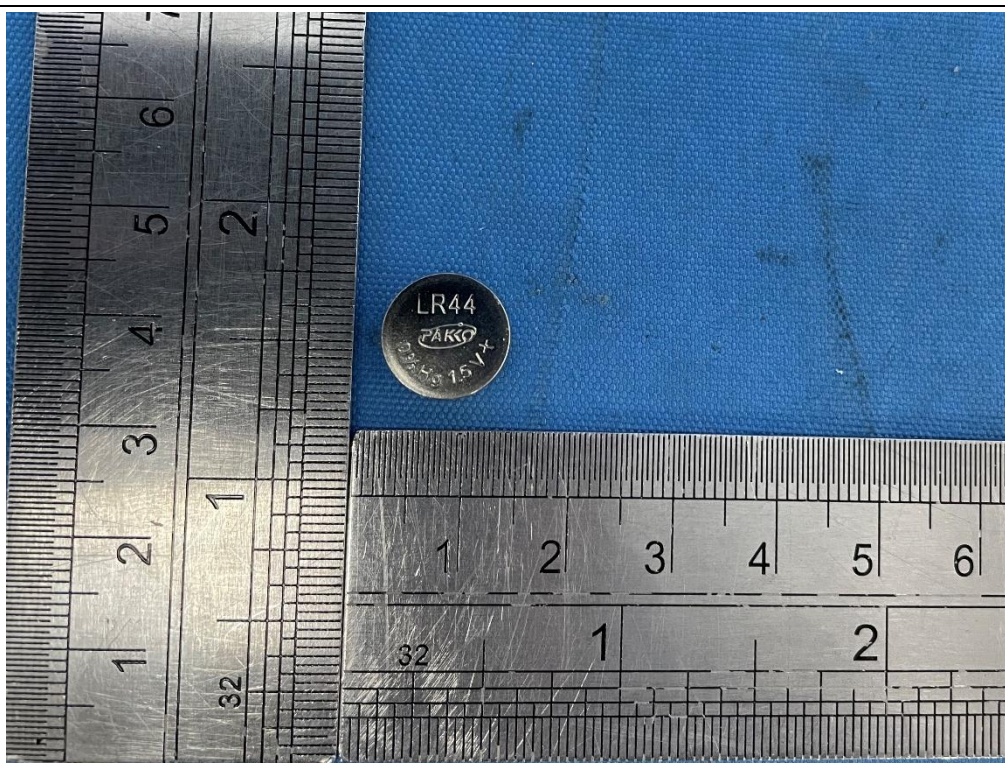


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General view-1



General view-2