

Technical Documentation for EU Battery Regulation

Basic Information:

Document No.	TQ_TDC_CR2016		
Product name	Li-MnO ₂ Button Cell	Rechargeable?	No rechargeable
Model Name	CR2016	Chemical system	MnO ₂ /Li
Serial Number	Refer to battery body or PO No. & Packing Label	Rated voltage	3.0 V
Brand Owner	TianQiu/TMMQ/No-brand/etc.	Weight of 1 cell	Approx. 1.8g
Manufacture	DongGuan Tianqiu Enterprise Co., Ltd.		
Manufacturer Address	TianQiu Industrial Park, Xinji Industrial Zone, Machong Town, Dongguan		
Importer	Same as the end user		
Importer Address	Same as the end user		
European Authorized Representative	Apex CE Specialists GmbH Address: Grafenberger Allee 277, 40237 Düsseldorf, DE Contact Person: Wells Yan Postal Code: 40237 Email: Info@apex-ce.com Tel: +49 21312066043		

Product Information:

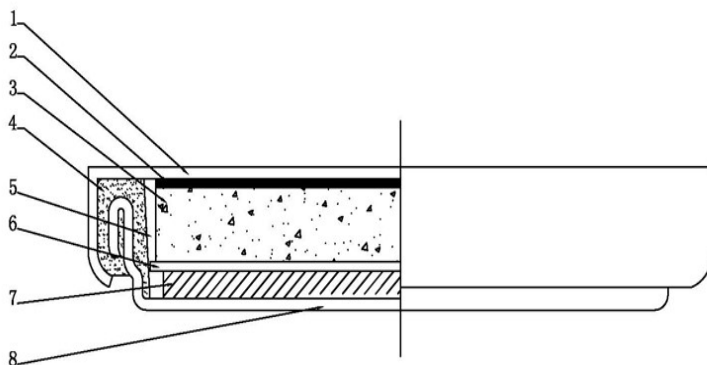
(1) General Description of the Battery and Its Intended Use

A Lithium metal button cell (IEC code: CR) is a type of primary battery that provides direct electric current from the electrochemical reaction between Li and manganese dioxide (MnO₂) in the presence of an organic electrolyte. Lithium metal battery have higher energy density than carbon zinc batteries. High specific energy, safety, long storage times (low self-discharge).

The lithium metal battery is a widely used product, which is essential for powering many portable devices, such as watches, weight scale, toys, and remote controls.

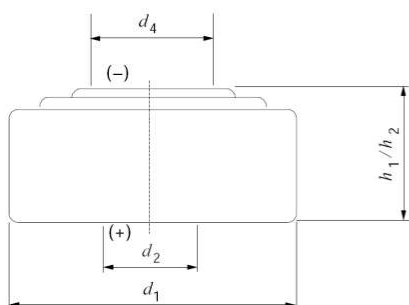
(2) Conceptual Design & Manufacturing Schemes

Conceptual Design:



NO	ITEM
1	壳Can
2	集流网Collector
3	正极粉饼Tablet
4	密封圈Gasket
5	电解液Electrolyte
6	隔膜纸Separator
7	金属锂Lithium
9	负极盖Cap

Dimension:



SPEC code	specification standard(mm)	
	MAX	MIN
h1/h2	1.6	1.4
d1	20.0	19.7
d2	-	-
d4	-	8.0

Note: h1 battery maximum total height
h2 battery positive and negative minimum distance between contacting surfaces
d1 Maximum and minimum diameter of the battery
d2 minimum diameter of the anode contact area
d4 minimum diameter of the cathode surface

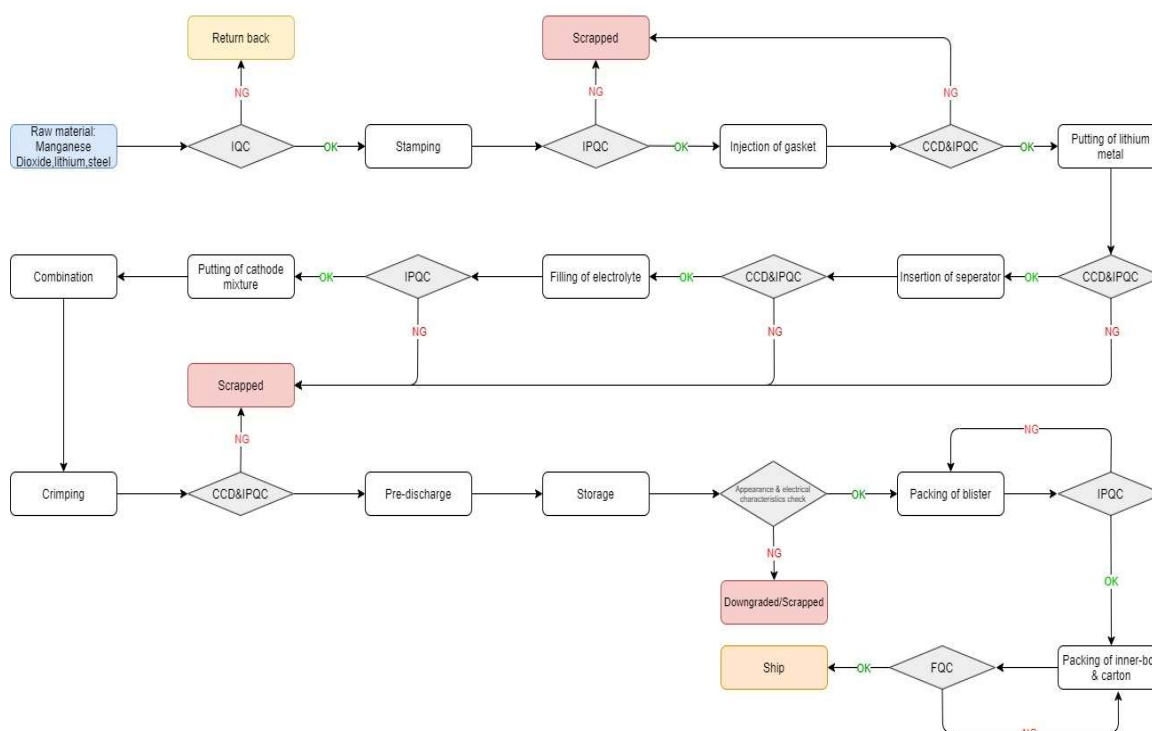
Composition:

Ingredient	Molecular formula	CAS NO.	Weigh
Iron	Fe	7439-89-6	71.812%
Manganese Dioxide	MnO ₂	1313-13-9	18.246%
Perchloric Acid, Lithium Salt	LiClO ₄	7791/3/9	2.053%
Polypropylene	(C ₃ H ₆) _x	9003-07-0	1.930%
Propylene Carbonate	C ₄ H ₆ O ₃	108-32-7	1.550%
Lithium	Li	7439-93-2	1.228%
Graphite	C ₂₄ X ₁₂	7782-42-5	2.234%
Polytetrafluoroethylene	(C ₂ F ₄) _n	9002-84-0	0.175%
Ethylene Glycol Dimethyl Ether	C ₄ H ₁₀ O ₂	110-71-4	0.772%

No intentionally mercury, cadmium, and lead added.

Manufacturing process flow chart:

Manufacturing Flow Process Diagram of Lithium Metal Button Cell



3) Label's speciment

A. Battery Marking



B. Immediate packing label

Product: Li-MnO ₂ Button Cell	Spec: CR2016 75mAh 0.225Wh
Qty: 12000pcs	Code: 3.1.2016.XX-XX
Manufacturer date: 2026-XX-XX	Weight: approx. 1.8g/pcs
No mercury & cadmium & lead added No rechargeable	
Manufacturer: DongGuan Tianqiu Enterprise Co., Ltd.	
Address: TianQiu Industrial Park, Xinji Industrial Zone, Machong Town, Dongguan GuangDong, P.R.China	
Importer: XXXX	
Address: XXXX	
 BATTERY WARNING KEEP OUT OF REACH OF CHILDREN Swallowing can lead to chemical burns, perforation of soft tissue, and death. Severe burns can occur within 2 hours of ingestion. Seek medical attention immediately.    	

Requirement	Check Result
General information on batteries	
- information identifying the manufacturer in accordance with Article 38(7)	OK
- the battery category and information identifying the battery in accordance with Article 38(6)	OK
- the place of manufacture (geographical location of a battery manufacturing plant)	OK
- the date of manufacture (month and year)	OK
- the chemistry	OK
- the hazardous substances present in the battery, other than mercury, cadmium or lead	OK
Symbol for separate collection of batteries	
- all batteries shall be marked with the symbol for separate collection of batteries ('separate collection symbol') as shown in Part B of Annex VI. 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. 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.	OK
CE Marking	
- The CE marking shall be affixed visibly, legibly and indelibly to the battery. Where that is not possible or not warranted due to the nature of the battery, it shall be affixed to the packaging and to the documents accompanying the battery. - The CE marking must consist of the initials "CE", both letters should have the same vertical dimension and be no smaller than 5mm (unless specified differently in the relevant product requirements).	OK

(4) Document

Standard Name / Common Specification Name	Test Report No.	Check Result
EU Battery Directive (EU) 2006/66/EC and amendment 2013/56/EU	SGS: CANEC26000573203	OK
EU Battery Regulation (EU) 2023/1542 Annex I		
EU REACH Regulation (EU) 1907/2006 - Annex XVII	SGS: CANEC26000595601	OK
EU REACH Regulation (EU) 1907/2006	SGS: CANEC26000595603	OK
IEC 60086-1 Primary batteries – Part 1: General (Performance and durability requirements)	IEC60086-1&-2 BAT2312WDG0247-R2	OK
IEC 60086-2 Primary batteries – Part 2: Physical and Electrical Specification (Performance and durability requirements)	IEC60086-1&-2 BAT2312WDG0247-R2	OK
IEC 60086-4 Primary batteries -Part 4: Safety of lithium batteries (Safety Parameters)	IEC60086-4 BAT2312WDG0247-2-R2	OK

(5) Additional Information

None.