

### UN38.3 Test summary for lithium cells

Based on UN38.3 test report S03A21080121U01001 and UN38.3 test summary S03A21080121Z01001

<b>1. Name and description of cell</b>	
Li-MnO <sub>2</sub> Button Cell, CR2032, 3.0V, 240mAh, 0.72Wh	

<b>2. Manufacturer of cell</b>	
Name	MediaRange GmbH
Adress	Zum Quellenpark 29, 65812 Bad Soden a.Ts., Deutschland
Phone	+49 6196 523 81 80
E-Mail	kontakt@mediarange.de
Website	www.mediarange.de

<b>3. Test laboratory of cell</b>	
Name	Guangdong ESTL Technology Co., Ltd.
Adress	Room 101,201-208, Unit 1, Building 1, No. 9 Headquarters 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China
Phone	+86 769 850 75 888
E-Mail	gdestl@gdestl.com
Website	http://www.gdestl.com

<b>4. ID-number and date</b>			
Unique test report identification number	S03A21080121U01001	Date of test report	30.08.2021

#### Description of cell

<b>5. Type of cell</b>	
Lithium ion cell	
Lithium metal cell	<b>X</b>

<b>6. Parameters</b>	
Mass in gram (g):	2.83
Lithium ion: Watt-hour rating (Wh):	
Lithium metal: Lithium metal content in gram (g):	0.072

<b>7. Physical description of cell</b>	
Lithium metal cell, button cell (round), silver	

<b>8. Model numbers</b>	
Li-MnO <sub>2</sub> Button Cell, CR2032 / MRBAT132	

## Tests and results

9. List of tests conducted and results	passed	failed	n/a
T1 - Altitude simulation	X		
T2 - Thermal Test	X		
T3 - Vibration	X		
T4 - Shock	X		
T5 - External Short Circuit	X		
T6 - Impact			X
T6 - Crush	X		
T7 - Overcharge			X
T8 - Forced Discharge	X		

10. Reference to the revised edition of the Manual of Tests and Criteria used and to amendments thereto
The sample has passed the test items of UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7, 38.3

## Additional supplier inquiry

11. Quality management system for manufacturing cells	yes	no
Manufactured cells/batteries are based on a documented quality management system according to transport regulations	X	

12. Exceeded parameters	yes	no
Lithium ion cell: more than 20 Wh Lithium metal cell: more than 1 g Lithium		X

13. Only in air transport of Lithium ion cells and lithium polymer cells: State of Charge (SoC) for UN 3480	yes	no	n/a
State of Charge (SoC) max. 30 %			X

14. Cells installed in equipment	yes	no	n/a
17.a) Only button cells enclosed?			X
17.b) Number of enclosed cells (other than button cells) per equipment			
17.c) Confirmation that no dangerous amount of heat is emitted from the equipment			X
17.d) Confirmation that the equipment when transported by air fulfills the defined air transport standards for electromagnetic radiation according to DO-160			X



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