

# UN 38.3 Test Summary Report

Lithium Cell or Battery Test Summary in Accordance with Section 2.9.4 UN Model Regulations and Sub-section 38.3 of the UN Manual of Tests and Criteria, Part III, subsection 38.3.5

[a]  Cell  Battery  Product  
 **Tested Type Part #:** 4409280113  
 **Same Type Part #:**

[b] **Manufacturer**  
 Saft Connected Energy Division  
 Friemann & Wolf Batterietechnik GmbH  
 Industriestr. 22  
 63654 Büdingen, Germany  
 T. +49 (0) 6042 954 150  
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<https://www.saftbatteries.com/>

[d] Unique report ID: UB643/07

[e] Report date: 2007.10.19

[c] **Test Laboratory**  
 Saft Connected Energy Division  
 Friemann & Wolf Batterietechnik GmbH  
 Industriestr. 22  
 63654 Büdingen, Germany  
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[f] (i)  Li-ion  Li-metal

(iv) **Description: BPU 7000-Batterie**

NSN: 6135-12-333-3641

TKZ: 52.5105.903.00

Part No.: 4409280113

Approved acc. to: VG 96915-2

Primary (non-rechargeable) lithium-manganese dioxide (Li-MnO<sub>2</sub>) battery assembled from 12 (twelve) "D" sized M20HR cells connected in 6S2P configuration in a metal housing

(ii) Mass: 2400 g

(iii)  Watt hour rating or  Lithium content: 43.2 g

(v)  Cell  Battery  Product. Model number/Part number: 4409280113

[g] List of Tests Conducted	Result (Pass / Fail / N.A.)	Test record reference
38.3.4.1 T.1: Altitude simulation	Pass	UB643/07, page 3
38.3.4.2 T.2: Thermal test	Pass	UB643/07, page 4
38.3.4.3 T.3: Vibration	Pass	UB643/07, page 5
38.3.4.4 T.4: Shock	Pass	UB643/07, page 7
38.3.4.5 T.5: External short circuit	Pass	UB643/07, page 8
38.3.4.6 T.6: Impact/Crush (cell only test)	Pass	UB643/07, page 8
38.3.4.7 T.7: Overcharge (N.A for Li-metal only)	N.A.	N.A.
38.3.4.8 T.8: Forced discharge (cell only test)	Pass	UB643/07, page 10

[h] Battery assembly:  Not Applicable.  UN38.3.3 (f)  UN38.3.3 (g)

[i] Test Reference: UN Manual of Tests and Criteria, Part III, sub-section 38.3, 4<sup>th</sup> revised edition, Amendment 1

Friemann & Wolf Batterietechnik GmbH is certified according to ISO 9001 and thereby manufactures all cells and batteries under a quality management system as required by IATA, ADR, RID and IMDG transport rules.

[j] Signatory A.

Name: Dr. Torsten Oekermann

Title: Product Engineering Manager

Signature.



[j] Signatory B.

Name: Olaf G. Lichtlein

Title: Managing Director

Signature.

**Important!** The above signatory / signatories affirm that this document is a true and correct summary of the original individual tests and test data. The original test data is confidential information available to competent State Authorities with valid identification and only upon their formal request. Disclosure of the original test data to any other entity upon its request will be considered by Saft and, should Saft consider this request is with merit, may be subject to the prior execution of a nondisclosure agreement.