

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] <input checked="" type="checkbox"/> Cell <input type="checkbox"/> Battery <input type="checkbox"/> Product <input checked="" type="checkbox"/> Tested Type Part #: 4176080205 <input checked="" type="checkbox"/> Same Type Part #: 4142080033	[d] Unique report ID: UB641/06
[b] Manufacturer Saft Civil Electronics Division Friemann & Wolf Batterietechnik GmbH Industriestr. 22 63654 Büdingen, Germany T. +49 (0) 6042 954 150 info@friemann-wolf.de https://friemann-wolf.de/ https://www.saftbatteries.com/	[e] Report date: 2006.01.31
	[c] Test Laboratory Saft Civil Electronics Division Friemann & Wolf Batterietechnik GmbH Industriestr. 22 63654 Büdingen, Germany T. +49 (0) 6042 954 150 info@friemann-wolf.de https://friemann-wolf.de/ https://www.saftbatteries.com/

Same Type Part Numbers # (all): 4142080033, 4142080034, 4142080037, 4142080038, 4142080039, 4142080044, 4142080047, 4142080203, 4142080403, 4142080503, 4142080703, 4142087103, 4142180203, 4142180403, 4142180703, 4142187103, 4142280045, 4142280203, 4142280403, 4142280703, 4142287103, 4143080105, 4143080205, 4144085205, 4145080034, 4145080044, 4172080403, 4174080205

[f] (i) Li-ion Li-metal

(iv) **Description:** Primary (non-rechargeable) "D" sized lithium-manganese dioxide (Li-MnO₂) cell with stainless steel housing and side vent, type **M20** including all variants (except M20 CV) and contact layouts

(ii) Mass: 120 g

(iii) Watt hour rating or Lithium content: 3.60 g

(v) Cell Battery Product. Model number/Part number: 4176080205

[g] List of Tests Conducted	Result (Pass / Fail / N.A.)	Test record reference
38.3.4.1 T.1: Altitude simulation	Pass	UB641/06, page 2
38.3.4.2 T.2: Thermal test	Pass	UB641/06, page 4
38.3.4.3 T.3: Vibration	Pass	UB641/06, page 6
38.3.4.4 T.4: Shock	Pass	UB641/06, page 7
38.3.4.5 T.5: External short circuit	Pass	UB641/06, page 8
38.3.4.6 T.6: Impact/Crush (cell only test)	Pass	UB641/06, page 9
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	UB641/06, 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, 4th revised edition

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. Date: 2020.05.11
 Name: Dr. Torsten Oekermann
 Title: Product Engineering Manager
 Signature:



[j] Signatory B. Date: 2020.05.11
 Name: Dieter Lerch
 Title: General Manager
 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.