

DYNAMIS Batterien GmbH Brühlstr. 15 78465 Dettingen/KN

Proceq SA
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Registergericht Amtsgericht
Freiburg im Breisgau
HRB 702395
Geschäftsführer: Adrian von Allmen

un_016_29

Dettingen, 20.04.2016

Test certificate

Used norm: UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6
Section 38.3 "Lithium metal - und Lithium Ion-battery"

Tested battery: Lithium Ion battery rechargeable
3,6Volt 14,1Ah (50,76Wh)
battery circuit: *Panasonic NCA103450 1S6P*
with protection circuit module


Part No. Battery Pack: 327 01 033


Manufacturer: Proceq SA
Swiss

Used chapter of the norm: T.1 to T.5 and T.7

Test operated in the test labor of the Dynamis Batterien GmbH. Started in week 8 and finished in week 14 2016.

Result: All test sample meet this requirement according
UN Manual of Tests and Criteria Section 38.3


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TESTLABOR
(Labor management)



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Test	Test abstract	Requirement	Result
T.1 Altitude simulation	Pressure of 11.6 kPa or less, 6h at ambient temperature $20^{\circ}\text{C} \pm 5^{\circ}\text{C}$.	No leakage, no venting, no disassembly, no rupture and no fire, OCV 90%.	Passed
T.2 Thermal test	10 times: ([6h at $75 \pm 2^{\circ}\text{C}$] & [6h at $-40 \pm 2^{\circ}\text{C}$])	No leakage, no venting, no disassembly, no rupture and no fire, OCV 90%.	Passed
T.3 Vibration	12 times: (7Hz to 200 Hz to 7Hz) In 15min, in x-/y-/z-direction 8g acceleration	No leakage, no venting, no disassembly, no rupture and no fire, OCV 90%.	Passed
T.4 Shock	3 x 150g-shock in x-/y-/z-direction pos. & neg. direction	No leakage, no venting, no disassembly, no rupture and no fire, OCV 90%.	Passed
T.5 External short circuit	Test sample heated 6h @ 57°C short circuit @ 20°C with external resistance ($< 0,1\text{Ohm}$) 1h after external case temperature. returned to 57°C	External temperature $< 170^{\circ}\text{C}$, no disassembly, no rupture and no fire during the test and 6h after.	Passed
T.6 Impact/Crush	--		
T.7 Overcharge	Overcharge with 19A @ $8,4V_{\text{max}}$, 24h	No disassembly, no fire during the test and within 7d after	Passed
T.8 Forced discharge	--		

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