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KANNAD ELTs

MATERIAL SAFETY DATA SHEET

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RECORD OF REVISIONS

Rev.	Date	Description of modification
A	05/10/2016	First Issue
B	27/01/2020	Change of logo Replacement of the supplier statements in Section 8
C	08/04/2020	Change of title of document to Material Safety Data Sheet Modification in 16 sections Add of BAT350

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MATERIAL SAFETY DATA SHEET

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MATERIAL SAFETY DATA SHEET
1. LIST OF BATTERY PACKS
1.1. List of Battery Packs

Designation	Battery Pack P/N	Qty of cells per Battery Pack	Cells Reference	Lithium content for each product	Net Quantity
BAT200	0141823	2	SAFT M20 LIMNO2 4142080403	7 g	0.250 kg
BAT300	S1820506-01	3	SAFT M20 SVKBW/+T4172080403	10.5 g	0.350 kg
BAT500	S1819506-01	3	SAFT M20 SVKBW/+T 4172080403	11.6 g	0.500 kg
		2	DURACELL DL123		
BAT350	0144033	3	SAFT LO26SXC	8,1 g	0.260 kg

1.2. List of ELTs

Designation	Part Number	Battery Pack Designation	Battery P/N included	Lithium content for each product	Net Quantity
KANNAD 406 ATP	S1819502-02	BAT500	S1819506-01	11.6 g	0.500 kg
KANNAD 406 AP	S1820502-02	BAT300	S1820506-01	10.5 g	0.350 kg
KANNAD 406 AP-H	S1820502-04	BAT300	S1820506-01	10.5 g	0.350 kg
KANNAD 406 AF	S1821502-02	BAT300	S1820506-01	10.5 g	0.350 kg
KANNAD 406 AF-H	S1822502-02	BAT300	S1820506-01	10.5 g	0.350 kg
KANNAD 406 AS TNC	S1823502-03	BAT300	S1820506-01	10.5 g	0.350 kg
KANNAD 406 SURVIVAL	S1823502-05	BAT300	S1820506-01	10.5 g	0.350 kg
KANNAD 406 AF COMPACT	S1840501-01	BAT200	0141823	7 g	0.250 kg
AP INTEGRA (ER)	S1850501-01	BAT200	0141823	7 g	0.250 kg
AF INTEGRA (ER)	S1851501-01	BAT200	0141823	7 g	0.250 kg
AF-H INTEGRA (ER)	S1852501-01	BAT200	0141823	7 g	0.250 kg
AP-H INTEGRA (ER)	S1854501-01	BAT200	0141823	7 g	0.250 kg
AP INTEGRA	S1850501-02	BAT200	0141823	7 g	0.250 kg
AF INTEGRA	S1851501-02	BAT200	0141823	7 g	0.250 kg
AF-H INTEGRA	S1852501-02	BAT200	0141823	7 g	0.250 kg
AP-H INTEGRA	S1854501-02	BAT200	0141823	7 g	0.250 kg
AP INTEGRA (ER-N)	S1850501-03	BAT200	0141823	7 g	0.250 kg
AF INTEGRA (ER-N)	S1851501-03	BAT200	0141823	7 g	0.250 kg
AF-H INTEGRA (ER-N)	S1852501-03	BAT200	0141823	7 g	0.250 kg
KANNAD 406 AF-H (HT)	S1822504-01	BAT350	0144033	8,1 g	0.260 kg

MATERIAL SAFETY DATA SHEET
1.3. List of Battery Kits

Designation	Part Number	Battery Pack Designation	Battery P/N included	Lithium content for each product	Net Quantity
KIT BAT200	S1840510-01	BAT200	0141823	7 g	0.250 kg
KIT BAT300	S1820516-99	BAT300	S1820506-01	10.5 g	0.350 kg
KIT BAT500	S1819516-99	BAT500	S1819506-01	11.6 g	0.500 kg
KIT BAT350	S1822505-01	BAT350	0144033	8,1 g	0.260 kg

2. COMPOSITION, INFORMATION OR INGREDIENTS
2.1. Products

Products are ELT beacons powered by Lithium Batteries. Sealed inside the product, the battery pack contains either 3 Lithium Manganese dioxide primary cells (for BAT500, BAT300) or 3 Lithium-Sulfur Dioxide primary cells (for BAT350) or 2 Lithium Manganese dioxide primary cells (for BAT200). Each pack has its own heat-shrink sleeve polyester, and incorporates electrical short-circuit protection.

The batteries in this product have a limited service life: see label for expiry date

The product contains no user-serviceable parts.

The product should only be disassembled by qualified service personnel.

DO NOT ATTEMPT TO RECHARGE THE BATTERIES.

2.2. At Cell Level

For Lithium Manganese dioxide primary cell :

<u>Component</u>	<u>CAS Number</u>	<u>EINECS/ELINCS</u>	<u>Content (wt. %)*</u>
Lithium	7439-93-2	231-102-5	3-4
Manganese dioxide	1313-13-9	215-202-6	40-50
Organic electrolyte**	N/A	N/A	15-25
Carbon	1338-86-4		1-5
Copper	7440-50-8	231-159-6	1-15
Aluminium	7429-90-5	231-072-3	1-20
Stainless steel, Nickel, inert material	N/A	N/A	remainder

* Quantities vary with cell type

** Contains 1,2-Dimethoxyethane (CAS 110-71-4, EINECS 603-031-00-3), content < 3 % listed on REACH candidate list since June 2012

For More details, refer to SAFT Battery information sheet

MATERIAL SAFETY DATA SHEET

For Lithium-Sulfur Dioxide primary cell :

<u>Component</u>	<u>CAS Number</u>	<u>EINECS/ELINCS</u>	<u>Content (wt. %)*</u>
Lithium metal	7439-93-2	231-102-5	<3
Sulfur Dioxide	7446-09-5	231-195-2	< 30
Acetonitrile	75-05-8	200-835-2	< 9
Lithium Bromide	7550-35-8	231-439-8	2.0-2.5
Carbon	1333-86-4	215-609-9	6.5-7
Mild Steel, Nickel, Aluminium, and inert material	N/A	N/A	remainder

For More details, refer to SAFT Battery information sheet

2.3. At Battery Pack Level

Depending on the type of battery pack the content may vary but will not exceed the given content ranges.

Refer to the following documents in annex (see Section 17) :

- NQ-195309B - STATEMENT WILPA2059 (0141823) (BAT200)
- NQ-190705B - STATEMENT WILPA0874 (S1820506-01) (BAT300)
- NQ-190701B - STATEMENT WILPA0873 (S1820516-01) (BAT500)
- NQ-195304B -STATEMENT WILPA1469 (0144033) (BAT350)

3. HAZARD IDENTIFICATION

Not chemically dangerous with normal use in accordance with Saft recommendations as stated in the user manuals or other similar documentation. Under normal conditions of use, the electrode materials and electrolyte they contain are not released to the outside, provided that the battery integrity is maintained and seals remain intact. Exposure to the ingredients contained within or their combustion products could be harmful.

Risk of exposure only in case of abuse (mechanical, thermal, electrical) which leads to the activation of safety valves and/or the rupture of the battery containers. In particular, the battery should not be opened, burned or stored/used above the specified temperature range (for more details see Section 2). Electrolyte leakage or battery venting/explosion/fire may follow, depending upon the circumstances.

MATERIAL SAFETY DATA SHEET

3.1. Protection from charging

Whenever lithium batteries are not the single power source in a circuit, the following measures recommended by Underwriters Laboratories are relevant. The cells should not be connected with an electrical power source that would increase the load through the cells. The electronic circuit shall include one of the following:

- Two suitable diodes or the equivalent in series with the cells to prevent any reverse (charging) current. The second diode is used to provide protection in the event that one would fail. Quality control, or equivalent procedures, shall be established by the device manufacturer to check that the diode polarity is correct for each unit. Or:
- A blocking diode or the equivalent to prevent any reverse (charging) current and a resistor to limit current in case of diode failure. The resistor should be sized to limit the reverse (charging) current to the maximum value according to the data sheet of the cell.

3.2. Hazards in case of opened cells by released material:

EYE CONTACT: Can cause eye irritation. Dust may cause inflammation of eyelids.

SKIN CONTACT: Can cause skin irritation.

INHALATION: Can cause respiratory tract and mucus membrane irritation. If gas is generated during battery disassembly, throat irritation may occur.

INGESTION: Can be poisoning if swallowed.

4. FIRST AID MEASURES

EYE CONTACT:

Exposure to materials from a ruptured or otherwise damaged cell or battery may cause eye irritation.

Flush immediately with copious amounts of water for at least 15 minutes; consult a physician immediately.

SKIN CONTACT:

Exposure to materials from a ruptured or otherwise damaged cell or battery may cause skin irritation.

Flush immediately with water and wash affected area with soap and water.

INHALATION:

Avoid inhaling any vented gases.

Remove to fresh air immediately.

If breathing is difficult, seek emergency medical attention.

INGESTION:

Consult a physician or local poison control center immediately.

MATERIAL SAFETY DATA SHEET**5. FIRE FIGHTING MEASURES****Extinguishing Media :**

Copious amounts of cold water or water-based foam may be used to cool burning cells or batteries. Do not use warm or hot water.

A carbon dioxide (CO₂) extinguisher is also effective.

For fires involving exposed, raw lithium metal (characterized by deep red flames), use only metal (Class D) fire extinguishers.

Do not use Halon type extinguishing material.

Special Fire Fighting Procedures :

Use a positive pressure self-contained breathing apparatus (SCBA) if cells or batteries are involved in a fire.

Full fire fighting protective clothing is necessary.

During water application, caution is advised as burning pieces of flammable particles may be ejected from the fire.

6. ACCIDENTAL RELEASE MEASURES

In the event a cell, battery or beacon is crushed; releasing its contents, rubber gloves must be used to handle all battery components.

Avoid inhalation of any vapors that may be emitted.

Damaged batteries or beacons that are not hot or burning should be placed in a sealed plastic bag or container.

7. HANDLING AND STORAGE**Precautions for Safe Handling :**

Batteries are not designed to be recharged.

Battery pack could not be disassembled without breaking. Never disassemble a battery pack. More than a momentary short circuit will cause temporary battery voltage loss until the battery is subjected to a charge. Batteries with fuses will no longer be functional after being shorted.

Extended short-circuiting creates high temperatures in the cell.

High temperatures can cause burns in skin or cause the cell to flame.

Conditions for Safe Storage and Incompatibility :

Batteries should be separated from other materials and stored in a non-combustible, well ventilated structure with sufficient clearance between walls and battery stacks. Do not place batteries near heating equipment, nor expose to direct sunlight for long periods.

Do not store batteries above 60°C (140°F) or below -40°C (-40°F). Store batteries in a cool (below 25°C (77°F)), dry area that is subject to little temperature change. Elevated temperatures can result in reduced battery service life. Battery exposure to temperatures in excess of 130°C (266°F) will result in the battery venting flammable liquid and gases.

Do not store batteries in a manner that allows terminals to short circuit.

MATERIAL SAFETY DATA SHEET

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls and Work Practices :

Under conditions of normal use, batterie packs or beacons do not emit hazardous or regulated substances.

No engineering controls are required for handling battery packs that have not been damaged.

Personal Protective Equipment :

Personal protective equipment for damaged battery pack should include chemical resistant gloves and safety glasses.

In the event of a fire, SCBA should be worn along with thermally protective outer garments.

9. PHYSICAL AND CHEMICAL PROPERTIES

The lithium-MnO₂ cell or lithium-sulfur dioxide cell or batteries described by this Material Safety Data Sheet are sealed units when offered for sale. They are manufactured "articles" and do not expose the user to hazardous chemicals when used in accordance with manufacturer specifications.

10. STATIBILITY AND REACTIVITY

Stability :	Stable
Hazardous Polymerization:	Will Not Occur
Conditions to Avoid:	Prolonged overcharging and/or overheating. It is not recommended that this product be stored above 60°C (140°F).
Hazardous Decomposition:	Carbon Monoxide (CO), and Hydrogen Fluoride (HF)
Reactivity:	Damaged non-discharged batteries contain elemental Lithium that is water reactive. This reaction gives off heat and hydrogen gas

11. TOXICOLOGICAL INFORMATION

No toxicological impacts are expected under normal use conditions.

The electrolytes contained in these battery packs can irritate eyes with any contact.

Prolonged contact of electrolytes with lung tissue, skin or mucous membranes may cause irritation.

Detailed information regarding sensitization, carcinogenicity, mutagenicity or reproductive toxicity related to internal cell or battery packs has not been included in this document.

12. ECOLOGICAL INFORMATION

No ecological impacts expected under normal use conditions.

Information on the ecological impact of internal battery pack components has not been included in this document.

MATERIAL SAFETY DATA SHEET**13. DISPOSAL CONSIDERATION**

Do not dispose in fire. Battery pack disposal regulations vary on national, state/provincial and local bases.

Disposal must be conducted in accordance with the applicable regulations.

These battery packs contain recyclable materials and recycling is encouraged over disposal.

14. TRANSPORTATION INFORMATION**14.1. For ELTS only**

Class:	9
UN Number:	UN3091
IATA packing instruction for air:	970 Section I
Packing instruction for road and sea:	P903
Proper shipping Name:	Lithium metal batteries contained in equipment
Packin Group:	II

14.2. For Battery Kits

Class:	9
UN Number:	UN3090
IATA packing instruction for air:	968 Section IA
Packing instruction for road and sea:	P903
Proper shipping Name:	Lithium metal batteries
Packin Group:	II

15. DISPOSAL INFORMATION

DO NOT INCINERATE

DO NOT DISCARD IN DOMESTIC WASTE

At the end of the product's useful life, it is vital that the battery packs be disconnected from the main unit to prevent false alarms. False alarms cause expensive disruption to Search and Rescue services and may endanger lives as a consequence.

Instructions on battery removal can be found in the End of Life Statement in the product User manual. This Operation should only be performed by qualified service personnel.

This product should be disposed of in a sensible and considerate manner, and in accordance with local regulations. Take it to a civil recycling facility, or contact Orolia for advice.

16. OTHER INFORMATION

16.1. GREEN PASSPORT: SHIP RECYCLING INFORMATION

Orolia SAS hereby declares potentially hazardous content in some of its electronic products.

Small amounts of the following substances may be present: Beryllium oxide, lithium, lead, brominated flame retardants.


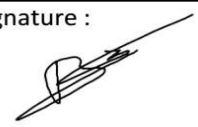
In keeping with European directive 2002/96/EC (Waste Electronic and Electrical Equipment), Orolia strongly recommends that its products, including any battery packs, be disposed of in a consideral and legal manner. Additional information, concerning the disposal of equipment can also be found in the relevant equipment User Manual.

**17. APPENDIX – UN 38.3 Test Summary Report from Williamson
Electronique**

UN 38.3 TEST SUMMARY REPORT	
<input type="checkbox"/> Cell <input checked="" type="checkbox"/> Battery <input type="checkbox"/> Product Tested type part : WILPA2059E (0141823E) Same type part : WILPA2059F, WILPA2059F1 (0141823J)	Unique report ID : 2.M20 CC SG Report date : 2015/08/14
Manufacturer : Williamson Electronique Pôle industriel d'innovation Jules Verne 8 rue du Moulin Cassé, BP 61211 44340 Bouguenais Cedex - France T. +33 (0) 2.40.18.80.00 https://www.williamson-electronique.fr	Test laboratory : Friemann & Wolf Batterietechnik GmbH Industriestrasse 22 63654 Büdingen - Germany T. +49 (0) 6042 954 150 info@friemann-wolf.de https://friemann-wolf.de/

<input type="checkbox"/> Li-ion battery (rechargeable) <input checked="" type="checkbox"/> Li-metal battery (primary)
Description : Primary non-rechargeable Lithium battery, assembled from two D-sized cells in series with PTC in common shrink sleeve Battery weight : 245 g <input type="checkbox"/> Nominal Energy : Watt-hour or <input type="checkbox"/> Lithium content : 7.0 g <input type="checkbox"/> Cell <input checked="" type="checkbox"/> Battery <input type="checkbox"/> Product. Model number/part number : 2s1p M20

List of tests conducted	Results (Pass / Fail / N.A.)	Test record reference
T1 : Altitude simulation	PASS	2.M20_WILPA2059E
T2 : Thermal test	PASS	2.M20_WILPA2059E
T3 : Vibration	PASS	2.M20_WILPA2059E
T4 : Shock	PASS	2.M20_WILPA2059E
T5 : External short circuit	PASS	2.M20_WILPA2059E
T6 : Impacted/crush (cell only test)	N.A	
T7 : Overcharge (N.A for Li-metal only)	N.A	
T8 : Forced discharge (cell only test)	N.A	
Battery assembly : <input checked="" type="checkbox"/> Not applicable. <input type="checkbox"/> UN38.3.3 (f) <input type="checkbox"/> UN38.3.3 (g)		
Test reference : UN manual of tests and criteria, part III sub-section 38.3. 5 th revised edition Amend. 1 & 2		



PRODUCT CLASSIFICATION FOR TRANSPORT (According to UN-DGP)	
UN Classification / Proper shipping name : UN3090 / Lithium metal batteries	
Signatory A. Date : 2020.01.07 Name : Cécile Burlot Title : Quality Manager Signature : 	Signatory B. Date : 2020.01.07 Name : Thierry Bouessay Title : Technical 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 Williamson Electronique and, should Williamson Electronique consider this request is with merit, may subject to prior execution of a nondisclosure agreement.

UN 38.3 TEST SUMMARY REPORT	
<input type="checkbox"/> Cell <input checked="" type="checkbox"/> Battery <input type="checkbox"/> Product Tested type part : 4432280000 Same type part : WILPA0874B, WILPA0874B1, WILPA0874C1, WILPA0874D & WILPA0874D1 (S1820506-01C), WILPA0874E, WILPA0874F & WILPA0874F1 (S1820506-01D), WILPA0874G & WILPA0874G1 (S1820506-01E)	Unique report ID : 3M20.1218 Report date : 2018.12.10
Manufacturer : Williamson Electronique 6 rue Georges Leclanché, BP 18414 44984 Sainte Luce sur Loire T. +33 (0) 2.40.18.80.00 https://www.williamson-electronique.fr	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

<input type="checkbox"/> Li-ion battery (rechargeable) <input checked="" type="checkbox"/> Li-metal battery (primary)
Description : Primary (non-rechargeable) lithium-manganese dioxide (Li-MnO ₂) battery assembled from 3(three) "D" sized M20 cells in a shrink sleeve Battery weight : 350 g <input type="checkbox"/> Nominal Energy : Watt-hour or <input checked="" type="checkbox"/> Lithium content : 10.5 g <input type="checkbox"/> Cell <input checked="" type="checkbox"/> Battery <input type="checkbox"/> Product. Model number/part number : 3s1p M20

List of tests conducted	Results (Pass / Fail / N.A.)	Test record reference
T1 : Altitude simulation	PASS	UB624/03
T2 : Thermal test	PASS	UB624/03
T3 : Vibration	PASS	UB624/03
T4 : Shock	PASS	UB624/03
T5 : External short circuit	PASS	UB624/03
T6 : Impacted/crush (cell only test)	PASS	UB641/06, UB647/11
T7 : Overcharge (N.A for Li-metal only)	N.A	N.A
T8 : Forced discharge (cell only test)	PASS	UB641/06, UB647/11
Battery assembly : <input checked="" type="checkbox"/> Not applicable. <input type="checkbox"/> UN38.3.3 (f) <input type="checkbox"/> UN38.3.3 (g)		
Test reference : UN manual of tests and criteria, part III sub-section 38.3. 6th revised edition Amend.1, 2017		


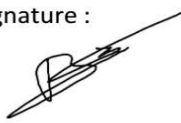
PRODUCT CLASSIFICATION FOR TRANSPORT (According to UN-DGP)	
UN Classification / Proper shipping name : UN3090 / Lithium metal batteries	
Signatory A. Date : 02/14/2019 Name : Cécile Burlot Title : Quality Manager Signature : 	Signatory B. Date : 02/14/2019 Name : Thierry Bouessay Title : Technical Director 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 Williamson Electronique and, should Williamson Electronique consider this request is with merit, may subject to prior execution of a nondisclosure agreement.

UN 38.3 TEST SUMMARY REPORT	
<input type="checkbox"/> Cell <input checked="" type="checkbox"/> Battery <input type="checkbox"/> Product Tested type part : WILPA0873 Same type part : WILPA0873E (S1819506-01D)	Unique report ID : 1-0029/15-01-02-A Report date : 10/06/2015
Manufacturer : Williamson Electronique 6 rue Georges Leclanché, BP 18414 44984 Sainte Luce sur Loire T. +33 (0) 2.40.18.80.00 https://www.williamson-electronique.fr	Test laboratory : CETECOM ICT Services Gmbh Untertuerkheimer Stasse 6-10 66117 Saarbruecken / Germany T. +48 681 5 98 - 0 http://www.cetecom.com

<input type="checkbox"/> Li-ion battery (rechargeable) <input checked="" type="checkbox"/> Li-metal battery (primary)
Description : Assembled from 2 batteries, one of three M20 cells in serie and the other of two DL123 cells in parallel Battery weight : 410 g
<input type="checkbox"/> Nominal Energy : Watt-hour or <input checked="" type="checkbox"/> Lithium content : 11.6 g
<input type="checkbox"/> Cell <input checked="" type="checkbox"/> Battery <input type="checkbox"/> Product. Model number/part number : 3s1p M20/ 1s2p DL123 - WILPA0873E

List of tests conducted	Results (Pass / Fail / N.A.)	Test record reference
T1 : Altitude simulation	PASS	1-0029/15-01-02-A
T2 : Thermal test	PASS	1-0029/15-01-02-A
T3 : Vibration	PASS	1-0029/15-01-02-A
T4 : Shock	PASS	1-0029/15-01-02-A
T5 : External short circuit	PASS	1-0029/15-01-02-A
T6 : Impacted/crush (cell only test)	N.A	
T7 : Overcharge (N.A for Li-metal only)	N.A	
T8 : Forced discharge (cell only test)	N.A	
Battery assembly : <input checked="" type="checkbox"/> Not applicable. <input type="checkbox"/> UN38.3.3 (f) <input type="checkbox"/> UN38.3.3 (g)		
Test reference : UN manual of tests and criteria, part III sub-section 38.3. 5th revised edition Amendment 2		



PRODUCT CLASSIFICATION FOR TRANSPORT (According to UN-DGP)	
UN Classification / Proper shipping name : UN3090 / Lithium metal batteries	
Signatory A. Date : 02/11/2019 Name : Cécile Burlot Title : Quality Manager Signature : 	Signatory B. Date : 02/11/2019 Name : Thierry Bouessay Title : Technical 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 Williamson Electronique and, should Williamson Electronique consider this request is with merit, may subject to prior execution of a nondisclosure agreement.

UN 38.3 TEST SUMMARY REPORT	
<input type="checkbox"/> Cell <input checked="" type="checkbox"/> Battery <input type="checkbox"/> Product Tested type part : WILPA1469 Same type part : WILPA1469A, WILPA1469B (0144033D)	Unique report ID : NQ-195304B Report date : 2019/12/30
Manufacturer : Williamson Electronique Pôle industriel d'innovation Jules Verne 8 rue du Moulin Cassé, BP 61211 44340 Bouguenais Cedex - France T. +33 (0) 2.40.18.80.00 https://www.williamson-electronique.fr	Test laboratory : Saft civil electronics division, Saft SAS Rue Georges Leclanché, BP 1039 86000 Poitiers - France T. +33 (0) 5.49.55.48.48 Litiumsales.fr@saftbatteries.com https://www.saftbatteries.com

<input type="checkbox"/> Li-ion battery (rechargeable) <input checked="" type="checkbox"/> Li-metal battery (primary)
Description : Non rechargeable lithium battery pack, assembled from three LO26SXC cells in series Battery weight : 280 g <input type="checkbox"/> Nominal Energy : Watt-hour or <input checked="" type="checkbox"/> Lithium content : 8.1 g <input type="checkbox"/> Cell <input checked="" type="checkbox"/> Battery <input type="checkbox"/> Product. Model number/part number : 3S1P LO26SXC

List of tests conducted	Results (Pass / Fail / N.A.)	Test record reference
T1 : Altitude simulation	PASS	T0027-16
T2 : Thermal test	PASS	T0027-16
T3 : Vibration	PASS	T0027-16
T4 : Shock	PASS	T0027-16
T5 : External short circuit	PASS	T0027-16
T6 : Impacted/crush (cell only test)	N.A	
T7 : Overcharge (N.A for Li-metal only)	N.A	
T8 : Forced discharge (cell only test)	N.A	
Battery assembly : <input checked="" type="checkbox"/> Not applicable. <input type="checkbox"/> UN38.3.3 (f) <input type="checkbox"/> UN38.3.3 (g)		
Test reference : UN manual of tests and criteria, part III sub-section 38.3. 5 th revised edition Amend. 1		

PRODUCT CLASSIFICATION FOR TRANSPORT (According to UN-DGP)	
UN Classification / Proper shipping name : UN3090 / Lithium metal batteries	
Signatory A. Date : 2020.01.07 Name : Cécile Burlot Title : Quality Manager Signature : 	Signatory B. Date : 2020.01.07 Name : Thierry Bouessay Title : Technical 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 Williamson Electronique and, should Williamson Electronique consider this request is with merit, may subject to prior execution of a nondisclosure agreement.