

## *PRODUCT SAFETY DATA SHEET*

Lithium ion battery pack used in smoov O10

10INR19/66-2

Item No. 1592875

### 1. Product and Company Identification

Identification:	Product category	Lithium Ion battery pack
	Model name	O10 10S2P US18650VTC6
	Nominal voltage	36 Vdc
	Nominal capacity	6 Ah
	Rechargeable	Yes
	Nominal energy	216 Wh
	Chemical system	Lithium Nickel Cobalt Oxide
Manufacturer:	Name and address	Alber GmbH Vor dem Weißen Stein 14 72461 Albstadt
	Emergency hotline (GBK)	+1 352 323 3500
	Phone	+49 (0) 7432 / 2006-0
	Telefax	+49 (0) 7432 / 2006-299
	E-mail	<a href="mailto:info@alber.de">info@alber.de</a>

## 2. Hazard Identification

Classification:	In general lithium ion rechargeable batteries are classified as dangerous good class 9 according UN 3480. UN 3481 is be used for transport with or in equipment.
Hazard:	It may cause heat generation or electrolyte leakage if battery terminals get in contact with other metals. Electrolyte is flammable. In case of electrolyte leakage, move the battery from fire immediately.
Toxicity:	Vapor generated from burning batteries, may irritate eyes, skin and throat.

## 3. Composition and information on ingredients

The battery should not be opened or burned since the following ingredients contained within the battery that could be harmful under some circumstance if exposed or misused.  
The cell contains neither metallic lithium nor lithium alloy.

Cathode:	Lithium nickel cobalt oxide Polyvinylidene Fluoride Carbon Black	(active material) (binder) (conductive material)
Anode:	Graphite Styrene-butadiene rubber / Carboxymethyl cellulose sodium salt (binder)	(active material) (binder)
Electrolyte:	Organic Solvent Lithium Salt	(non-aqueous liquid) (binder)
Others:	Heavy metals such as Mercury, Cadmium, Lead, and Chromium are not used in the battery.	

## 4. First aid measures

*The product contains organic electrolyte. In case of electrolyte leakage from the battery, below actions are required.*

<i>Eye contact:</i>	<i>Flush the eyes with plenty of clean water for at least 15 minutes immediately, without rubbing, and call a doctor. If appropriate procedures are not taken, this may cause an eye irritation.</i>
<i>Skin contact:</i>	<i>Wash the contact areas off immediately with plenty of water and soap. If appropriate procedures are not taken, this may cause sores on the skin.</i>
<i>Inhalation:</i>	<i>Move to fresh air immediately, and call a doctor.</i>

## 5. Firefighting measures

- Use specified extinguishers (gas, foam, powder) and extinguishing system under the Fire Defense Law.
- Since corrosive gas may be produced at the time of fire extinguishing, use an air inhalator when danger is predicted.
- Use a large amount of water as a supportive measure in order to get cooling effect if needed. (Indoor/outdoor fire hydrant)
- Carry away flammable materials immediately in case of fire.
- Move batteries to a safer place immediately in case of fire.

## 6. Accidental release measures

- Wipe off with dry cloth
- Keep away from fire
- Wear safety goggles, safety gloves as needed

## 7. Precautions for Safe Handling and Use

Storage:	Store within the recommended limit of -20°C to 45°C (-4°F to 113°F), well-ventilated area. Do not expose to high temperature (60°C/140°F). Since short circuit can cause burn hazard or safety vent to open, do not store with metal jewelry, metal covered tables, or metal belt.
Handling:	Do not disassemble, remodel, or solder. Do not short + and - terminals with a metal. Do not open the battery.
Charging:	Charge within the limits of 0°C to 45°C (32°F to 113°F) temperature. Charge with specified charger designed for this battery.
Discharging:	Discharge within the limits of -20°C to 60°C (-4 °F to 140°F) temperature.
Disposal:	Dispose in accordance with applicable federal, state and local regulations.
Caution:	Fire, Explosion, and Severe Burn Hazard. Do not Crush, Disassemble, Heat Above 100°C/212°F, or Incinerate.

## 8. Exposure Controls/Personal protection (In case electrolyte is leaked from battery)

Acceptable concentration: Not specified in ACGIH.

Facilities: Provide appropriate ventilation such as local ventilation system in the storage.

Protective clothing: Gas mask for organic gases, safety goggle, safety glove.

## 9. Physical and chemical Properties

Appearance: rechargeable Lithium ion battery pack

## 10. Stability and reactivity

External short-circuit, deformation by crush, high temperature (over 100°C) exposure of a battery cause generation of heat and ignition.

During a long storage the capacity will be reduced and the lifespan of the battery will be shorter.

The plastic housing can be damaged by leaking electrolyte.

## 11. Toxicological information

Upon normal use there will be no leaking and nobody can come into contact with toxically ingredients of the battery.

## 12. Ecological information

Upon normal use there won't be any environmental pollution.

If the battery is unusable, you must recycle it.

## 13. Disposal considerations

When battery is disposed, isolate positive (+) and negative (-) terminals of the battery to avoid those terminals from touching each other. Batteries may be short-circuited when piled up or mixed with the other batteries in disorder.

Dispose in accordance with applicable federal, state and local regulations.

The battery is hazardous waste. It is not allowed to dispose it with common waste.

## 14. Transportation information

Classified as class 9 **UN 3481** in case of transportation packed in or with equipment.

Classified as class 9 **UN 3480** in case of transportation of the battery as core pack.

The battery must be protected against short circuit.

### Road and railway: ADR / RID

Packing instructions: PI 903

Transportation Category: II (3 Gefahrgutpunkte)

### Air: IATA

Packing instructions: UN 3481 PI 966 (Teil I / section 1) or UN 3480 PI 965 (Teil IA / section 1A)

### Sea: IMDG-Code

Packing instructions: PI 903

## **15. Regulatory information**

ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route

RID: Règlement concernant le transport international ferroviaire de marchandises dangereuses

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association, Dangerous Goods Regulations (DGR)

## **16. Other information**

The information and instructions in this datasheet are based on the information and instructions of the lithium ion cell manufacturers. Therefore Alber makes no warranty, either expressed or implied, with respect to this information and disclaims all liability from reliance on it.