

MATERIAL SAFETY DATA SHEET

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Rechargeable Lithium Ion Battery A25

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The information and recommendations set forth are made in good faith and believed to be accurate as of the date of preparation. Wyon AG makes no warranty, expressed or implied, with respect to this information and disclaims all liabilities from reliance on it.

1 Product Identification

Product Name: Lithium Ion Battery
Model: A25
Chemical System: Lithium Ion, rechargeable

2 Composition

- Lithium cobaltate (LiCoO₂), CAS 12190-79-3
- Graphite (C), CAS 7782-42-5
- Organic Solvent
- Lithium Salt
- Polyvinylidene difluoride (PVdF), CAS 24937-79-9

3 Physical Data

Specific Gravity (H₂O=1): LiCoO₂: 4.95
Graphite: 2.09-2.2

Melting Point : LiCoO₂ about 1130 °C

Appearance and Odour: LiCoO₂ is a black, odourless powder
C is a black, odourless powder
Organic solvent is a colorless or light yellow liquid with characteristic fruity odour.
Lithium salt is a white, crystalline and odourless powder

4 Fire and Explosion Hazard Data

Extinguishing Media: Water
Flammable Limits: Not available
Special Fire Fighting Procedure: Use Water spray, Carbon Dioxide, Dry chemical powder or appropriate foam. Use agent appropriate for surrounding materials. Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Extremely corrosive Hydrogen Fluoride gas is produced upon combustion of cell contents.

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5 Reactivity Data

Conditions to Avoid: Do not heat, crush, disassemble or overcharge.

6 Health Hazard Data

Routes of Entry (only material inside battery):	Inhalation	Yes
	Skin	Yes
	Ingestion	Yes

6.1 Health Hazards (Acute and Chronic):

These chemicals are contained in a sealed can. Risk of exposure occurs only if the battery is mechanically or electrically abused. Organic solvent has slight toxicity and can irritate skin and eyes. Lithium salt is irritating to skin, eyes and mucous membranes and contact should be avoided.

6.2 Medical Conditions Generally Aggravated by Exposure:

Any acute exposure will not generally aggravate any medical condition.

6.3 Emergency and First Aid Procedures:

In case of skin contact with contents of battery, flush immediately with water. For eye contact, flush with copious amounts of water for 15 minutes. Do not inhale leaked material. If irritation persists, get medical help.

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7 Precautions for Safe Handling and Use

7.1 Steps to be taken in Case Material is Released or Spilled:

The preferred response is to leave the area and allow the batteries to cool and the vapors to dissipate. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate in an appropriate facility.

7.2 Waste Disposal Method:

Lithium ion batteries are recyclable.

Dispose in accordance with local regulations.

Open batteries should be treated as hazardous waste. Do not incinerate or subject batteries to temperatures in excess of 100°C. Such treatment can cause cell rupture.

7.3 Precautions to be taken in Handling and Storage:

Avoid mechanical or electrical abuse.

7.4 Other Precautions:

Batteries may explode or cause burns if disassembled, crushed or exposed to fire or high temperatures. Do not short or install batteries with incorrect polarity.

8 Control Measure

- | | |
|---|--|
| • Respiratory Protection : | not necessary under conditions of normal use |
| • Ventilation: | not necessary under conditions of normal use |
| • Protective Gloves: | not necessary under conditions of normal use |
| • Eye Protection | not necessary under conditions of normal use |
| • Other Protective Clothing or Equipment: | not necessary under conditions of normal use |

9 Transportation

Lithium-Ion batteries of type A25 as produced by Wyon AG Swiss Batteries meet the requirements of tests stipulated in the recommendations of the transport of dangerous goods, UN manual of tests and criteria, part III, subsection 38.3, Fourth revised edition 2003. When in the original packaging, these batteries therefore comply with the following special provisions of international transport regulations and can be transported as **non dangerous-goods** (exempt from Class 9 shipping conditions):

DOT 49 CFR section 173.185

IATA special provision A45

ADR, special provision 188

IMO/IMDG Code, special provision 188

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