

Material Safety Data Sheet

For

ROOFER TECHNOLOGY (SHENZHEN) CO., LTD.

Roofer Building, Gexia Industrial Estate, Sanlian Village, Longhua Town,

Baoan District, Shenzhen City, 518109, China.

and for their product

Section 1- Product and Company Identification

Product Identification: Li-Ion Battery Pack

Model:NLT3285

Mnufacture's Name: ROOFER TECHNOLOGY (SHENZHEN) CO., LTD.

Address: Roofer Building, Gexia Industrial Estate, Sanlian Village, Longhua Town,

Baoan District, Shenzhen City, 518109, China

Emergency Telephone No.: +86-755-33878998

Fax: +86-755-33878555

Section 2 – Composition/Information on Ingredients

Chemical characterization

Description: Mixture of the substances listed below with nonhazardous additions.

Hazardous Ingredients(Chemical Name)

	Percent of Content (%)	CAS Number
Carbon (proprietary) (C)	10-30	7440-44-0
Copper Foil (Cu)	2-10	7440-50-8
Aluminum Foil (Al)	2-10	7429-90-5
Polyvinylidene Fluoride(PVDF)	<5	24937-79-9
Electrolyte (proprietary)	10-20	N/A.
Metal Oxide (proprietary)	20-50	N/A.
Stainless steel, Nickel and inert materials	Remainder	N/A

Labeling according to EC directives.

No symbol and risk phrase are required.

Section 3 – Hazards Identification

Preparation hazards and classification	Not dangerous with normal use. The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.
Appearance, Color, and Odor	Solid object with no odor, no color.
Primary Route(s) of Exposure	These chemicals are contained in a sealed enclosure. Risk of exposure occurs only if the cell is mechanically, thermally or electrically abused to the point of compromising the enclosure. If this occurs, exposure to the electrolyte solution contained within can occur by Inhalation, Ingestion, Eye contact and Skin contact
Potential Health Effects:	<p>ACUTE (short term): see Section 8 for exposure controls In the event that this battery has been ruptured, the electrolyte solution contained within the battery would be corrosive and can cause burns.</p> <p>Inhalation: Inhalation of materials from a sealed battery is not an expected route of exposure. Vapors or mists from a ruptured battery may cause respiratory irritation.</p> <p>Ingestion: Swallowing of materials from a sealed battery is not an expected route of exposure. Swallowing the contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.</p> <p>Skin: Contact between the battery and skin will not cause any harm. Skin contact with contents of an open battery can cause severe irritation or burns to the skin.</p> <p>Eye: Contact between the battery and the eye will not cause any harm. Eye contact with contents of an open battery can cause severe irritation or burns to the eye.</p> <p>CHRONIC (long term): see Section 11 for additional toxicological data</p>
Medical Conditions Aggravated by Exposure	Not applicable
Reported as carcinogen	Not applicable

Section 4 – First-aid Measures

Inhalation	If contents of an opened battery are inhaled, remove source of contamination or move victim to fresh air. Obtain medical advice.
Eye contact	If eye contact with contents of an open battery occurs, immediately flush the contaminated eye(s) with lukewarm, gently flowing water for at least 30 minutes while holding the eyelids open. Neutral saline solution may be used as soon as it is available. If necessary, continue flushing during

	transport to emergency care facility. Take care not to rinse contaminated water into the unaffected eye or on face. Quickly transport victim to an emergency care facility.
Skin contact	If skin contact with contents of an open battery occurs, as quickly as possible remove contaminated clothing, shoes and leather goods. Immediately flush with lukewarm, gently flowing water for at least 30 minutes. If irritation or pain persists, seek medical attention. Completely decontaminate clothing, shoes and leather goods before reuse or discard.
Ingestion	If ingestion of contents of an open battery occurs, NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 60 to 240 mL (2-8 oz.) of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim rinse mouth with water again. Quickly transport victim to an emergency care facility.

Section 5 – Fire-fighting Measures

Flammable Properties	In the event that this battery has been ruptured, the electrolyte solution contained within the battery would be flammable. Like any sealed container, battery cells may rupture when exposed to excessive heat; this could result in the release of flammable or corrosive materials.
Suitable extinguishing Media	Use extinguishing media suitable for the materials that are burning.
Unsuitable extinguishing Media	Not available
Explosion Data	Sensitivity to Mechanical Impact: This may result in rupture in extreme cases Sensitivity to Static Discharge: Not Applicable
Specific Hazards arising from the chemical	Fires involving lithium batteries can be controlled with water. When water is used, however, hydrogen gas may evolve. In a confined space, hydrogen gas can form an explosive mixture. In this situation, smothering agents are recommended to extinguish the fire
Protective Equipment And precautions for firefighters	As for any fire, evacuate the area and fight the fire from a safe distance. Wear a pressure-demand, self-contained breathing apparatus and full protective gear. Fight fire from a protected location or a safe distance. Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.
NFPA	Health: 0 Flammability: 0 Instability: 0

Section 6 – Accidental Release Measures

Personal Precautions	Restrict access to area until completion of clean-up. Do not touch the spilled material. Wear adequate personal protective equipment as indicated in Section 8.
Environmental Precautions	Prevent material from contaminating soil and from entering sewers or waterways.
Methods for Containment	Stop the leak if safe to do so. Contain the spilled liquid with dry sand or earth. Clean up spills immediately.
Methods for Clean-up	Absorb spilled material with an inert absorbent(dry sand or earth). Scoop contaminated absorbent into an acceptable waste container. Collect all contaminated absorbent and dispose of according to directions in Section 13. Scrub the area with detergent and water; collect all contaminated wash water for proper disposal.

Section 7 – Handling and Storage

Handling	Do not open, disassemble, crush or burn battery. Ensure good ventilation/exhaustion at the workplace. Prevent formation of dust. Information about protection against explosions and fires: Keep ignition sources away- Do not smoke.
Storage	Store battery in a dry location. Keep at room temperature. Elevated temperature can result in shortened battery life. Keep out of reach of children. Protect from heat and direct sunlight. Do not store together with oxidizing and acidic materials. Keep the battery in the PE bag.

Section 8 – Exposure Controls/Personal Protection

Engineering Controls	Use local exhaust ventilation or other engineering controls to control sources of dust, mist, fumes and vapor. Keep away from heat and open flame. Store in a cool, dry place.
Personal Protective Equipment	Respiratory Protection: Not necessary under normal conditions Skin Protection: Not necessary under normal conditions, Wear neoprene or natural rubber gloves if handling an open or leaking battery. Eye Protection: Not necessary under normal conditions, Wear safety glasses if handling an open or leaking battery.
Other Protective Equipment	Have a safety shower and eye wash fountain readily available in the immediate work area.
Hygiene Measures	Do not eat, drink, or smoke in work area. Maintain good housekeeping.

Section 9 - Physical and Chemical Properties

Physical State	Form: Solid
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	Color: Silvery white
	Odor: Monotony
Change in condition:	
pH	Not applicable
Boiling Point/Boiling range:	Not available.
Decomposition Temperature:	Not available.
Flash Point and Method (°C)	Not available.
Autoignition Temperature (°C)	130°C
Explosion limits:	
Lower:	Not available.
Upper:	Not available.
Oxidizing properties	Not available.
Vapor Density:	(Air = 1) Not applicable
Vapor Pressure:	Not applicable
Density:	Not available.
Solubility in Water:	Insoluble
Viscosity	Not applicable
Octanol/water partition coefficient	Not applicable

Section 10 - Stability and Reactivity

Stability	The product is stable under normal conditions.
Conditions to Avoid	Avoid exposing the battery to fire or high temperature. Do not disassemble, crush, short or install with incorrect polarity. Avoid mechanical or electrical abuse.
Incompatible Materials	Not Available
Hazardous Decomposition Products	This material may release toxic fumes if burned or exposed to fire
Possibility of Hazardous Reaction	Not Available

Section 11 - Toxicological Information

Irritation	Risk of irritation occurs only if the cell is mechanically, thermally or electrically abused to the point of compromising the enclosure. If this occurs, irritation to the skin, eyes and respiratory tract may occur.
Sensitization	Not Available

Neurological Effects	Not Available
Teratoaenicity	Not Available
Reproductive Toxicity	Not Available
Mutagenicity (Genetic Effects)	Not Available
Toxicologically Synergistic Materials	Not Available

Section 12 - Ecological Information

General note:	Water hazard class 1(Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Eco-toxicity	Not Available
Mobility	Not Available
Persistence & Degradability	Not Available
Bioaccumulation	Not Available
Other Adverse Effects	Not Available

Section 13 – Disposal Considerations

Product disposal recommendation: Observe local, state and federal laws and regulations.

Packaging disposal recommendation: Completely discharge containers(no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local, state and federal laws and regulations.

Section 14 – Transport Information

Concorde’s Li-ion Battery Pack comply with UN Recommendations on the Transport of Dangerous Goods;IATA Dangerous Goods regulations,and applicable U.S DOT regulstions for the saft transport of Li- ion Battery Pack .the Li- ion Battery Pack have been tested under provisions of the UN Manual of Tests and Criteria,Part III ,sub-section 38.3 and are classifide as non-dangerous goods.

Transport Information :Land transport ARD/RID(cross-broder)

Sea transport IMDG

AIR transport ICAO-TI and IATA-DGR

Section 15 - Regulatory Information

OSHA hazard communication standard (29 CFR 1910.1200)

Hazardous

✓ Non-hazardous

Section 16 - Other Information

the information above is believed to be accurate and represents the best information currently available to us. however, concorde makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use.

users should make their own investigations to determine the suitability of the information for their particular purposes. although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation. This material safety data sheet provides guidelines for the safe handling and use of this product; it does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required.

The data/information contained herein has been reviewed and approved for general release on the basis that this document contains no export controlled information