



2927 Lomita Blvd., Torrance, CA 90505, USA

Email: dmo@totexmf.com Tel: 310-326-2028 ext. 126 Fax: 310-326-2336 Date: June 2015

**Safety Data Sheet (SDS)**

**1. IDENTIFICATION OF THE GOODS AND COMPANY UNDERTAKING**

Name of Company: Totex Manufacturing Inc.  
 Address: 2927 Limta Blvd.  
 Torrance, CA 90505  
 USA  
 Contact Person: Derald Mo  
 Telephone number: 310-326-2028  
 Fax number: 310-326-2336  
 For emergency: call CHEMTREC at 1-703-527-3887  
 Product Name: Lithium Ion Batteries

**2. COMPOSITION OF THE GOODS**

Model#	Uses on	Voltage (Volts)	Capacity (mAh)	Pack Chemistry	No of cell contain in the each pack	one cell voltage ( V )	One cell capacity ( mA )	Equivalent Lithium Content for each	Equivalent Lithium Content for each pack(g)	Wh
U80284/HO-HCB-100	OEM	25.9	1500.00	Lithium Ion	1 P S 7 7	3.6	1,500.0	0.300	3.150	38.9

**Battery pack ( cell ) Ingredient Chart**

Ingredient	Risk Codes	Safety Description	Hazard	Contents / Exposure Controls / Personal Protection
Cobalt oxide	R22;R43; R50/53	S24;S37;S60;S61	Xn(Harmful)N(Dangerous for the environment)	0.1 mg/m3(TWA)
Manganese(VI)oxide	R20/22	S25	Xn(Harmful)	<b>Airborne Exposure Limits:-</b> OSHA Permissible Exposure Limit(PEL):5 mg/m3 Ceiling for manganese compounds as Mn -ACGIH Threshold Limit Value(TVL):0.2 mg/m3(TWA)for manganese,elementaland inorganic compounds as Mn
Nickel oxide	R43,R49, R53	S45,S53,S61	T(Toxic)	<b>Airborne Exposure Limits:-</b> For Nickel,Metal and Insoluble Compounds,as Ni:- OSHA Permissible Exposure Limite(PEL)- 1 mg/m3(TWA).For Nickel,Elemental/Metal:-ACGIH Threshold Limit Value(TLV)- 1.5mg/m3(TWA),A5- Not suspected as a human carcinogen.For Nickel,Insoluble Compounds,as Ni:- ACGIH Threshold Limit Value(TLV)- 0.2 mg/m3 (TWA). A1- Confirmed human carcinogen
Carbon	R36/37/38 ,R36/37 R20,R10	S22;S24/25	F(Highly Flammable)Xn(Harmful)Xi(Irritant)	<b>Airborne Exposure Limits:-</b> OSHA Permissible Exposure Limits(PELs):activated carbon(graphite,synthetic):Total particulate =15 mg/m3
Aluminium foil	R17,R15, R36/38,R 10,R67,R 65,R62,R 51,53,	S7/8,S43,S26,S6 2,S61,S36/37,S3 3,S29,S16,S9	F(Highly Flammable)Xn(Harmful)Xi(Irritant)	<b>Airborne Exposure Limits:-</b> OSHA Permissible Exposure Limit(PEL):15 mg/m3 (TWA)total dust and 5 mg/m3(TWA) repairable fraction for Aluminum metal as Al-ACGIH Threshold Limit Value(TLV):
Copper foil	R11 R36 R37 R38	S5,S26,S16,S61, S36/37	F(Highly Flammable)N(Dangerous for the environment)Xn(Harmful)Xi(Irritant)	<b>Copper Dust and Mists,as Cu:-</b> OSHA Petmissible Exposure Limit(PEL)- 1 mg/m3(TWA)-ACGIH Threshold Limit Value (TLV)- 1 mg/m3(TWA)Copper Fume:- OSHA Permissible Exposure Limit(PEL)- 0.1 mg/m3(TWA)- ACGIH Threshold Limit Value(TLV)- 0.2
Polyvinylidene fluoride (PVdF)		S22;S24/25		

UN Class: UN 3480 - Class 9

Note: Under IATA Dangerous Goods Regulations Packing Instruction 965 Section II:- Lithium Ion can be transported and meets the following:  
 1) Watt-hour rating is not more than 100Wh. The Watt-hour rating is marked on the outside of the battery



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case except those manufactured before 1 January 2009 which may be transported without this marking until 31 December 2010.  
2) Each battery mentioned above is of the type proven to meet the requirements of each test in the UN Manual and of Tests Criteria, Part III, subsection 38.3. (T1-T5, T7)

**3. HAZARDS IDENTIFICATION**

This product is safe under normal use. Mis-handling and/or mis-use will cause serious damage to the product, and there will be the possibility of the generating of smoke or metals, rupture, or flaming.

- Drop Test: All packaging is capable of withstanding a 1.2m drop test in 6 different flat surface orientation without damage.
- Toxicity: See heading 11
- Additional Information: *Safety Instruction*
  - Do not disassemble or reconstruct the product
  - Do not short-circuit; Do not swallow the product
  - Do not incinerate or heat the product
  - Do not use or leave product nearby fire, stove, or heated place
  - Do not immerse the product in water or sea water, or get it wet
  - Do not give the product impact or throw it
  - Do not drive a nail into the product, strike it by hammer or tread it

**4. FIRST AID MEASURES**

In case of electrolyte leakage from the battery, necessary actions are described below.

- Eye contact: Flush the eyes with plenty of clean water such as tap water immediately, without rubbing. Seek medical treatment. If appropriate procedures are not taken, this may cause a loss of sight.
- Skin contact: Wash the contact areas off immediately with plenty of clean water such as tap water, otherwise it might cause irritation on the skin. If this chemical penetrates the clothing, immediately remove the clothing and flush the skin with water promptly. If irritation persists after washing, get medical attention.
- Inhalation: Move the exposed person to area with fresh air immediately, and seek medical treatment.
- Ingestion: Get medical attention immediately

**5. FIRE FIGHTING MEASURES**

Clear fire area of all non-emergency personnel. Clear away any combustible substances from the fire area.

- Extinguishing method: Since vapor, generated from burning battery packs, make eyes, nose, and throat irritate, be sure to extinguish the fire on the windward side. Wear the respiratory protection equipment in some cases.
- Fire extinguishing agent: Plenty of water, CO2, and foam are effective.
- Special protective equipment for fire fighter: Wear the respiratory protection equipment in some cases.

**6. MEASURES FOR ELECTROLYTE LEAKAGE**

In case of electrolyte leakage, move the battery packs away from the fire immediately. Avoid contact with spilled or released material. Immediately remove a contaminated clothing.

- Personal precautions: Remove any ignition sources nearby. Control of dust generation. May consider wearing sufficient ventilation/respiratory protection. Prevention of skin and eye contact with the chemical.
- Environmental precautions: Keeping away from drains, surface- and ground-water and soil. Alert the neighborhood if possible.
- Method for cleaning up: Use of absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.), reduction of gases/fumes with water, dilution.
- Note: Refer to heading 8 for exposure control  
Refer to heading 13 for disposal consideration

**7. HANDLING AND STORAGE**

- Handling: When packing the battery packs, do not allow terminals to contact each other, or contact with other metals. Avoid improper handling of the packaging box so as not to drop or damage it.



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Do not disassemble or reconstruct, swallow, incinerate or heat the product.  
Avoid use or leave product nearby fire, stove or heated place. Do not immerse the product in water or sea water. Dispose of or recycle the product according to your local government law/regulations.  
Storage: Do not store the battery packs in places of high temperature exceeding 35° or under direct sunlight as it will affect the battery performance only.  
Avoid places of high humidity, Be sure not to expose the battery pack to condensation, water drop or not to store it under frozen condition. When piling the pallets up or placing them in parallel, appropriate space between each pallet should be provided.  
Be sure to install suitable fire extinguishing equipment such as automatic fire extinguisher.  
Avoid storing the battery packs in places where it is exposed to static electricity so that no damage will be caused to the protection circuit of the battery pack.  
Note: Information in this section should relate to the protection of health, safety, and the environment. Please refer to Article 5 of Directive 98/24/EC for more details on safety handling and storage.

**8. EXPOSURE CONTROLS**

Personal protective equipment: (in case of electrolyte leakage)  
*Respiratory Protection:* Protector with ventilator (in case of high concentration of gases), air breather  
*Hand Protection:* Suitability and durability of a glove is dependent on usage  
*Eye protection:* Goggles / mask  
*Protective clothing:* Use protective clothing which is chemical resistant  
Facilities: Provide appropriate ventilation system such as local ventilator in the storage place. Local exhaust ventilation is recommended. Firewater monitors and deluge systems are recommended. Eye washes and showers for emergency use  
Note: Refer to Article 4 of Directive 98/24/EC for more details on the health and safety of workers

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance: The product is stored in the plastic resin case / PVC sleeves. Shape, size and color varies.  
Odour: No odor  
Specific temperatures/temperature ranges at which changes in physical state occur:  
There is no useful information for the product as a mixture  
Flash point: N/A  
Explosion properties: N/A

**10. STABILITY AND REACTIVITY**

Stability: Stable under normal conditions of use  
Condition to Avoid: Avoid impact, deconstruct, direct sunlight, high temperature, high humidity, sparks, open flames and other ignition sources  
Materials to avoid: Conductive materials, water, seawater, strong oxidizers and strong acids  
Hazardous decomposition products: Acrid or harmful fume is emitted during fire

**11. TOXICOLOGICAL INFORMATION**

In case of electrolyte leakage from the product  
Irritation: Irritating to eyes, skin, and throat  
Sensitivity: Sensitive to skin  
Respiratory irritation: Inhalation of vapours may cause irritation to the respiratory system

**12. ECOLOGICAL INFORMATION**

Since a battery cell and the internal materials remain in the environment, do not bury or throw out into the environment.

**13. DISPOSAL CONSIDERATIONS**

When the battery is worn out, dispose of it under the ordinance of each local government or the law issued by relating government.

**14. TRANSPORT INFORMATION**



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During the transportation of a large amount of battery packs by sea, air, trailer, or railway, do not leave them in place of high temperatures and do not allow them to be exposed to condensation. Confirm no leakage and no over-spilt from a container. Properly store cargo to prevent falling, dropping and breakage. Prevent collapse of cargo piles and wet by rain. The container must be handled carefully. Do not give shocks that result in a mark of hitting on the product. Please refer to heading 7 also.

**Packaging:**

**1) Package <= 2 packs**

- a. Packed in strong boxes
- b. Packed in a way to prevent short circuits

**2) Package > 2 packs**

- 1. Lithium ion batteries PI 965 IB;
- 2. Packed in strong packaging marked to say that it contains Lithium Ion Batteries
- 3. Accompanied by a document indicating that the package contains lithium Ion batteries
- 4. Be capable of withstanding 1.2metre drop test in any orientation without short circuiting, damage or release
- 5. Maximum 10 Kg gross weight

### **15. REGULATORY INFORMATION**

Regulation specifically applicable: Directive 67/548/EEC & 1999/45/EC

### **16. OTHER INFORMATION**

The information contained in this Safety data sheet is based on the present state of knowledge and current legislation. This safety data sheet provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.