

**MATERIAL SAFETY DATA SHEET****DATE:** JULY.31,2009**NUMBER:** RJSSZ090763MSDSUS**IDENTITY (As Used on Label and List)****Product Name:** PolymerLithiumIonBattery**SECTION I CHEMICAL PRODUCT AND COMPANY IDENTIFICATION****Manufacturer's Name:**

DESAY POLYPOWER BATTERY CO.,LTD.

Address (Number, Street, City, State, and ZIP Code):

7 AREA,BEYOND NO.6 ZONE,ZHONGKAI HIGH&TECHNOLOGY DEVELOPMENT ZONE,HUIZHOU,GUANGDONG,CHINA. ZIPCODE:516006

Emergency Telephone Number: +86-752-2631028**Fax Number for Information:** +86-752-2631296**Contact Person:** GUODONG LEE**SECTION II COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	Cas No.	TLV
LithiumCobaltate(LiCoO ₂)	12031-55-112031-65-1	0.02mg/m ₃ (Co,TWA)0.1mg/m ₃ (Ni,SolubleCompounds,TWA)
Graphite	7782-42-5	2mg/m ₃ (TWA)
Copper	7440-50-8	0.2mg/m ₃ (Fume,TWA)
Aluminum	7429-90-5	2mg/m ₃ (SolubleSalts,TWA)
Nickel	7440-02-0	1.5mg/m ₃ (Elemental,TWA)
LithiumHexafluorophosphate	21324-40-3	2.5mg/m ₃ (F,TWA)
EthyleneCarbonate	96-49-1	N/A
MethylEthylCarbonate	623-53-0	N/A
DimethylCarbonate	616-38-6	N/A
DiethylCarbonate	105-58-8	N/A
Polyvynilidenedifluoride(PVdF)	24937-79-9	N/A

SECTION III HAZARDS IDENTIFICATION**LD50 LC50 Mixture:**

NONESPECIFIEDBYMANUFACTURER.

Routes of Entry:

INHALATION:YESSKIN:YESINGESTION:YES

Reports of Carcinogenicity:**RJS STANDARDS TESTING & CERTIFICATION CENTER**
141-0414th Avenue,Whitestone,NewYork11357,USA.



NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:

THESE CHEMICALS ARE CONTAINED IN A SEALED CAN. RISK OF EXPOSURE OCCURS ONLY IF BATTERY IS MECHANICALLY OR ELECTRICALLY ABUSED. MOST LIKELY RISK IS ACUTE EXPOSURE WHEN CELL VENTS. DEC IS BELIEVED TO BE SLIGHTLY TO MODERATELY TOXIC, AND EC IS CONSIDERED TO BE NON-TOXIC BUT MODERATELY IRRITATING TO EYES. (EFTS OF OVEREXP)

Explanation of Carcinogenicity:

NOT RELEVANT

Effects of Overexposure:

HLTH HAZ: LIPF*3 IS IRRITATING TO SKIN, EYES AND MUCOUS MEMBRANES. CONTACT OF ELECTROLYTE WITH SKIN & EYES SHOULD BE AVOIDED. DEC MAY BE A REPRODUCTIVE HAZARD.

Medical Condition Aggravated by Exposure:

AN ACUTE EXPOSURE WILL NOT GENERALLY AGGRAVATE ANY MEDICAL CONDITION.

SECTION IV - FIRST AID MEASURES

Ingestion:

CALL MD IMMEDIATELY.

Skin:

FLUSH IMMEDIATELY WITH WATER. CALL MD.

Eyes:

FLUSH WITH COPIOUS AMOUNT OF WATER FOR AT LEAST 15 MINUTES. CALL MD.

Inhalation:

DO NOT INHALE VENTED MATERIAL. IF IRRITATION PERSISTS, GET MEDICAL HELP.

SECTION V - FIRE FIGHTING MEASURES

Extinguishing Media:

IN CASE OF FIRE IN ADJACENT AREA, USE WATER, CO₂ DRY CHEM EXTINGS IF CELL ARE PACKED IN THEIR ORIGINAL CONTAINRS.

Fire Fighting Procedures:

USE NIOSH APPROVED SCBA & FULL PROTECTIVE EQUIPMENT.

Unusual Fire/Explosion Hazard:

NONE SPECIFIED BY MANUFACTURER.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Spill Release Procedures:



THE PREFERRED RESPONSE IS TO LEAVE THE AREA & ALLOW BATTERIES TO COOL & VAPORS TO DISSIPATE. AVOID SKIN & EYE CONTACT OR INHALATION OF VAPORS. REMOVE SPILLED LIQUID WITH ABSORBENT & INCINERATE.

Neutralizing Agent:

NONE SPECIFIED BY MANUFACTURER.

SECTION VII - HANDLING AND STORAGE

Handling and Storage Precautions:

AVOID MECHANICAL OR ELECTRICAL ABUSE.

Other Precautions:

BATTERIES MAY EXPLODE OR CAUSE BURN, IF DISASSEMBLED, CRUSHED OR EXPOSED TO FIRE OR HIGH TEMPERATURES. DO NOT SHORT NOR INSTALL WITH INCORRECT POLARITY.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection:

NIOSH APPROVED RESPIRATOR APPROPRIATE FOR EXPOSURE OF CONCERN . NOT NECESSARY UNDER CONDITIONS OF NORMAL USE.

Ventilation:

NOT NECESSARY UNDER CONDITIONS OF NORMAL USE.

Protective Gloves:

IMPERVIOUS GLOVES.

Eye Protection:

ANSI APPROVED CHEM WORKERS GOGGSS .

Other Protective Equipment:

EYE WASH FOUNTAIN & DELUGE SHOWER WHICH MEET ANSI DESIGN CRITERIA . NOT NECESSARY UNDER CONDITIONS OF NORMAL USE.

Work Hygienic Practices:

NONE SPECIFIED BY MANUFACTURER.

Supplemental Safety and Health

EXTING MEDIA:SINCE FUEL OF FIRE IS BASICALLY PAPER PRODUCTS. FOR BULK QUANTITIES OF UNPACKAGED CELL USE LITH-X (GRAPHITE BASE). IN THIS CASE, USE NO WATER.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Specific Gravity: (H₂O=1):

LiCoO₂:4.95, GRAPHITE:2.09~2.2



Melting Point(°C):

LiCoO₂ ABOUT 1130°C

Appearance and Odor:

LiCoO₂ IS A BLACK, ODORLESS POWDER.

C IS A BLACK, ODORLESS POWDER.

ORGANIC SOLVENT IS A COLORLESS OR LIGHT YELLOW LIQUID.

LITHIUM SALT IS A WHITE, CRYSTALLINE AND ODORLESS POWDER.

SECTION X - STABILITY AND REACTIVITY

Stability Indicator:

YES

Materials to Avoid:

NONE SPECIFIED BY MANUFACTURER.

Stability Condition to Avoid:

DO NOT HEAT OR DISASSEMBLE OR OVERCHARGE.

SECTION XI - TOXICOLOGICAL INFORMATION

Carcinogenicity:

IARC: NOT ESTABLISHED.

NATIONAL TOXICOLOGY PROGRAM: NOT ESTABLISHED.

OSHA: NOT ESTABLISHED.

Reproduction Toxicity: NOT AVAILABLE.

Teratogenicity: NOT AVAILABLE.

Mutagenicity: NOT AVAILABLE.

Synergistic Products: NOT AVAILABLE.

SECTION XII - ECOLOGICAL INFORMATION

Environmental Toxicity:

ON THE BASIS OF AVAILABLE INFORMATION, THIS PRODUCT IS NOT EXPECTED TO PRODUCE ANY SIGNIFICANT ADVERSE ENVIRONMENTAL EFFECTS WHEN RECOMMENDED USE INSTRUCTIONS ARE FOLLOWED.

SECTION XIII - DISPOSAL CONSIDERATIONS

Waste Disposal Methods:



DISCHARGE, TREATMENT, OR DISPOSAL IS SUBJECT TO NATIONAL, STATE, PROVINCIAL, OR MUNICIPAL LAWS. CONSULT STATE OR LOCAL REGULATORY AUTHORITIES BEFORE FLUSHING TO SEWER WITH LARGE AMOUNTS OF WATER. OPEN CELLS SHOULD BE TREATED AS HAZARDOUS WASTE.

SECTION XIV - TRANSPORT INFORMATION

CLASSIFICATION

LITHIUM ION BATTERIES ARE CLASSIFIED IN CLASS 9 – MISCELLANEOUS DANGEROUS GOODS AS: UN 3480, LITHIUM ION BATTERIES OR IF INSIDE A PIECE OF EQUIPMENT OR PACKED SEPARATELY WITH A PIECE OF EQUIPMENT AS: UN 3481, LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT; OR UN 3481, LITHIUM ION BATTERIES PACKED WITH EQUIPMENT.

IN THE ABSENCE OF EXCEPTIONS, THESE BATTERIES MUST BE SHIPPED IN QUANTITIES THAT COMPLY WITH THE LIMITATIONS CONTAINED IN THE REGULATIONS (SEE DGR TABLE 4.2). ALSO, THEY MUST BE CONTAINED IN SPECIFICATION PACKAGING PRESCRIBED BY THE ICAO TECHNICAL INSTRUCTIONS AND IATA DANGEROUS GOODS REGULATIONS. A COMPLETED PACKAGE MUST DISPLAY A CLASS 9 HAZARD LABEL IN ADDITION TO MARKINGS THAT IDENTIFY THE APPLICABLE PROPER SHIPPING NAME AND UN NUMBER. A SHIPPER MUST DOCUMENT THE SHIPMENT USING A SHIPPER'S DECLARATION FOR DANGEROUS GOODS.

EXCEPTIONS

SMALL LITHIUM METAL AND LITHIUM ION BATTERIES ARE EXCEPTED FROM MOST OF THE REQUIREMENTS OF THE ICAO TECHNICAL INSTRUCTIONS AND IATA DGR PROVIDED THAT THEY COMPLY WITH ALL OF THE REQUIREMENTS SET OUT IN PART 1 OF PACKING INSTRUCTIONS 965, 966 AND 967 FOR LITHIUM ION BATTERIES IN THE 50TH EDITION OF THE IATA DGR. PACKAGES CONTAINING LITHIUM BATTERIES, OR LITHIUM BATTERIES CONTAINED IN, OR PACKED WITH, EQUIPMENT THAT MEET THE PROVISIONS OF PART 1 OF THESE PACKING INSTRUCTIONS ARE NOT REQUIRED TO HAVE A CLASS 9 HAZARD LABEL AND THERE IS NO REQUIREMENT FOR A SHIPPER'S

LITHIUM-ION CELLS / BATTERIES SHIPPED AS 'NOT RESTRICTED' CARGO

COMPLY WITH PART 1 OF PI965-PI967 ACCORDINGLY.
FOR CELLS, THE WATT-HOUR RATING IS NO MORE THAN 20WH.
FOR BATTERIES, THE WATT-HOUR RATING IS NO MORE THAN 100WH.
WATT-HOUR RATING IS MARKED ON THE OUTSIDE OF THE BATTERY CASE.
FOR THOSE LITHIUM ION CELLS / BATTERIES CONTAINED IN EQUIPMENT, THE EQUIPMENT MUST BE EQUIPPED WITH AN EFFECTIVE MEANS OF PREVENTING ACCIDENTAL ACTIVATION.

IMPORTANT INFORMATION:

THE PACKAGE CONTAINS 'LITHIUM ION BATTERIES'
HANDLE WITH CARE. FLAMMABILITY HAZARD EXISTS IF THE PACKAGE IS DAMAGED.
WHEN THE PACKAGE IS DAMAGED, PLEASE REFER TO SECTION VIII TO HANDLE OR REPACK IT IF NECESSARY.
THE PACKING INSTRUCTION HAS THE SHIPMENT COMPLY WITH PART 1 OF PI965 OR PI966.
THE CONSIGNMENT DOES NOT CONTAIN ANY RECALLED AND/OR DEFECTIVE BATTERIES.



SECTION XV - REGULATORY INFORMATION

FOR DETAILS REGULATIONS YOU SHOULD CONTACT THE APPROPRIATE AGENCY IN YOUR COUNTRY.

SECTION XVI - OTHER INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make 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. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.

NOTE

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