

深圳市天祥瑞实业有限公司

SHENZHEN TIANXIANGRUI INDUSTRIAL Co., Ltd

地址：深圳市宝安82区新湖路华丰科技园

PC: 518000

ADD: HuaFengKeJIYuan , Xihu Road, Bao'an District, Shenzhen , China

Tel:29563809 Fax:29657080 E-mail:txr4168@163.com Website:www.sztxr.com



Material Safety Data Sheet REPORT NO : 0911005

Button Type CR Lithium cell

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|--|--|---|-------|
| IDENTITY (As Used on Label and List) | | | |
| Note : Blank spaces are not permitted if any item is not applicable or no information is available, the space must be marked to indicate that. | | | |
| Section I | | | |
| Manufacturer's Name | | | |
| SHENZHEN TIANXIANGRUI CO.,LTD | | | |
| Emergency Telephone Number 0755-29563809 | | | |
| Date of prepared and revision November 14, 09 | | | |
| HuaFengKeJIYuan , Xihu Road,Bao'an District, Shenzhen ,China | | | |
| Emergency | | | |
| 0755-29563809 | | | |
| Signature of Preparer (optional) | | | |
| Section II - Hazardous Ingredients / Identity Information | | | |
| IMPORTANT NOTE: The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful. | | | |
| MATERIAL OR INGREDIENT | PEL (OSHA) | TLV (ACGIH) | %/wt. |
| | 3.5 mg/m ³ TWA | 3.5 mg/m ³ TWA | 0-1 |
| 1,2-Dimethoxyethane | None established | None established | 0-6 |
| 1,3-Dioxolane | None established | None established | 0-8 |
| Graphite | 15 mg/m ³ TWA (total dust) 5 mg/m ³ TWA (respirable fraction) | 2 mg/m ³ TWA (respirable fraction) | 0-3 |
| Lithium or Lithium Alloy | None established | None established | 1-6 |
| Lithium Perchlorate | None established | None established | 0-3 |
| Lithium Trifluoromethanesulfonate | None established | None established | 0-3 |
| Lithium Trifluoromethanesulfonimide | None established | None established | 0-3 |
| Manganese Dioxide | 5 mg/m ³ Ceiling (as Mn) | 0.2 mg/m ³ TWA (as Mn) | 12-42 |
| Propylene Carbonate | None established | None established | 0-8 |
| Section III - Physical / Chemical Characteristics | | | |
| Boiling Point N.A. | | | |
| Specific Gravity (H ₂ O=1) N.A. | | | |
| Vapor Pressure (mm Hg) N.A. | | | |
| Melting Point N.A. | | | |
| Vapor Density (AIR=1) N.A. | | | |
| Evaporation Rate (Butyl Acetate) N.A. | | | |
| Solubility in Water N.A. | | | |

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| Section IV - Fire and Explosion Hazard Data |
| Flash Point (Method Used) N.A. |
| Flammable Limits N.A. |
| LEL N.A. |
| UEL N.A. |
| Extinguishing Media N.A. |
| Special Fire Fighting Procedures N.A. |
| Unusual Fire and Explosion Hazards |
| Do not dispose of battery in fire - may explode. |
| Do not short-circuit battery – may cause burns. |
| |
| Section V – Reactivity Data |
| Stability Unstable |
| Conditions to Avoid Stable |
| Incompatibility (Materials to Avoid) |
| Hazardous Decomposition or Byproducts |
| Hazardous |
| Polymerization May Occur Conditions to Avoid |
| Will Not Occur |
| Section VI - Health Hazard Data |
| Route(s) of Entry |
| Inhalation N.A. |
| Skin N.A. |
| Ingestion N.A. |
| Health Hazard (Acute and Chronic) / Toxicological information |
| In case of electrolyte leakage, skin will be itchy when contaminated with electrolyte. |
| In contact with electrolyte can cause severe irritation and chemical burns. |
| Inhalation of electrolyte vapors may cause irritation of the upper respiratory tract and lungs. |
| Section VII – First Aid Measures |
| First Aid Procedures |
| If electrolyte leakage occurs and makes contact with skin, wash with plenty of water immediately. |
| If electrolyte comes into contact with eyes, wash with copious amounts of water for fifteen (15) minutes, and contact a physician. |
| If electrolyte vapors are inhaled, provide fresh air and seek medical attention if respiratory irritation develops. Ventilate the contaminated area. |

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| Section VIII - Fire and Explosion Hazard Data |
| Flash Point (Method Used) N.A. |
| Ignition Temp. N.A. |
| Flammable Limits N.A. |
| LEL N.A. |
| UEL N.A. |
| Extinguishing Media Carbon Dioxide, Dry Chemical or Foam extinguishers |
| Special Fire Fighting Procedures N.A. |
| Unusual Fire and Explosion Hazards Do not dispose of battery in fire - may explode. |
| Do not short-circuit battery - may cause burns. |
| Section IX – Accidental Release or Spillage |
| Steps to Be Taken in Case Material is Released or Spilled |
| Batteries that are leakage should be handled with rubber gloves. |
| Avoid direct contact with electrolyte. |
| Wear protective clothing and a positive pressure Self-Contained Breathing Apparatus (SCBA). |
| Section X – Handling and Storage |
| Safe handling and storage advice |
| Batteries should be handled and stored carefully to avoid short circuits. |
| Do not store in disorderly fashion, or allow metal objects to be mixed with stored batteries. |
| Never disassemble a battery. |
| Do not breathe cell vapors or touch internal material with bare hands. |
| Keep batteries between -30°C and 35°C for prolong storage. |
| Section XI – Exposure Controls / Person Protection |
| Occupational Exposure Limits: LTEP |
| N.A. |
| STEP |
| N.A. |
| Respiratory Protection (Specify Type) |
| N.A. |
| Ventilation Local Exhausts |
| N.A. |
| Special |
| N.A. |
| Mechanical (General) |
| N.A. |
| Other |
| N.A. |

Protective Gloves

N.A.

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| Eye Protection |
| N.A. |
| Other Protective Clothing or Equipment |
| N.A. |
| Work / Hygienic Practices |
| N.A. |
| Section XII – Ecological Information |
| N.A. |
| Section XIII – Disposal Method |
| Dispose of batteries according to government regulations. |
| Section XIV – Transportation Information |
| |
| Section XV – Regulatory Information |
| Special requirement be according to the local regulators. |
| |
| Section XVI – Other Information |
| The data in this Material Safety Data Sheet relates only to the specific material designated herein. |
| |
| Section XVII – Measures for fire extinction |
| In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture. |
| Fire fighters should wear self-contained breathing apparatus. |