31RTULITHBATT Specification Sheet

Part Number:	31RTULITHBATT
Chemistry:	Primary Lithium
Voltage:	7.2
Capacity:	8.5 Ah
Weight:	0.25 lb
Length:	2.01 in
Width:	1.02 in
Height:	2.04 in
Termination:	Wire leads

Lithium / Cell:	2.45 gr
Cells / Battery:	2
Lithium / Battery:	4.9 gr

Do not crush, puncture, short external contacts or dispose of in fire or water.

Replace only with the battery pack designated for this product.

Do not attempt to disassemble, open, or service the battery pack.

INTERSTATE BATTERIES
Outrageously Dependable®

March 22, 2017

Certificate of Compliance with UN38.3

In order to ensure air transportation safety, IATA requires a UN38.3 test report before transporting both lithium-ion batteries and lithium primary batteries. The United Nations' Transport of Dangerous Goods Manual of Tests and Criteria Recommendations sets standards for pre-shipment safety testing of both lithium ion and lithium primary batteries. Interstate All-Battery has obtained the necessary documentation to show that all of the lithium ion and lithium primary batteries sold by Interstate All-Battery have passed section 38.3.

The testing includes the following:

T1 – Altitude Simulation (Primary and Secondary Cells and Batteries)
T2 – Thermal Test (Primary and Secondary Cells and Batteries)
T3 – Vibration (Primary and Secondary Cells and Batteries)
T4 – Shock (Primary and Secondary Cells and Batteries)
T5 – External Short Circuit (Primary and Secondary Cells and Batteries)
T6 – Impact (Primary and Secondary Cells)
T7 – Overcharge (Secondary Batteries)
T8 – Forced Discharge (Primary and Secondary Cells)

Sincerely,
INTERSTATE BATTERIES, INC.

Dan Lane
Regulatory Compliance Manager

SAFETY DATA SHEET

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Interstate All-Battery
4301 121st Street
Urbandale, IA 50323

EMERGENCY PHONE: 24 hours – (800) 255-3924
INFORMATION PHONE: (800) 541-8419, Ext. 6672 or 6663

PRODUCT NAME: Lithium Thionyl Chloride

SDS NUMBER: LTC1 **REVISION NUMBER:** 1

DATE OF PREPARATION/REVISION: June 1, 2015

Section 2: HAZARDS IDENTIFICATION

NOTE: Under OSHA regulations, batteries are considered "articles" and are not subject to the OSHA Hazard Communication Standard MSDS/SDS requirements which apply for "hazardous chemicals in the workplace." Additionally, batteries are considered "articles" under the Global Harmonized System and are exempted from the GHS labeling and SDS classification criteria.

Internal components will not present a health hazard under normal use of the batteries. The chemicals and metals in this product are contained in a sealed can. Exposure to the contents will not occur unless the battery leaks, is exposed to high temperatures or is mechanically, physically, or electrically abused. Damaged battery will release concentrated potassium hydroxide, which is caustic. Anticipated potential leakage of potassium hydroxide is 2 to 20 mL, depending on battery size. A similar amount of zinc may also leak.

EMERGENCY OVERVIEW:

The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful. If the battery is opened or broken then the following hazards apply:

ROUTES OF ENTRY:

EYE CONTACT: Contents of an open battery can cause severe irritation and chemical burns. Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of the chemical remains. Seek medical attention.

SKIN CONTACT: Contents of an open battery can cause skin irritation and/or chemical burns. If a chemical burn occurs or if irritation persists, seek medical attention.

INHALATION: Contents of an open battery can cause respiratory irritation.

INGESTION: Swallowing a battery can be harmful. Contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.

ACUTE HEALTH EFFECTS:

Exposure and/or contact with battery electrolyte (acid) may lead to acute irritation of the skin, corneal damage of the eyes, and irritation of the mucous membranes of the eyes and upper respiratory system, including lung.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

A knowledge of the available toxicology information and of the physical and chemical properties of the material suggests that overexposure in unlikely to aggravate existing medical conditions.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Material	% by Wt.	CAS Number	Molecular Formula
Lithium	3.5-5.0	7239-93-2	Li
Carbon	3.0-4.0	7782-42-5	C
Tetrafluoroethylene	N/A	9002-84-0	(C2F4)n
Thionyl Chloride	40-45	7719-09-7	SoCl2
Aluminum Chloride	1-5	7446-70-0	AlCl3
Lithium Chloride	N/A	7447-41-8	ClLi
Stainless steel	N/A	N/A	N/A
Glass	N/A	N/A	Na2O.CaO.6SiO2
Nickel	N/A	7440-02-0	Ni
Vinyl Chloride	N/A	9002-86-2	(C2H3Cl)n

Section 4: FIRST AID MEASURES

EYE CONTACT: Immediately rinse with cool running water for at least 15 minutes. Seek medical attention immediately after rinsing.

SKIN CONTACT: Wash thoroughly with soap and water. If acid is splashed on clothing or shoes, remove immediately and discard.

INHALATION: Remove from exposure to fresh air and consult a physician if any of the acute effects listed above develop.

INGESTION: Do not induce vomiting. Refer to a physician immediately.

Section 5: FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Carbon dioxide (CO2) or dry chemical fire extinguisher

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing. Fight fire from a distance or protected area. Cool fire exposed batteries to prevent rupture. Use caution when handling fire-exposed containers (containers may rocket or explode in heat of fire).

Section 6: ACCIDENTAL RELEASE MEASURES

Clean-up personnel should wear appropriate protective clothing to avoid eye and skin contact and inhalation of vapors or fumes. Increase ventilation. Carefully collect batteries and place in an appropriate container for disposal.

Section 7: HANDLING AND STORAGE

MECHANICAL CONTAINMENT: Batteries normally evolve hydrogen which, when combined with oxygen from the air, can produce a combustible or explosive mixture unless vented. If such a mixture is present, short circuits, high temperature, or static sparks can cause an ignition.

Do not obstruct safety release vents on batteries. Encapsulation (potting) of batteries will not allow cell venting and can cause high pressure rupture.

HANDLING: Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuit will cause the battery to lose energy, and can cause the safety release vent to open. Sources of short circuits include jumbled batteries in bulk containers, metal jewelry, metal covered tables or metal belts used for assembly of batteries into devices.

WARNING: Do not install backwards, charge, put in fire, or mix with other battery types. May explode or leak causing injury. **Replace all batteries at the same time.**

STORAGE: Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life.

CHARGING: This battery is manufactured in a charged state. It is not designed for recharging. Recharging can cause battery leakage or, in some cases, high pressure rupture. Inadvertent charging can occur if a battery is installed backwards.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: Not required under normal handling conditions.

RESPIRATORY PROTECTION: None required under normal handling conditions.

GLOVES: Not necessary under normal conditions. Use neoprene or natural rubber gloves if handling an open or leaking battery.

EYE PROTECTION: Not necessary under normal conditions. Wear safety glasses with side shields if handling an open or leaking battery.

OTHER PROTECTIVE EQUIPMENT: None required under normal handling conditions.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

▪ **APPEARANCE (PHYSICAL STATE, & COLOR) :**	Cylindrical
▪ **ODOR:**	Odorless
▪ **ODOR THRESHOLD:**	Not applicable
▪ **PH:**	Not applicable
▪ **MELTING POINT/FREEZING POINT:**	Not applicable
▪ **INITIAL BOILING POINT AND BOILING RANGE:**	Not applicable
▪ **FLASH POINT:**	Not applicable
▪ **EVAPORATION RATE:**	Not applicable
▪ **FLAMMABILITY (SOLID, GAS):**	Not determined
▪ **UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:**	Not determined
▪ **VAPOR PRESSURE:**	Not applicable
▪ **VAPOR DENSITY:**	Not applicable
▪ **RELATIVE DENSITY:**	Not applicable
▪ **SOLUBILITY(IES):**	Insoluble in water
▪ **PARTITION COEFFICIENT: *N*-OCTANOL/WATER:**	Not applicable
▪ **AUTO-IGNITION TEMPERATURE:**	Not applicable
▪ **DECOMPOSITION TEMPERATURE:**	Not applicable

Section 10: STABILITY AND REACTIVITY

STABILITY: ☐ Unstable ☑ Stable

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CONDITIONS TO AVOID: Do not heat, crush, disassemble, short circuit, or recharge

INCOMPATIBILITY: Contents are incompatible with strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may produce hazardous fumes of zinc and manganese; caustic vapors of potassium hydroxide and other toxic by-products.

HAZARDOUS POLYMERIZATION: Will not occur.

Section 11: TOXICOLOGICAL INFORMATION

Lithium Thionyl Chloride batteries are not hazardous waste. Under normal conditions of use, Lithium Thionyl Chloride batteries are non-toxic.

The toxicological information of the applicable internal cell materials is as follows:

- **Acute toxicity:**
  - Oral — GHS: Category 3. Harmful if swallowed
  - Skin — GHS: It is not possible to classify
  - Inhalation（steam） — GHS: It is not possible to classify
  - Inhalation（dust） — GHS: It is not possible to classify
- **Skin corrosivity:** GHS: Category 1B. Serious chemical wound of the skin and damage of eyes is caused.
- **Serious damage and irritant property for eyes:** GHS: Category 1
- **Respiratory or skin sensitization**:
  - Respiratory sensitization: GHS: It is not possible to classify
  - Skin sensitization: GHS: out of Category
- **Germline mutagenicity:** GHS: out of Category
- **Carcinogenicity:** GHS: It is not possible to classify
- **Reproduction Toxicity:** GHS: It is not possible to classify

- **Certain target organ/ Systemic toxicity (single exposure):**
  GHS: Category 1
  The disorder of the respiratory system is caused
- **Certain target organ/ Systemic toxicity (repeated exposure)**
  GHS: It is not possible to classify

Section 12: ECOLOGICAL INFORMATION

No eco-toxicity data is available. This product is not expected to present an environmental hazard. Lithium Thionyl Chloride batteries do not contain any added mercury, cadmium or lead.

Section 13: DISPOSAL

Dispose of in compliance with federal, state/provincial and local regulations.

Non-Household Setting (US Federal): Lithium Thionyl Chloride batteries in their original form (finished consumer product), when disposed of as waste, are considered **non-hazardous** waste according to Federal RCRA regulation (40 CFR 261).

Household Use: Lithium Thionyl Chloride batteries can be safely disposed of with normal household waste. Do not accumulate large quantities used batteries for disposal as accumulation could cause batteries to short-circuit. Do not incinerate.

It is recommended that the batteries be recycled. To find an Interstate All Battery Store that will send Lithium Thionyl Chloride batteries for recycling, please go to the dealer locator function found at www.interstatebatteries.com.

Section 14: TRANSPORTATION INFORMATION

UN NUMBER: 3090/3091

UN PROPER SHIPPING NAME: LITHIUM BATTERIES (INCLUDING LITHIUM ION BATTERIES)/LITHIUM BATTERIES PACKED WITH OR CONTAINED IN EQUIPMENT

TRANSPORT HAZARD CLASS: Class 9

PACKING GROUP: II

The U.S. and international regulations pertaining to the transportation of lithium (metal) cells and batteries and lithium ion cells and batteries have changed significantly over the past five years. Tests based on UN Manual of Tests and Criteria must be performed as identified in 49 CFR §173.185 and the ICAO Technical Instructions, Packing Instruction 903, and Special Provision A45. The regulations also apply to cells and batteries that are packed with or contained in equipment (UN3091).

Most consumer-type lithium metal batteries and lithium ion batteries do not require fully regulated markings, labels, and shipping papers. However, the ICAO Technical Instructions contain limited marking, shipping paper, and packaging requirements for packaging that contain more than 12 batteries or 24 cells. Larger cells and batteries must be shipped as fully regulated hazardous materials. This means that shippers of larger cells and batteries must comply with specific labeling, marking, packaging, shipping paper, and employee training requirements.

The U.S. DOT hazardous materials regulations prohibit the transport of lithium metal batteries on passenger-carrying aircraft. In addition, the U.S. DOT requires specific markings on packaging that contain small, consumer-type lithium metal batteries ("PRIMARY LITHIUM BATTERIES – FORBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT"). A "cargo aircraft only"label must be placed on packaging containing larger cells and batteries that are shipped as fully regulated hazardous materials.

Section 15: REGULATORY INFORMATION

ISO 11014-2009: Safety data sheet for chemical products - Content and order of sections.

Regulation (EC) No 1272/2008: Classification, Labeling and Packaging of Substances and Mixtures.

International Air Transport Association (IATA) Dangerous Goods Regulations, 54th Edition

The International Maritime Dangerous Goods (IMDG) Code (inc Amdt 35-10)

Section 16: OTHER INFORMATION

Disclaimer: This information has been compiled from sources considered to be dependable and is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty (either express or implied) or guarantee is made to the accuracy, reliability or completeness of the information contained herein. This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. It is the user's responsibility to satisfy himself as to the suitability and completeness of this information for his own particular use. We do not accept liability for any loss or damage that may occur, whether direct, indirect, incidental or consequential, from use of this information.