# GUIDE LITHIUM ION BATTERIES 147

## POTENTIAL HAZARDS

### FIRE OR EXPLOSION

- Lithium ion batteries contain flammable liquid electrolyte that may vent, ignite and produce sparks when subjected to high temperatures (> 150 °C (302 °F)), when damaged or abused (e.g., mechanical damage or electrical overcharging).
- May burn rapidly with flare-burning effect.
- May ignite other batteries in close proximity.

## HEALTH

- Contact with battery electrolyte may be irritating to skin, eyes and mucous membranes.
- Fire will produce irritating, corrosive and/or toxic gases.
- Burning batteries may produce toxic hydrogen fluoride gas (see GUIDE 125).
- Fumes may cause dizziness or suffocation.

## **PUBLIC SAFETY**

- CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- As an immediate precautionary measure, isolate spill or leak area for at least 25 meters (75 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind, uphill and/or upstream.
- Ventilate closed spaces before entering.

### PROTECTIVE CLOTHING

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

### **EVACUATION**

### Large Spill

Consider initial downwind evacuation for at least 100 meters (330 feet).

#### Fire

• If rail car or trailer is involved in a fire, ISOLATE for 500 meters (1/3 mile) in all directions; also initiate evacuation including emergency responders for 500 meters (1/3 mile) in all directions.

## **EMERGENCY RESPONSE**

### FIRE

#### **Small Fire**

• Dry chemical, CO<sub>2</sub>, water spray or regular foam.

## Large Fire

- Water spray, fog or regular foam.
- Move containers from fire area if you can do it without risk.

## SPILL OR LEAK

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Do not touch or walk through spilled material.
- Absorb with earth, sand or other non-combustible material.
- Leaking batteries and contaminated absorbent material should be placed in metal containers.

## FIRST AID

- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
- Move victim to fresh air.
- Call 911 or emergency medical service.
- Give artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.

## **EMERGENCY RESPONSE TELEPHONE NUMBERS**

## CANADA

**1. CANUTEC**, provides a 24 hour national bilingual (French and English) emergency response advisory service:

1-888-CANUTEC (226-8832) or 613-996-6666\*
\*666 (STAR 666) cellular (in Canada only)

## **UNITED STATES**

1. CHEMTREC®, a 24 hour emergency response communication service:

1-800-424-9300 \*

(Toll-free in the U.S., Canada and the U.S. Virgin Islands) **703-527-3887** For calls originating elsewhere

2. CHEMTEL, INC., a 24 hour emergency response communication service:

1-888-255-3924 \*

(Toll-free in the U.S., Canada, Puerto Rico and the U.S. Virgin Islands) **813-248-0585** For calls originating elsewhere

**3. INFOTRAC**, a 24 hour emergency response communication service:

1-800-535-5053 \*

(Toll-free in the U.S., Canada and the U.S. Virgin Islands) **352-323-3500** For calls originating elsewhere

**4. 3E COMPANY**, a 24 hour emergency response communication service:

1-800-451-8346 \*

(Toll-free in the U.S., Canada and the U.S. Virgin Islands) **760-602-8703** For calls originating elsewhere

The emergency response information services shown above have requested to be listed as providers of emergency response information and have agreed to provide emergency response information to all callers. They maintain periodically updated lists of state and Federal radiation authorities who provide information and technical assistance on handling incidents involving radioactive materials.

**5. MILITARY SHIPMENTS**, for assistance at incidents involving materials being shipped by, for, or to the Department of Defense (DOD), call one of the following numbers (24 hours):

703-697-0218 \* - Explosives/ammunition incidents

(U.S. Army Operations Center)

**1-800-851-8061** (Toll-free in the U.S.) - All other dangerous goods incidents (Defense Logistics Agency)

**6. NATIONWIDE POISON CONTROL CENTER** (United States only)

**1-800-222-1222** (Toll-free in the U.S.)

<sup>\*</sup> Collect calls are accepted