# 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.

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## **EMERGENCY RESPONSE**

## FIRE

### **Small Fire**

• Dry chemical, CO2, 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.

Page 232 ERG 2016 ERG 2016 Page 233