GUIDE LITHIUM ION BATTERIES

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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\(_2\), 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.