POTENTIAL HAZARDS

HEALTH
- **TOXIC**, inhalation, ingestion or contact (skin, eyes) with vapors, dusts or substance may cause severe injury, burns or death.
- Reaction with water or moist air may release toxic, corrosive or flammable gases.
- Reaction with water may generate much heat that will increase the concentration of fumes in the air.
- Fire will produce irritating, corrosive and/or toxic gases.
- Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.

FIRE OR EXPLOSION
- Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.
- For UN1796, UN1826, UN2031 at high concentrations and for UN2032, these may act as oxidizers, also consult GUIDE 140.
- Vapors may accumulate in confined areas (basement, tanks, hopper/tank cars, etc.).
- Substance may react with water (some violently), releasing corrosive and/or toxic gases and runoff.
- Contact with metals may evolve flammable hydrogen gas.
- Containers may explode when heated or if contaminated with water.

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 in all directions for at least 50 meters (150 feet) for liquids and at least 25 meters (75 feet) for solids.
- Keep unauthorized personnel away.
- Stay upwind, uphill and/or upstream.
- Ventilate enclosed areas.

PROTECTIVE CLOTHING
- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

EVACUATION

Spill
- See Table 1 - Initial Isolation and Protective Action Distances for highlighted materials. For non-highlighted materials, increase, in the downwind direction, as necessary, the isolation distance shown under “PUBLIC SAFETY”.

Fire
- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

In Canada, an Emergency Response Assistance Plan (ERAP) may be required for this product. Please consult the shipping document and/or the ERAP Program Section (page 391).
EMERGENCY RESPONSE

FIRE

• Note: Some foams will react with the material and release corrosive/toxic gases.

Small Fire
• CO₂ (except for Cyanides), dry chemical, dry sand, alcohol-resistant foam.

Large Fire
• Water spray, fog or alcohol-resistant foam.
• Move containers from fire area if you can do it without risk.
• Use water spray or fog; do not use straight streams.
• Dike fire-control water for later disposal; do not scatter the material.

Fire involving Tanks or Car/Trailer Loads
• Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
• Do not get water inside containers.
• Cool containers with flooding quantities of water until well after fire is out.
• Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
• ALWAYS stay away from tanks engulfed in fire.

SPILL OR LEAK

• ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
• All equipment used when handling the product must be grounded.
• Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
• Stop leak if you can do it without risk.
• A vapor-suppressing foam may be used to reduce vapors.
• DO NOT GET WATER INSIDE CONTAINERS.
• Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
• Prevent entry into waterways, sewers, basements or confined areas.

Small Spill
• Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.
• Use clean, non-sparking tools to collect material and place it into loosely covered plastic containers for later disposal.

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.
• Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
• 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.
• In case of contact with Hydrofluoric acid (UN1790), flush with large amounts of water. For skin contact, if calcium gluconate gel is available, rinse 5 minutes, then apply gel. Otherwise, continue rinsing until medical treatment is available. For eyes, flush with water or a saline solution for 15 minutes.
• For minor skin contact, avoid spreading material on unaffected skin.
• Keep victim calm and warm.
• Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.