GUIDE 155  SUBSTANCES - TOXIC AND/OR CORROSIVE (FLAMMABLE/WATER-SENSITIVE)

POTENTIAL HAZARDS

FIRE OR EXPLOSION

• HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.
• Vapors form explosive mixtures with air: indoors, outdoors and sewers explosion hazards.
• Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks, etc.).
• Vapors may travel to source of ignition and flash back.
• Those substances designated with a (P) may polymerize explosively when heated or involved in a fire.
• Substance will react with water (some violently) releasing flammable, toxic or corrosive gases and runoff.
• Contact with metals may evolve flammable hydrogen gas.
• Containers may explode when heated or if contaminated with water.

HEALTH

• TOXIC: inhalation, ingestion or contact (skin, eyes) with vapors, dusts or substance may cause severe injury, burns or death.
• Bromoacetates and chloroacetates are extremely irritating/lachrymators (cause eye irritation and flow of tears).
• Reaction with water or moist air will 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 environmental contamination.

PUBLIC SAFETY

• CALL 911. Then call emergency response telephone number on shipping paper. If shipping paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
• Keep unauthorized personnel away.
• Stay upwind, uphill and/or upstream.
• Ventilate closed spaces before entering, but only if properly trained and equipped.

PROTECTIVE CLOTHING

• Wear positive pressure self-contained breathing apparatus (SCBA).
• Wear chemical protective clothing that is specifically recommended by the manufacturer when there is NO RISK OF FIRE
• Structural firefighters’ protective clothing provides thermal protection but only limited chemical protection

EVACUATION

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.

Spill

• For highlighted materials: see Table 1 - Initial Isolation and Protective Action Distances.
• For non-highlighted materials: increase the immediate precautionary measure distance, in the downwind direction, as necessary.

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 paper and/or the ERAP Program Section (page 390).
EMERGENCY RESPONSE

FIRE

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

CAUTION: For Acetyl chloride (UN1717), use CO₂ or dry chemical only.

Small Fire
• CO₂, dry chemical, dry sand, alcohol-resistant foam.

Large Fire
• Water spray, fog or alcohol-resistant foam.

FOR CHLOROSILANES, DO NOT USE WATER; use AFFF alcohol-resistant medium-expansion foam.
• If it can be done safely, move undamaged containers away from the area around the fire.
• Avoid aiming straight or solid streams directly onto the product.

Fire Involving Tanks or Car/Trailer Loads
• Fight fire from maximum distance or use unmanned master stream devices 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) from 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.

FOR CHLOROSILANES, use AFFF alcohol-resistant medium-expansion foam to reduce vapors.
• DO NOT GET WATER on spilled substance or 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

• Call 911 or emergency medical service.
• Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
• Move victim to fresh air if it can be done safely.
• Give artificial respiration if victim is not breathing.
• Do not perform mouth-to-mouth resuscitation if victim ingested or inhaled the substance; wash face and mouth before giving artificial respiration. Use 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.
• 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.