

# GUIDE CARBON MONOXIDE (REFRIGERATED LIQUID)

## 168

### POTENTIAL HAZARDS

#### HEALTH

- **TOXIC; Extremely Hazardous.**
- Inhalation extremely dangerous; may be fatal.
- Contact with gas, liquefied gas or cryogenic liquids may cause burns, severe injury and/or frostbite.
- Odorless, will not be detected by sense of smell.

#### FIRE OR EXPLOSION

- **EXTREMELY FLAMMABLE.**

**CAUTION: Flame can be invisible. Use an alternate method of detection (thermal camera, broom handle, etc.)**

- May be ignited by heat, sparks or flames.
- Containers may explode when heated.
- Vapor explosion and poison hazard indoors, outdoors or in sewers.
- Vapors from liquefied gas are initially heavier than air and spread along ground.
- Vapors may travel to source of ignition and flash back.
- Runoff may create fire or explosion hazard.

### 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.
- Many gases are heavier than air and will spread along the ground and collect in low or confined areas (sewers, basements, tanks, etc.).
- 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.**
- Always wear thermal protective clothing when handling refrigerated/cryogenic liquids.

#### EVACUATION

##### Immediate precautionary measure

- Isolate spill or leak area for at least 100 meters (330 feet) in all directions.

##### Spill

- See **Table 1 - Initial Isolation and Protective Action Distances.**

##### Fire

- If tank, rail tank car or highway tank 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.

## EMERGENCY RESPONSE

**FIRE**

**CAUTION:** Flame can be invisible. Use an alternate method of detection (thermal camera, broom handle, etc.)

- **DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.**

**Small Fire**

- Dry chemical, CO<sub>2</sub> or water spray.

**Large Fire**

- Water spray, fog or regular foam.
- If it can be done safely, move undamaged containers away from the area around the fire.

**Fire Involving Tanks**

- Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not direct water at source of leak or safety devices; icing may occur.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks in direct contact with flames.

**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 or walk through spilled material.
- Stop leak if you can do it without risk.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- Do not direct water at spill or source of leak.
- If possible, turn leaking containers so that gas escapes rather than liquid.
- Prevent entry into waterways, sewers, basements or confined areas.
- Isolate area until gas has dispersed.

**FIRST AID**

Refer to the “General First Aid” section.

**Specific First Aid:**

- In case of contact with liquefied gas, only medical personnel should attempt thawing frosted parts.