



Methyl Chloride

Handling & Storage Requirements

Methyl chloride should be stored in carbon steel pressure tanks built and tested to applicable ASME code for unfired pressure vessels. The storage tank should be designed for a minimum working pressure of 250 PSIG. In cold climates, storage tanks should be rated for full vacuum service. Additional local code requirements must be incorporated in the construction of the storage tanks.

Pressure relief devices should be sized and tested according to ASME code. Dual relief valves should be provided to allow testing with the tank in service. All methyl chloride storage tanks should be equipped with a high-level alarm to prevent overfilling the vessel. Filling density should be limited to no more than 90% during warm weather.

All openings in storage tanks must be welded or have standard bolted flanges rated for the appropriate pressure requirements. Threaded piping and cast or ductile iron equipment should not be used in methyl chloride service.

Carbon steel containers and schedule 80 piping are suitable for handling dry methyl chloride. Cast or ductile iron and brass or copper-bearing alloys should not be used in methyl chloride service. Aluminum and aluminum alloys must not be used in methyl chloride storage or handling systems since trimethyl aluminum is formed when methyl chloride contacts aluminum. Zinc and magnesium alloys also must be avoided in equipment or piping for methyl chloride service.

Gasket materials in methyl chloride service should be spiral wound or Teflon[®] envelope type. Other gasket materials may be

acceptable, but chemical compatibility must be verified prior to use.

All piping and equipment for methyl chloride should be designed as a closed and contained system so the chemical (both liquid and vapor) is controlled at all times. Storage vessels must have both liquid and vapor piping with block valves located as close to the tank nozzles as possible. In piping or equipment where liquid methyl chloride may be trapped between closed valves, liquid thermal safety relief valves should be installed, preferably with discharge to storage.

Electrical equipment and wiring used in areas where methyl chloride is processed must meet local and national electrical code requirements. In general, this equipment should meet NFPA Class 1, Division 2 hazardous location requirements for lighting, electric motors, instrumentation and other electric powered equipment.

Methyl chloride tanks and unloading facilities should be located away from areas containing fired heaters and other potential ignition sources. All tanks and piping must be electrically bonded and provided with static electricity and lightning protection.

For further information contact:

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