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MSDS: Halocarbon 11

PRODUCT INFORMATION

PRODUCT: Halocarbon 11

TRADE NAME: Halocarbon 11 or Freon® 11

CHEMICAL NAME: Trichlorofluoromethane

SYNONYMS: R 11 or Refrigerant 11

FORMULA: CCl₃F

CHEMICAL FAMILY: Halogenated Hydrocarbon

SUPPLIER'S NAME: MEGS Inc.

SUPPLIER'S ADDRESS: 2675 De Miniac
Ville St-Laurent, Qc, H4S 1E5

EMERGENCY PHONE NUMBER: (514) 956-7503

MOLECULAR WEIGHT: 137.36

PRODUCT USE: Various

PRODUCT IDENTIFICATION None
NUMBER:

HAZARDOUS INGREDIENTS

CHEMICAL ID	CONCENTRATION	CAS #	LD(50)	LC(50)
Halocarbon 11	99+%	75-69-4	Ipr-mus 1743 mg/kg	Inhl-mus 10 pph/30 min

PHYSICAL DATA

PHYSICAL STATE: Liquid

APPEARANCE: Water white volatile liquid

ODOR: Slight ethereal odor

ODOR THRESHOLD: Unknown

SPECIFIC GRAVITY (H₂O = 1): 1.50

VAPOR PRESSURE: 74 kPa @ 15°C

VAPOR DENSITY (air = 1): 4.87
EVAPORATION RATE: Unknown
BOILING POINT: 23.77°C
FREEZING POINT: -111.11°C
pH: Unknown
GAS DENSITY: 1499 kg/m³ @ 15°C, 101.3 kPa
COEFFICIENT OF WATER/OIL (Vapor) @ 25°C, Bunsen Coefficient DISTRIBUTION: = 0.179

FIRE OR EXPLOSION HAZARD

CONDITIONS OF FLAMMABILITY: Nonflammable
R11 is nonflammable in air, however as a mixture with flammable gases may, if ignited, lead to its decomposition giving rise to toxic products.

MEANS OF EXTINCTION: Nonflammable gas

FLASHPOINT AND METHOD OF DETERMINATION: Nonflammable gas

UPPER EXPLOSION LIMIT (% BY VOL): Nonflammable gas

LOWER EXPLOSION LIMIT (% BY VOL): Nonflammable gas

AUTO-IGNITION TEMPERATURE: Nonflammable gas

FLAMMABILITY CLASSIFICATION: Nonflammable gas

HAZARDOUS COMBUSTION PRODUCTS: Nonflammable gas

EXPLOSION DATA: Nonflammable gas

SENSITIVITY TO STATIC DISCHARGE: None

REACTIVITY DATA

CHEMICAL STABILITY: Stable

INCOMPATIBLE MATERIALS: Reactive metals (silver, brass, bronze, copper) may enhance decomposition at high temperatures (100°C).

CONDITIONS OF REACTIVITY: None

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen fluoride, hydrogen chloride and possibly phosgene

TOXICOLOGICAL PROPERTIES

ROUTES OF ENTRY:

SKIN CONTACT: None

SKIN ABSORPTION: None

EYE: None

INHALATION: Inhalation of high concentrations of vapor may cause dizziness, disorientation, incoordination, narcosis, nausea or vomiting leading to unconsciousness.

INGESTION: None

ACUTE OVER EXPOSURE EFFECTS: Relatively non-toxic; however, it may act as a narcotic at high concentrations.

CHRONIC OVER EXPOSURE EFFECTS: No irreversible effects are known once an adequate supply of oxygen is returned (oxygen deficiency corrected).

EXPOSURE LIMITS: Ceiling limit = 1,000 molar ppm (TLV) Due to stability at room temperature, may be considered a simple asphyxiant.

IRRITANCY OF PRODUCT: None

SENSITIZATION TO MATERIAL: None

CARCINOGENICITY, REPRODUCTIVE EFFECTS: None

TERATOGENICITY, MUTAGENICITY: None

TOXICOLOGICALLY SYNERGISTIC PRODUCTS: None

PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT: Plastic or rubber gloves. Safety goggles or safety glasses. Safety shoes.

SPECIFIC ENGINEERING CONTROLS: Halocarbon 11 is noncorrosive and may be used with any common structural material. Silver and copper bearing alloys can act as catalysts for the decomposition of halocarbon 11 at high temperatures. Alloys containing more than 2% magnesium should not be used if water is present.

LEAK AND SPILL PROCEDURES: EVACUATE ALL PERSONNEL FROM AFFECTED AREA.

Use appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with an inert gas prior to attempting repairs. If leak is on container or container valve, contact the closest MEGS location.

WASTE DISPOSAL: Do not attempt to dispose of waste or unused quantities. Return in the shipping container properly labeled, with any valve outlet plugs or caps secured and valve protection cap in place to MEGS for proper disposal. For emergency disposal, contact the closest MEGS location.

HANDLING PROCEDURES AND EQUIPMENT: USE ONLY IN WELL-VENTILATED AREAS.

Do not drag, slide or roll containers. Use a suitable hand truck for container movement. Do not heat container by any means to increase the discharge rate of product from the container. Use a check valve or trap in the discharge line to prevent hazardous back flow into the container.

STORAGE REQUIREMENTS: Protect cylinders from physical damage. Store in cool, dry, well-ventilated area of non combustible construction away from heavily trafficked areas and emergency exits. Do not allow the temperature where containers are stored to exceed 52°C. Containers must be stored upright and firmly secured to prevent falling or being knocked over. Full and empty containers should be segregated. Use a "first in - first out" inventory system to prevent full containers being stored for excessive periods of time.

TDG CLASSIFICATION: None

WHMIS CLASSIFICATION: None

SPECIAL SHIPPING INFORMATION: Keep container upright.

FIRST AID MEASURES

SPECIFIC FIRST AID PROCEDURES: PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE TO HALOCARBON 11. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS.

INHALATION: Conscious persons should be assisted to an uncontaminated area and inhale fresh air. Unconscious persons should be moved to an uncontaminated area, given assisted resuscitation and supplemental oxygen. Further treatment should be symptomatic and supportive.

EYE CONTACT: PERSONS WITH POTENTIAL EXPOSURE TO

HALOCARBON 11 SHOULD NOT WEAR CONTACT LENSES.

Flush contaminated eye(s) with copious quantities of water. Part eyelids to assure complete flushing. Continue for a minimum of 15 minutes.

SKIN CONTACT: Flush affected area with copious quantities of water. Remove affected clothing as rapidly as possible.

PREPARATION INFORMATION

PREPARED BY: Safety Department

DATE PREPARED: 01/01/1999

LAST REVISION DATE: 05/21/2002

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