

Print MSDS Sheet

MGI68241 Page 001 of 008

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MG INDUSTRIES
3 GREAT VALLEY PARKWAY
MALVERN, PENNSYLVANIA 19355
PHONE: 610-695-7400
FAX: 610-695-7596
SUBSTANCE: 2 COMP. MIX HALOCARBON 12 1-12% BAL. AIR
TRADE NAMES/SYNONYMS:
MGI68241
CREATION DATE: Oct 31 1990
REVISION DATE: Dec 07 1999

EMERGENCY CONTACT:
CHEMTREC:
1-800-424-9300

SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: AIR, COMPRESSED
CAS NUMBER: Not assigned.
EC NUMBER: Not assigned.
PERCENTAGE: 88.0-99.0
COMPONENT: DICHLORODIFLUOROMETHANE
CAS NUMBER: 75-71-8
EC NUMBER (EINECS): 200-893-9
PERCENTAGE: 1.0-12.0

SECTION 3 HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=1 FIRE=0 REACTIVITY=0
EC CLASSIFICATION (CALCULATED): Not determined.
EMERGENCY OVERVIEW:
PHYSICAL DESCRIPTION: Gas.
MAJOR HEALTH HAZARDS: central nervous system depression, difficulty breathing
PHYSICAL HAZARDS: Containers may rupture or explode if exposed to heat.
POTENTIAL HEALTH EFFECTS:
INHALATION:
SHORT TERM EXPOSURE: nausea, vomiting, symptoms of drunkenness, tingling sensation, suffocation, convulsions, coma
LONG TERM EXPOSURE: no information on significant adverse effects
SKIN CONTACT:
SHORT TERM EXPOSURE: no information on significant adverse effects
LONG TERM EXPOSURE: no information is available
EYE CONTACT:
SHORT TERM EXPOSURE: irritation

MGI68241 Page 002 of 008

LONG TERM EXPOSURE: no information is available
INGESTION:
SHORT TERM EXPOSURE: ingestion of a gas is unlikely
LONG TERM EXPOSURE: ingestion of a gas is unlikely
CARCINOGEN STATUS:
OSHA: N
NTP: N
IARC: N

SECTION 4 FIRST AID MEASURES

INHALATION: When safe to enter area, remove from exposure. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Keep warm and at rest. Get medical attention immediately.
SKIN CONTACT: Wash if needed. If frostbite, freezing, or cryogenic burns

occur, warm affected area in warm water. If this is not available, gently wrap affected parts in blankets. Allow circulation to return naturally. Get medical attention immediately.

EYE CONTACT: It is unlikely that emergency treatment will be required. Wash with large amounts of water or normal saline until no evidence of chemical remains (at least 15-20 minutes). Get medical attention immediately.

INGESTION: It is unlikely that emergency treatment will be required. Get medical attention, if needed.

NOTE TO PHYSICIAN: For inhalation, consider oxygen.

SECTION 5 FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Negligible fire hazard. Containers may rupture or explode if exposed to heat.

EXTINGUISHING MEDIA: carbon dioxide, regular dry chemical

Large fires: Use regular foam or flood with fine water spray.

FIRE FIGHTING: Move container from fire area if it can be done without risk.

Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck, evacuation radius: 800 meters (1/2 mile). Use extinguishing agents appropriate for surrounding fire. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Do not get water directly on material. Reduce vapors with water spray. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Consider downwind evacuation if material is leaking.

MGI68241 Page 003 of 008

SECTION 6 ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL RELEASE:

Stop leak if possible without personal risk. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

SECTION 7 HANDLING AND STORAGE

Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.

SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:

DICHLORODIFLUOROMETHANE:

- 1000 ppm (4950 mg/m³) OSHA TWA
- 1000 ppm (4950 mg/m³) ACGIH TWA
- 1000 ppm (4950 mg/m³) NIOSH recommended TWA 10 hour(s)
- 5000 mg/m³ (1000 ml/m³) DFG MAK 4 times/shift
- 1000 ppm (5030 mg/m³) UK OES TWA
- 1250 ppm (6280 mg/m³) UK OES STEL

MEASUREMENT METHOD: Charcoal tube (2); Methylene chloride; Gas chromatography with flame ionization detection; NIOSH III # 1018

VENTILATION: Based on available information, additional ventilation is not required. Ensure compliance with applicable exposure limits.

EYE PROTECTION: For the gas: Eye protection not required, but recommended. For the liquid: Wear splash resistant safety goggles. Contact lenses should not

be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

CLOTHING: For the gas: Protective clothing is not required. For the liquid: Wear appropriate protective, cold insulating clothing.

GLOVES: Wear insulated gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

For Unknown Concentrations or Immediately Dangerous to Life or Health -

Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a

MGI68241 Page 004 of 008

separate escape supply.

Any self-contained breathing apparatus with a full facepiece.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION: Gas.

BOILING POINT: Not available

FREEZING POINT: Not available

VAPOR PRESSURE: Not available

VAPOR DENSITY: Not available

DENSITY: Not available

WATER SOLUBILITY: Not available

PH: Not applicable

VOLATILITY: Not applicable

ODOR THRESHOLD: Not available

EVAPORATION RATE: Not applicable

COEFFICIENT OF WATER/OIL DISTRIBUTION: Not applicable

SECTION 10 STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: Protect from physical damage and heat. Containers may rupture or explode if exposed to heat.

INCOMPATIBILITIES: combustible materials, reducing agents, metals

AIR:

CHARCOAL: May explode on contact with the liquid.

COMBUSTIBLE MATERIALS: May explode on contact with the liquid.

ETHER: May explode on contact with the liquid.

HYDROCARBONS: May explode on contact with the liquid.

ORGANIC MATERIALS: May ignite on contact with the liquid.

REDUCING AGENTS (STRONG): May react vigorously.

DICHLORODIFLUOROMETHANE:

ALUMINUM: Vigorous exothermic reaction.

CALCIUM: Exothermic reaction.

MAGNESIUM: Exothermic reaction.

METALS: May react exothermically at elevated temperatures.

PLASTICS, RUBBER, AND COATINGS: May be attacked.

POTASSIUM: Exothermic reaction.

SODIUM: Exothermic reaction.

ZINC: Exothermic reaction.

HAZARDOUS DECOMPOSITION:

Thermal decomposition products: miscellaneous decomposition products

POLYMERIZATION: Will not polymerize.

MGI68241 Page 005 of 008

SECTION 11 TOXICOLOGICAL INFORMATION

DICHLORODIFLUOROMETHANE:

TOXICITY DATA:

200000 ppm/30 minute(s) inhalation-human TClO; >5600 ug/kg oral-rat LD; >80 pph/4 hour(s) inhalation-rat LC; 3348 gm/m3/3 hour(s) inhalation-mouse LC50; 80 pph/30 minute(s) inhalation-rabbit LC50; 80 pph/30 minute(s) inhalation-guinea pig LC50; 2548 mg/kg/26 week(s) intermittent oral-rat TDLo; 4136 mg/m3/8 hour(s)-6 week(s) intermittent inhalation-rat TClO; 3997 mg/m3/90 day(s) continuous inhalation-rat TClO; 3997 mg/m3/90 day(s) continuous inhalation-monkey TClO; 3997 mg/m3/90 day(s) continuous inhalation-rabbit TClO; 3997 mg/m3/90 day(s) continuous inhalation-guinea pig TClO

CARCINOGEN STATUS: ACGIH: A4 -Not Classifiable as a Human Carcinogen

ACUTE TOXICITY LEVEL:

Relatively Non-toxic: inhalation

TARGET ORGANS: central nervous system

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: heart or cardiovascular disorders

ADDITIONAL DATA: Stimulants such as epinephrine may induce ventricular fibrillation.

HEALTH EFFECTS:

INHALATION:

DICHLORODIFLUOROMETHANE: Exposure to high concentrations of gas may cause central nervous system depression. Sniffing aerosols of fluorochlorinated hydrocarbons has caused sudden death by cardiac arrest, probably due to sensitization of the myocardium. A group of workers with intermittent fluorocarbon exposure reported an increased incidence of palpitations and lightheadedness. Animals exposed to 20% 40 hours weekly for 10-12 weeks showed generalized tremors and other signs of mild narcosis, as well as slight blood changes, but no pathological effects. In another animal study, 40% for 30 minutes per day for 3-6 weeks resulted in some respiratory pathology. See information on simple asphyxiants.

ACUTE EXPOSURE:

AIR: Inhalation of compressed air at greater than atmospheric pressure, without complete decompression may cause decompression sickness. Symptoms may include: Headache, vertigo, fatigue, vomiting, dyspnea, burning sensation in the chest, cough, pulmonary edema, cutaneous irritation, itching, mottling and edema, macular eruptions, visual defects, deafness, pain in muscles, tingling, numbness, weakness or paralysis of limbs, angina, hypotension, convulsions, unconsciousness, coma, and death. Aseptic bone necrosis may occur following even one successful compression/decompression. The nitrogen in air inhaled under pressure may be an anesthetic producing narcosis.

CHRONIC EXPOSURE:

AIR: Repeated or prolonged exposure to compressed air at greater than atmospheric pressure may cause aseptic bone necrosis, which may progress to joint collapse with subsequent osteo-arthritis. Repeated exposure, without complete decompression, may result in decompression sickness with symptoms as in acute inhalation.

MGI68241 Page 006 of 008

SKIN CONTACT:

ACUTE EXPOSURE:

2 COMP. MIX HALOCARBON 12 1-12% BAL. AIR: No adverse effects have been reported from the gas. Due to rapid evaporation, the liquid may cause frostbite with redness, tingling and pain or numbness. In more severe cases, the skin may become hard and white and develop blisters.

CHRONIC EXPOSURE:

2 COMP. MIX HALOCARBON 12 1-12% BAL. AIR: No data available.

EYE CONTACT:

ACUTE EXPOSURE:

2 COMP. MIX HALOCARBON 12 1-12% BAL. AIR: No adverse effects have been reported from the gas. Due to evaporation, the liquid may cause frostbite with redness, pain, and blurred vision.

CHRONIC EXPOSURE:

2 COMP. MIX HALOCARBON 12 1-12% BAL. AIR: No data available.

INGESTION:

ACUTE EXPOSURE:

2 COMP. MIX HALOCARBON 12 1-12% BAL. AIR: Ingestion of a gas is unlikely.
If liquid is swallowed, frostbite damage to the lips, mouth and mucous
membranes may occur.

CHRONIC EXPOSURE:

2 COMP. MIX HALOCARBON 12 1-12% BAL. AIR: No data available.

SECTION 12 ECOLOGICAL INFORMATION

Not available

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable regulations.

SECTION 14 TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101 SHIPPING NAME-UN NUMBER:

Compressed gases, n.o.s. (dichlorodifluoromethane, air)-UN1956

U.S. DOT 49 CFR 172.101 HAZARD CLASS OR DIVISION:

2.2

U.S. DOT 49 CFR 172.101 AND SUBPART E LABELING REQUIREMENTS:

Nonflammable gas

U.S. DOT 49 CFR 172.101 PACKAGING AUTHORIZATIONS:

EXCEPTIONS: 49 CFR 173.306, 307

MGI68241

Page 007 of 008

NON-BULK PACKAGING: 49 CFR 173.302, 305

BULK PACKAGING: 49 CFR 173.314, 315

U.S. DOT 49 CFR 172.101 QUANTITY LIMITATIONS:

PASSENGER AIRCRAFT OR RAILCAR: 75 kg

CARGO AIRCRAFT ONLY: 150 kg

LAND TRANSPORT ADR/RID:

SUBSTANCE NAME: Compressed gas, n.o.s.

UN NUMBER: UN1956

ADR/RID CLASS: 2

ITEM NUMBER: 1A

WARNING SIGN/LABEL: 2; 13

HAZARD ID NUMBER: 20

AIR TRANSPORT IATA/ICAO:

CORRECT TECHNICAL NAME: Compressed gas, n.o.s.

UN/ID NUMBER: UN1956

IATA/ICAO CLASS: 2.2

LABEL: Nonflammable gas

MARITIME TRANSPORT IMDG:

CORRECT TECHNICAL NAME: Compressed gases, n.o.s.

UN/ID NUMBER: UN1956

IMDG CLASS: 2(2.2)

EmS No.: 2-04

MFAG Table No.: 620

MARINE POLLUTANT: N

SECTION 15 REGULATORY INFORMATION

U.S. REGULATIONS:

TSCA INVENTORY STATUS: N

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CERCLA SECTION 103 (40CFR302.4): Y

DICHLORODIFLUOROMETHANE: 5000 LBS RQ

SARA SECTION 302 (40CFR355.30): N

SARA SECTION 304 (40CFR355.40): N

SARA SECTION 313 (40CFR372.65): Y

DICHLORODIFLUOROMETHANE

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):

ACUTE: Y

CHRONIC: N

FIRE: N

REACTIVE: N

SUDDEN RELEASE: Y

OSHA PROCESS SAFETY (29CFR1910.119): N

STATE REGULATIONS:

California Proposition 65: N

EUROPEAN REGULATIONS:

EC NUMBER: Not assigned.

MGI68241

Page 008 of 008

SECTION 16 OTHER INFORMATION

MSDS SUMMARY OF CHANGES

SECTION 14 TRANSPORT INFORMATION

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