

MATERIAL SAFETY DATA SHEET

Trade Name: Johnsens Freeze 12
MSDS NO. 6030
Revision Date: 04/11/2006
Date Printed: 12/30/2008

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Johnsens Freeze 12
Chemical Family: Refrigerant gas/lubricant
Synonyms: None
Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300

Supplier: Technical Chemical Company, P.O. Box 139, Cleburne, Texas 76033

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	OSHA TWA	OSHA STEL	OSHA SKIN
1,1,1,2-Tetrafluoroethane 811-97-2	70-90	Not Listed	Not Listed	Not Listed
1-Chloro 1,1-Difluoroethane 75-68-3	10-25	Not Listed	Not Listed	Not Listed

Component	Weight %	OSHA Z PEL	OSHA Z TWA	OSHA Z Ceiling
1,1,1,2-Tetrafluoroethane 811-97-2	70-90	Not Listed	Not Listed	Not Listed
1-Chloro 1,1-Difluoroethane 75-68-3	10-25	Not Listed	Not Listed	Not Listed

Component	ACGIH TLV TWA	ACGIH TLV STEL	ACGIH TLV Ceiling
1,1,1,2-Tetrafluoroethane 811-97-2	Not Listed	Not Listed	Not Listed
1-Chloro 1,1-Difluoroethane 75-68-3	Not Listed	Not Listed	Not Listed

Other: Contains no other ingredients in concentrations >.1% that are now known to be hazardous as defined by OSHA.

3. HAZARDS IDENTIFICATION

Emergency Overview: Warning! Content under pressure. May be fatal if inhaled. Gross inhalation overexposure may cause: respiratory track irritation, eye and skin irritation, central nervous system depression, headache, dizziness, anesthesia, drowsiness, loss of consciousness and death. Suffocation, if air is displaced by vapors. "Frostbite-like" effects may occur if the liquid or escaping vapors contact the eyes or skin.

HMIS Classification: Health: 1 Flammability: 2 Physical Hazard: 2
NFPA Rating: Health: 2 Flammability: 2 Reactivity: 1

4. FIRST AID MEASURES

Eye Contact: In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

Ingestion: DO NOT INDUCE VOMITING. Give nothing by mouth. Get medical attention! If vomiting occurs, keep head lower than hips to prevent aspiration.

Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.

Skin Contact: In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and shoes, and launder before reuse. Use approved skin lotions or creams to replace lost skin oils. Treat for frostbite if necessary by gently warming affected area.

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5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point °F(°C): >300 F.
Flash Point Method: COC
Flammable Limits in Air - Lower (%): Not Determined
Flammable Limits in Air - Upper (%): Not Determined
Autoignition Temperature °F(°C): Not Determined
Extinguishing Media: Water fog, carbon dioxide, foam, dry chemical. Use water spray to keep containers cool that are exposed to heat or flames.

Protection Of Fire-Fighters:

Special Fire-Fighting Procedures: Warning!! Contents under pressure. Container may rupture under fire conditions. Decomposition may occur. Wear approved positive-pressure self-contained breathing apparatus and protective clothing.
Hazardous Combustion Products: Carbon Dioxide. Carbon Monoxide.
Aerosol Comments: NFPA Level 1 Aerosol

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective clothing and equipment to prevent skin and eye contact.
Spill Procedures: Wear protective equipment specified. Contain any liquid from leaking containers. Ventilate spill area. Soak up material with absorbent and place in chemical waste container.
Action to be taken if material is released or spilled: Increase area ventilation. Do not puncture or incinerate container. Contents under pressure.
Environmental Precautions: Keep away from drains.

7. HANDLING AND STORAGE

Handling and Storage: CAUTION: COMPRESSED GAS. Do not puncture, incinerate or store above 120 F. Do not store in passenger compartment of automobile. Avoid breathing vapors, if exposed to high vapor concentration, leave area at once. Avoid contact with skin and eyes. Should not be mixed with air for leak testing or used for any other purpose above atmospheric pressure.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Local exhaust ventilation as necessary to maintain exposures to within applicable limits. Showers. Eyewash stations.
Eyes: Wear safety glasses or goggles to protect against exposure.
Skin Protection: Avoid skin contact. Wear protective clothing and gloves.
Respiratory Protection: Use in a well ventilated area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless gas with clear to yellow liquid.
Odor: MILD ETHER LIKE
pH Value: Not Determined
Vapor Pressure: 67 PSIG @ 70 F
Vapor Density (Air=1): 3.6 @ 25 C
Boiling Point (°F): -15.5 F (Lowest Component)
Melting/Freezing Point: Not determined.
Solubility in Water: SLIGHT
Bulk Density at 20°C: 1.2 @ 25 C (g/cm3)
Molecular Weight: Mixture
Specific Gravity (H2O=1): 1.0 @ 70 F liquid approx.
Viscosity: Not determined.
Evaporation Rate: Not Determined
VOC Content(%): Not determined.
Decomposition Temperature: Not Known

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10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Do not expose to heat or store at temperatures above 120 F.
Materials to Avoid: Avoid contact with acidic, basic or oxidizing agents. Avoid contact with alkali or alkaline earth metals.
Hazardous Decomposition Products: Carbon monoxide. Carbon dioxide. This material can be decomposed by high temperatures forming hydrofluoric acid and possibly carbonyl fluoride.
Hazardous Polymerization: WILL NOT OCCUR

11. TOXICOLOGICAL INFORMATION

Toxicological Data:

Component	Route	Species	Dose
1,1,1,2-Tetrafluoroethane 811-97-2	Inhalation	Rats	LC50 1500 gm/m ³ /4H
1-Chloro 1,1-Difluoroethane 75-68-3	Inhalation	Rats	LC50 2050 gm/m ³ /4H

Carcinogenicity:

Component	IARC	NTP	OSHA
1,1,1,2-Tetrafluoroethane 811-97-2	Not Listed	Not Listed	Not Listed
1-Chloro 1,1-Difluoroethane 75-68-3	Not Listed	Not Listed	Not Listed

12. ECOLOGICAL INFORMATION

Remarks: Ecological testing has not been conducted on this product.

13. DISPOSAL CONSIDERATION

Waste Classification: Not determined.
Waste Management: Not determined.
Disposal Method: Disposal should be made in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

U.S. DOT:

Proper Shipping Name: Refrigerant Gas, n.o.s. (1,1,1,2-Tetrafluoroethane, 1-Chloro 1,1-Difluoroethane)
Hazard Class: 2.2
UN/NA Number: UN 1078
DOT Packing Group: NA

IMDG:

Proper Shipping Name: Refrigerant Gas, n.o.s. (1,1,1,2-Tetrafluoroethane, 1-Chloro 1,1-Difluoroethane)
Hazard Class: 2.2
Hazard Subclass: Not determined.
UN No.: UN 1078
Packing Group: NA
Marine Pollutant: No

15. REGULATORY INFORMATION

US Federal Regulations:

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Component	SARA 313	SARA 302	TPQ	RQ
1,1,1,2-Tetrafluoroethane 811-97-2	Not Listed	Not Listed	Not Listed	Not Listed
1-Chloro 1,1-Difluoroethane 75-68-3	Listed.	Not Listed	Not Listed	Not Listed

SARA 311/312 Hazard Categories: Not Determined.

State Regulations:

Component	California Prop. 65 Cancer list	California - Prop 65 Developmental Toxicity	California Prop. 65 Reproductive Female	California Prop. 65 Reproductive Male
1,1,1,2-Tetrafluoroethane 811-97-2	Not Listed	Not Listed	Not Listed	Not Listed
1-Chloro 1,1-Difluoroethane 75-68-3	Not Listed	Not Listed	Not Listed	Not Listed

Component	New Jersey Right-to-Know List:
1-Chloro 1,1-Difluoroethane 75-68-3	Substance no. 0385 Substance no. 2422 Substance no. 2423 Substance no. 2425 Substance no. 2426 Substance no. 2427 Substance no. 2428 Substance no. 2429 Substance no. 2430

U.S. TSCA: The components of this product are listed on the TSCA Inventory.
Canadian Inventory: The components of this product are listed on the Canadian DSL or NDSL Inventory.

Consumer Product Safety Improvement Act of 2008 General Conformity Certification

The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product container.

16. OTHER INFORMATION

General Notes:
Disclaimer: Do not allow undiluted material or large quantities to reach groundwater, bodies of water or sewer system. The information and recommendations contained herein are based upon tests believed to be reliable. However, the manufacturer/distributor of this product does not guarantee their accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. The manufacturer/distributor assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.