

OSHA Material Safety Data Sheet



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1. IDENTIFICATION

Verruca-Freeze®

Description:

Refrigerant gas, R 404A, Non-flammable gas (UN 3337)
(For Shipping See Section 10)

Components:

| Ingredients | CAS No. | Hazard |
|---------------------------|----------|--|
| 1,1,1,2-tetrafluoroethane | 811-7-2 | OSHA PEL NIF Dupont AEL 1000ppm Preliminary toxicity Assessment by Dupont |
| Pentafluoroethane | 354-33-6 | AIHA 1000ppm TWA |
| 1,1,1-trifluoroethane | 420-46-2 | AIHA 1000ppm TWA |

2. PHYSICAL DATA

Boiling Point: -47°C -54°F **ph:** 7 – 8
Density: 1.08 **% Volatile:** 100
Solubility in Water: NIF **% Solids:** 0
Vapor Density (Air=1): 3.4 **Evaporation Rate (H₂O =1):** >1
Appearance: Clear water-white liquid with low odor

3. HAZARDOUS REACTIVITY

Stability: Material is stable. However, avoid open flames and high temperatures.

Decomposition Products: Material can be decomposed by hydrogen fluoride, carbon dioxide, and carbon monoxide.

Incompatibility: Reactive alkali metals – strong acids & bases.

Polymerization: Will not occur.

4. FIRE AND EXPLOSION HAZARD DATA

Flash Point: NA per DOT regulations

Explosion Limits:

LEL: NA UEL: NA

Extinguishing Media: Water, foam, dry chemical, carbon dioxide.

Special Fire Fighting Procedures: Fire fighters should wear self contained, positive-pressure breathing apparatus (SCBA) and avoid skin contact.

Unusual Fire and Explosion Information: Cans are equipped with pressure relief devices but still may rupture with force at temperatures above 120°F.

Hazard Rating:

Health: 1 Fire: 0 Reactivity: 1 Personal Protection: 1
0-Least 1-Slight 2-Moderate 3-High 4-Extreme

5. STORAGE CONDITIONS

Clean dry area. Keep cans in cool place out of direct sunlight. Do not heat above 120°F. Do not puncture or damage containers.

Rotate stock. Do not store in automobiles. Keep this and all chemicals out of reach of children.

6. EMPLOYEE PROTECTION INFORMATION

Respiratory Protection: Normal ventilation is generally adequate. Local exhaust should be used when accidental large amounts are released. Mechanical ventilation should be used in low places. Avoid breathing vapors.

Personal Protective Equipment: Cotton surgical glove liners and/or non-sterile gloves may be used for protection when using Verruca-Freeze™.

Eyes: Eyes and ear canal of patient and physician must be covered when working in close proximity to these areas.

7. Emergency and First Aid Procedures (for accidental exposure):

INHALATION: Remove to fresh air. If breathing has stopped, administer artificial respiration.

EYE: Flush eyes for at least fifteen minutes with clear water. If irritation persists, seek medical attention.

SKIN: Wash with soap and water. Treat for frostbite if necessary.

INGESTION: DO NOT INDUCE VOMITING! Give 2 glasses of water and immediately seek medical attention.

Potential Effects of Overexposure:

INHALATION: Major potential route of exposure. Cryogen is of low order of acute toxicity in animals. When oxygen levels in air are reduced to 12 – 14% by displacement, symptoms of asphyxiation, coordination loss, increased pulse rate and deeper respiration will occur. At higher levels cardiac arrhythmia may occur.

EYES: Liquid can cause slight, temporary irritation with slight temporary corneal injury. Vapors can irritate eyes.

SKIN: Prolonged or repeated contact with liquid can cause freezing of skin tissues, defatting, and dermatitis.

INGESTION: Single dose toxicity is low to moderate. If vomiting occurs the liquid can be aspirated into the lungs, which can cause chemical pneumonia and systemic effects. Human psychotropic, gastrointestinal, and central nervous system effects possible.

Other Product Information: Material is not listed as a possible carcinogen, mutagenic, or teratogenic chemical by OSHA, IARC, NTP.

8. SPILL OR LEAK PROCEDURES

Evacuate area. Ventilate area and avoid breathing vapors. The liquid gas will quickly evaporate.

9. WASTE DISPOSAL METHODS

Comply with local, state, and federal regulations. Do not incinerate or destroy aerosol cans.

10. TRANSPORTATION SECTION

DOT SP 12783

DOT Name - Refrigerant gas, R 404A, Non-flammable gas

Proper Shipping Name – Consumer Commodity, ORM-D

DOT Hazard Class – 2.2

UN Number – UN3337

DOT Packing Group – N/A

RQ – N/A

Classified Consumer Commodity, ORM-D

May not exceed 66lb Gross Weight limit ground and air shipment.

Ground Ship – Consumer Commodity ORM-D

Air Ship – Consumer Commodity ORM-D-AIR: **must have shipping papers.**

The information contained herein is based on current technical data and tests, which we believe to be accurate and reliable. It is intended for use by persons having technical knowledge and skill, at their own risk. We can assume no liability for results obtained or damages incurred through improper use of product or application of data.