

Safety Data Sheet

Product No. 27219 PELCO Histo/Cyto-freeze™

Issue Date (06-03-15)

Review Date (08-31-17)

Section 1: Product and Company Identification

Product Name: PELCO Histo/Cyto-freeze™

Synonym:

Company Name

Ted Pella, Inc., P.O. Box 492477, Redding, CA 96049-2477

Inside USA and Canada 1-800-237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

Outside USA and Canada 1-530-243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

CHEMTREC USA and Canada Emergency Contact Number 1-800-424-9300 24 hours a day

CHEMTREC Outside USA and Canada Emergency Contact Number +1-703-741-5970 24 hours a day

Section 2: Hazard Identification

2.1 Classification of the substance or mixture

GHS Pictograms



Explosion

GHS Categories

Gasses under pressure - Liq. Gas

Simple Asphyxiant 1

H280: Contains gas under pressure; may explode if heated.

2.2 Label elements

Hazard Pictograms



Signal Word: Warning

Hazard statements:

H280: Contains gas under pressure; may explode if heated.

Precautionary statements:

P403: Store in a well-ventilated place.

P410: Protect from sunlight.

2.3 Other hazards

Health Effects:

NFPA Hazard Rating: Health: NIF; Fire: NIF; Reactivity: NIF

HMIS® Hazard Rating: Health: 1; Fire: 0; Reactivity: 0
(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

Results of PBT and vPvB assessment:

PBT: NA

vPvB: NA

Emergency overview

Appearance: Clear, colorless gas. CONTENTS UNDER PRESSURE.

Immediate effects: Aerosol. Pressurized container may explode when exposed to heat or flame. Health injuries are not known or expected under normal use.

Potential health effects

Primary Routes of entry: Inhalation, eyes, skin.

Signs and Symptoms of Overexposure: ND

Eyes: Irritant. Liquid may cause freezing.

Skin: Contact with liquid may cause freezing or frost bite.

Ingestion: Not considered a potential route of exposure.

Inhalation: High concentrations of vapor are harmful and may cause heart irregularities, unconscious, or death.

Chronic Exposure: ND

Chemical Listed As Carcinogen Or Potential Carcinogen: None

See Toxicological Information (Section 11)

Potential environmental effects

See Ecological Information (Section 12)

Section 3: Composition / Information on Ingredients

Principle Hazardous Component(s) (chemical and common name(s)) (Cas. No)	%	OSHA PEL mg/m ³	ACGIH TLV mg/m ³	NTP Carcinogen	IARC Carcinogen	OSHA regulated Carcinogen
1,1,1,2-Tetrafluoroethane (811-97-2)	100	NE	NE	No	No	No

Section 4: First Aid Measures

If accidental overexposure is suspected

Eye(s) Contact: Flush eyes with large amounts of water for at least 15 minutes while holding eyelids apart. If symptoms persist, seek medical attention.

Skin Contact: Wash with copious amounts of water for at least 15 minutes. Contact medical attention if complications arise.

Inhalation: If unconscious, remove to fresh air and call a physician.

Ingestion: Have victim rinse mouth thoroughly with water.

Note to physician

Treatment: Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be used only in situations of emergency life support.

Medical Conditions generally Aggravated by Exposure: Preexisting diseases of the central nervous system may be aggravated by exposure to this product.

Section 5: Fire Fighting Measures

Flash Point: NA

Flammable Limits: NA

Auto-ignition point: >743°C

Fire Extinguishing Media: Use CO₂, foam or dry chemical. Water is generally not effective and may spread fire; however, water spray may be used from a safe distance to cool containers and protect surrounding area.

Special Fire Fighting Procedures: Containers should be cooled with water to prevent vapor pressure build-up. Use equipment or shielding, as required, to protect personnel from containers bursting, rupturing or venting.

Unusual Fire and Explosion Hazards: Gas is not flammable at ambient temperatures and atmospheric pressure. However, this material may become combustible when mixed with oxygen or air under pressure or air above atmospheric pressure. Containers may rupture or explode under fire conditions.

Hazardous combustion products: Oxides of carbon. Hydrofluoric acid, carbonyl fluoride, and additional toxic chemicals may be formed in small amounts.

DOT Class: ORM-D

Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled: Remove all sources of ignition and provide good ventilation. Wear appropriate personal protective equipment (PPE). Stop or reduce discharge if it can be done safely.

Waste Disposal Methods: Do not puncture or incinerate containers. When contents are depleted continue to depress button until all gas is expelled. Dispose of waste according to federal, state and local regulations.

Section 7: Handling and Storage

Precautions to be Taken in Handling and Storage

Handling: Avoid breathing vapor. Keep away from heat and flame. Use with adequate ventilation. Do not puncture or incinerate containers. May cause frostbite.

Storage: Do not expose to direct sunlight or store at temperatures above 120°F. Keep containers tightly closed when not in use. Store in a cool, dry, well-ventilated area away from all sources of ignition. Empty container may contain hazardous residues and still under pressure.

Storage temperature: Cool and dry area.

Storage Pressure: ND

Section 8: Exposure Controls / Personal Protection

Engineering Controls

Ventilation required: Ventilation should be adequate to prevent exposures above PEL/TLV limits.

Personal Protection Equipment

Respiratory protection: A supplied air respirator should be used if ventilation is not sufficient to maintain exposure limits. Use NIOSH approved respirator where there is likelihood of inhalation of the product mist, spray or aerosol.

Skin protection: Chemically-resistant gloves.

Eye protection: Chemically-resistant safety glasses with side shields.

Additional clothing and/or equipment: ND

Exposure Guidelines

See Composition/Information on Ingredients (Section 3)

Section 9 Physical and Chemical Properties

Appearance and Physical State: Clear, colorless, compressed liquefied gas.

Odor (threshold): None (NA)

Specific Gravity (H₂O=1): 1.22

Vapor Pressure (mm Hg): 80

Vapor Density (air=1): 3.60

Percent Volatile by volume: ND

Evaporation Rate (butyl acetate=1): 0.5-2
Boiling Point: ND
Freezing point / melting point: -101°C
pH: NA
Solubility in Water: Negligible
Molecular Weight: 102.03

Section 10: Stability and Reactivity

Stability: Stable. Do not mix with oxygen or air above atmospheric pressure. Any source of high temperature (>250°C) may form hydrofluoric acid and possibly carbonyl fluoride decomposition products.

Conditions to Avoid: Do not store above 54 °C. Keep away from heat, direct sunlight, open flames, glowing surfaces or sparks. Dropping containers may cause bursting.

Materials to Avoid (Incompatibility): Oxidizing agents. Alkali or alkaline earth metals. Powdered metals. Magnesium. Zinc. Freshly-abraded aluminum surfaces. Chemically –active metals: calcium, powdered aluminum, zinc, sodium, potassium, magnesium, etc.

Hazardous Decomposition Products: Hydrofluoric acid, carbonyl fluoride, oxides of carbon and additional toxic chemicals may be formed in small amounts.

Hazardous Polymerization: None.

Section 11: Toxicological Information

Results of component toxicity test performed:

1,1,1,2-Tetrafluoroethane (811-97-2):

Rat (Inhalation) 4 hr: > 500,000 PPM.

Animal Data: A short duration spray of vapor produced very slight eye irritation. This material is a slight skin irritant, but not a skin sensitizer.

Human experience (OSHA): Because of its use in metered-dose inhalers, 1,1,1,2-tetrafluoroethane has been studied in human volunteers with single breath inhalation and one-hour exposures to concentrations up to 8000 ppm, which caused no respiratory irritation or adverse effects on pulse, blood pressure, lung function, electrocardiogram or on the CNS. Not expected to be hazardous by OSHA criteria.

This product **does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

Section 12: Ecological Information

Ecological Information: None known.

Chemical Fate Information: ND

Section 13 Disposal Considerations

RCRA 40 CFR 261 Classification: This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR261.4(b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

Contents under pressure. Do not puncture, incinerate or crush.

Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

Section 14: Transportation Information

US DOT Information: Proper shipping name: 1,1,1,2-Tetrafluoroethane

Hazard Class: 2.2

Packaging group: NA

UN Number: UN3159

Ship as Consumer Commodity, ID8000

IATA: Proper shipping name: 1,1,1,2-Tetrafluoroethane

Hazard Class: 2.2

Packing group: NA

UN Number: UN3159

Marine Pollutant: None

Canadian TDG: Proper shipping name: 1,1,1,2-Tetrafluoroethane

Section 15: Regulatory Information

United States Federal Regulations

SDS complies with OSHA's Hazard Communication Rule 29, CFR 1910.1200.

SARA (Section 311, 312): Acute – Yes; Chronic – Yes; Fire – No; Reactivity – No. Pressure – Yes

SARA Title III: No

RCRA: ND

TSCA: All components are listed.

CERCLA: No

State Regulations

California Proposition 65: No

International Regulations

Canada WHMIS: Listed Proper shipping name: 1,1,1,2-Tetrafluoroethane: compressed Gas.

Europe EINECS Numbers: 212-377-0

Section 16: Other Information

Label Information: Contents under pressure, non-flammable gas. Inhalation can be harmful. Avoid contact with eyes and skin. Liquid contact may cause freezing or frostbite.

European Risk and Safety Phrases: ND

European symbols needed: ND

Canadian WHMIS Symbols: ND

Abbreviations used in this document

NE= Not established

NA= Not applicable

NIF= No Information Found

ND= No Data

Disclaimer

Ted Pella, Inc. makes no warranty of any kind regarding the information furnished herein. Users should independently determine the suitability and completeness of information from all sources. While this data is presented in good faith and believed to be accurate, it should be considered only as a supplement to other information gathered by the user. It is the User's responsibility to assure the proper use and disposal of these materials as well as the safety and health of all personnel who may work with or otherwise come in contact with these materials.