

Safety Data Sheet

Castaldo® Jewelry Silicone Mold Release Spray



SDS Revision Date:

10/08/2015

1: Identification

Product Identifier

Product Form: Mixture
Product Name: Castaldo® Mold Release
Intended Use of the Product: Mold releasant

Name, Address, and Telephone of the Responsible Party

Company Name:
F. E. Knight Inc.
120 Constitution Blvd.,
Franklin, MA 02038. USA

Emergency Telephone Number

Emergency Number: Chem-Tel: 1-800-255-3924 or 617-969-5399
Company Telephone Number: (508) 520-1666

2: Hazards identification of the product

Classification of the Substance or Mixture

Classification (GHS-US)

Simple Asphyxiation

Flam. Aerosol 2: H223

Liquefied gas: H280

Label Elements

GHS-US Labeling :

Hazard Pictograms (GHS-US):



GHS02



GH04

Signal Word (GHS-US):
Hazard Statements (GHS-US):

Warning
H223 - Flammable aerosol.
H280 - Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation.

Precautionary Statements (GHS-US):

P210 - Keep away from heat, sparks, open flames, hot surfaces. No smoking.
P211 - Do not spray on an open flame or other ignition source.
P251 - Pressurized container: Do not pierce or burn, even after use.
P403 - Store in a well-ventilated place.
P410 + P412 - Protect from sunlight.
Do not expose to temperatures exceeding 50 °C/122 °F.
P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

Other Hazards:

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

3: Composition / information on ingredients

Mixture

Name	Product Identifier	% (w/w)	Classification (GHS-US)
1,1-Difluoroethane	(CAS No) 75-37-6	40 - 70	Simple Asphy Flam. Gas 1, H220 Liquefied gas, H280
Dimethyl ether	(CAS No) 115-10-6	10 - 30	Flam. Gas 1, H220 Liquefied gas, H280
1,1,1,2-Tetrafluoroethane	(CAS No) 811-97-2	3 - 7	Simple Asphy Liquefied gas, H280
Siloxanes and Silicones, di-Me	(CAS No) 63148-62-9	1 - 5	Not classified

Naphtha, petroleum, hydrotreated light	(CAS No) 64742-49-0	1 - 5	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
--	------------------------	-------	--

The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret [29 CFR 1910.1200].

A range of concentration as prescribed by the Controlled Products Regulations has been used where necessary, due to varying composition.

Full text of H-phrases: see section 16

4: First aid measures

Description of First Aid Measures

- General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.
- Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Get immediate medical advice/attention. Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.
- Skin Contact:** Immediately rinse with plenty of water. Obtain medical attention if irritation develops or persists.
- Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Obtain medical attention if irritation persists.
- Ingestion:** Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor/physician if you feel unwell.

Most Important Symptoms and Effects Both Acute and Delayed

- General:** Gas can be toxic as a simple asphyxiant by displacing oxygen from the air. May cause frostbite.
- Inhalation:** In elevated concentrations may cause asphyxiation, central nervous system effects, and increased breathing rate. Symptoms of asphyxiation include headache, dizziness, rapid breathing, increased pulse, mood changes, tremors, cyanosis, muscular weakness, narcosis, numbness of the extremities, unconsciousness and death.
- Skin Contact:** May cause frostbite on contact with the liquefied gas.
- Eye Contact:** May cause eye irritation.
- Ingestion:** Ingestion is an unlikely route of exposure for a gas.
- Chronic Symptoms:** None expected under normal conditions of use.

Indication of any immediate medical attention and special treatment needed.

If you feel unwell, seek medical advice (show the label where possible).

5: Fire-fighting measures

Extinguishing Media:

Suitable Extinguishing Media: Do not extinguish burning gas if flow cannot be shut off immediately. Extinguish secondary FIRES with appropriate materials.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

- Fire Hazard:** Flammable aerosol. Gas/vapor heavier than air. May accumulate in confined spaces, particularly at or below ground level.
- Explosion Hazard:** May form flammable/explosive vapor-air mixture. Heating may cause an explosion. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.
- Reactivity:** Hazardous reactions will not occur under normal conditions.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions:

Leaking gas fire: Do not extinguish, unless leak can be stopped safely. In case of leaking gas fire, eliminate all ignition sources if safe to do so.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Hydrogen Fluoride. Fluorine compounds. Carbon oxides (CO, CO₂). Phosgene.

Reference to Other Sections

Refer to section 9 for flammability properties.

6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

General Measures: Use special care to avoid static electric charges. Eliminate every possible source of ignition. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Ruptured cylinders may rocket.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

Environmental Precautions: Avoid release to the environment.

Methods and Material for Containment and Cleaning Up.
For Containment: Stop leak if safe to do so.

Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely. Stop the source of the release, if safe to do so. Consider the use of water spray to disperse vapors. Isolate the area until gas has dispersed. Ventilate and gas test area before entering.

Reference to Other Sections: See Section 8, Exposure Controls and Personal Protection. See Section 13, Disposal Considerations.

7: Handling and storage

Precautions for Safe Handling Additional Hazards

When Processed: When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard. Contact with the liquefied gas may cause frostbite. In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Exposed person may not be aware of asphyxiation.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Proper grounding procedures to avoid static electricity should be followed. Comply with applicable regulations. Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling. Keep at temperatures below 52°C / 125°F.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep in fireproof place.

Incompatible Materials:	Strong acids. Strong bases. Strong oxidizers.
Storage Area:	Keep away from sources of ignition - No smoking.
Specific End Use(s):	Mold releasant

8: Exposure controls / personal protection

Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency

including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Dimethyl ether (115-10-6)

British Columbia:	OEL TWA (ppm)	1000 ppm
Fluorides		
Mexico:	OEL TWA (mg/m ³)	2.5 mg/m ³
USA ACGIH:	ACGIH TWA (mg/m ³)	2.5 mg/m ³
USA OSHA:	OSHA PEL (TWA) (mg/m ³)	2.5 mg/m ³
		2.5 mg/m ³ (dust)
Alberta:	OEL TWA (mg/m ³)	2.5 mg/m ³
British Columbia:	OEL TWA (mg/m ³)	2.5 mg/m ³
Manitoba:	OEL TWA (mg/m ³)	2.5 mg/m ³
New Brunswick:	OEL TWA (mg/m ³)	2.5 mg/m ³
Newfoundland & Labrador:	OEL TWA (mg/m ³)	2.5 mg/m ³
Nova Scotia:	OEL TWA (mg/m ³)	2.5 mg/m ³
Nunavut:	OEL STEL (mg/m ³)	5 mg/m ³
Nunavut:	OEL TWA (mg/m ³)	2.5 mg/m ³
Northwest Territories:	OEL STEL (mg/m ³)	5 mg/m ³
Northwest Territories:	OEL TWA (mg/m ³)	2.5 mg/m ³
Ontario:	OEL TWA (mg/m ³)	2.5 mg/m ³
Prince Edward Island:	OEL TWA (mg/m ³)	2.5 mg/m ³
Québec:	VEMP (mg/m ³)	2.5 mg/m ³
Saskatchewan:	OEL STEL (mg/m ³)	5 mg/m ³
Saskatchewan:	OEL TWA (mg/m ³)	2.5 mg/m ³
Yukon:	OEL STEL (mg/m ³)	2.5 mg/m ³
Yukon:	OEL TWA (mg/m ³)	2.5 mg/m ³

Exposure Controls

Appropriate Engineering Controls: Gas detectors should be used when flammable gases/ vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Oxygen detectors should be used when asphyxiating gases may be released.

Personal Protective Equipment: Protective clothing. Protective goggles. Gloves.
Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing: Flame retardant antistatic protective clothing.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical safety goggles.

Skin and Body Protection: Use chemically protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

Thermal Hazard Protection: If material is cold, wear thermally resistant protective gloves.

Other Information: When using, do not eat, drink or smoke.

9. Physical and chemical properties

Information on Basic Physical and Chemical Properties

Physical State: Gas

Appearance:	Clear Colorless Aerosol
Odor:	Slight ethereal
Odor Threshold:	Not available
pH:	Not available
Evaporation Rate:	Not available
Melting Point:	Not available
Freezing Point:	Not available
Boiling Point:	Not available
Flash Point:	Not available
Auto-ignition Temperature:	Not available
Decomposition Temperature:	Not available
Flammability (solid, gas):	Not available
Lower Flammable Limit:	18 % (1,1-Difluoroethane)
Upper Flammable Limit:	3.7 % (1,1-Difluoroethane)
Vapor Pressure:	Not available
Relative Vapor Density at 20 °C:	Not available
Specific Gravity:	<1
Solubility:	Not available
Partition Coefficient:	
N-Octanol/Water:	Not available
Viscosity:	Not available
Explosion Data – Sensitivity to Mechanical Impact:	Sensitive to mechanical impact
Explosion Data – Sensitivity to Static Discharge:	Static discharge could act as an ignition source

10: Stability and reactivity

Reactivity:	Hazardous reactions will not occur under normal conditions.
--------------------	---

Chemical Stability:	Can form explosive mixture with air. Contains gas under pressure; may explode if heated.
Possibility of Hazardous Reactions:	Hazardous polymerization will not occur.
Conditions to Avoid:	Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks. Use special care to avoid static electric charges.
Incompatible Materials:	Strong acids. Strong bases. Strong oxidizers. Reducing agents. Alkali metals. Alkaline earth metals. Powdered metals. Acid anhydrides. Amines.
Hazardous Decomposition Products:	Thermal decomposition generates: Hydrogen fluoride. Fluorine compounds. Carbon oxides (CO, CO ₂). Phosgene. Formaldehyde.

11: Toxicological information

Information on Toxicological Effects - Product

Acute Toxicity:	Not classified
LD50 and LC50 Data:	Not available
Skin Corrosion/Irritation:	Not classified
Serious Eye Damage/Irritation:	Not classified
Respiratory or Skin Sensitization:	Not classified
Germ Cell Mutagenicity:	Not classified
Teratogenicity:	Not classified
Carcinogenicity:	Not classified
Specific Target Organ Toxicity (Repeated Exposure):	Not classified
Reproductive Toxicity:	Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard:	Not classified
Symptoms/Injuries After Inhalation:	In elevated concentrations may cause asphyxiation, central nervous system effects, and increased breathing rate. Symptoms of asphyxiation include headache,

dizziness, rapid breathing, increased pulse, mood changes, tremors, cyanosis, muscular weakness, narcosis, numbness of the extremities, unconsciousness and death.

Symptoms/Injuries After

Skin Contact: May cause frostbite on contact with the liquefied gas.

Symptoms/Injuries After

Eye Contact: May cause eye irritation.

Symptoms/Injuries

After Ingestion: Ingestion is an unlikely route of exposure for a gas.

Chronic Symptoms: None expected under normal conditions of use.

Information on Toxicological Effects - Ingredient(s) LD50 and LC50 Data:

Dimethyl ether (115-10-6)

LC50 Inhalation Rat : 308.5 mg/l/4h

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

LC50 Inhalation Rat: 1500 g/m³ (Exposure time: 4 h)

Naphtha, petroleum, hydrotreated light (64742-49-0)

LD50 Oral Rat: > 5000 mg/kg

LD50 Dermal Rabbit: > 3160 mg/kg

LC50 Inhalation Rat: 73680 ppm/4h

12: Ecological information

Toxicity

Ecology - General: Harmful to aquatic life with long lasting effects.

Persistence and Degradability: Not established

Bioaccumulative Potential: Not established.

Dimethyl ether (115-10-6)

Log Pow: -0.18

Siloxanes and Silicones, di-Me (63148-62-9)

Mobility in Soil: Not available
Other Adverse Effects
Other Information: Avoid release to the environment.

13: Disposal considerations

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Additional Information: Handle empty containers with care because residual vapors are flammable.

14: Transport information

14.1 In Accordance with DOT

Please see current shipping paper for most up to date shipping information including exemptions and special circumstances.

Proper Shipping Name : AEROSOLS flammable, (each not exceeding 1 L capacity)
Hazard Class: 2.1
Identification Number: UN1950
Label Codes: 2.1
ERG Number: 115



14.2 In Accordance with IMDG

Proper Shipping Name: AEROSOLS
Hazard Class: 2.1
Identification Number: UN1950
Label Codes: 2.1
EmS-No. (Fire): F-D
EmS-No. (Spillage): S-U



14.3 In Accordance with IATA

Proper Shipping Name: AEROSOLS, FLAMMABLE
Identification Number: UN1950
Hazard Class: 2
Label Codes: 2.1
ERG Code (IATA): 10L



14.4 In Accordance with TDG

Proper Shipping Name: AEROSOLS flammable
Hazard Class: 2.1
Identification Number: UN1950
Label Codes: 2.1



US Federal Regulations

Castaldo Mold Release
SARA Section 311/312

Hazard Classes: Immediate (acute) health hazard.
Fire hazard.

15: Regulatory information

Dimethyl ether (115-10-6):

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Siloxanes and Silicones, di-Me (63148-62-9):

Listed on the United States TSCA (Toxic Substances Control Act) inventory

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

Listed on the United States TSCA (Toxic Substances Control Act) inventory

1,1-Difluoroethane (75-37-6):

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Naphtha, petroleum, hydrotreated light (64742-49-0):

Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations

Dimethyl ether (115-10-6):

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

U.S. - Massachusetts - Right To Know List

1,1-Difluoroethane (75-37-6):

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

Fluorides:

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

Canadian Regulations

Castaldo Mold Release

WHMIS Classification:

Class B Division 5 - Flammable Aerosol

Class A - Compressed Gas

Class D Division 2 Subdivision B - Toxic material causing other toxic effect



Dimethyl ether (115-10-6)

Listed on the Canadian DSL

(Domestic Substances List)

WHMIS Classification:

Class A - Compressed Gas

Class B Division 1 - Flammable Gas

Siloxanes and Silicones, di-Me (63148-62-9)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification:

Uncontrolled product according to WHMIS classification criteria

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

Listed on the Canadian DSL

(Domestic Substances List)

WHMIS Classification:

Class A - Compressed Gas

1,1-Difluoroethane (75-37-6)

Listed on the Canadian DSL

(Domestic Substances List)

WHMIS Classification:

Class A - Compressed Gas

Class B Division 1 - Flammable Gas

**Naphtha, petroleum,
hydrotreated light (64742-49-0)
Listed on the Canadian**

DSL (Domestic Substances List)

WHMIS Classification: Class B Division 2 - Flammable Liquid
Class D Division 2 Subdivision B - Toxic material
causing other toxic effects

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

Revision Date: 10/08/2015
Other Information: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

16: Other information, including date of preparation or last revision

15GHS Full Text Phrases:

Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Asp. Tox. 1	Aspiration hazard Category 1
Flam. Aerosol 2	Flammable aerosol Category 2
Flam. Liq. 2	Flammable Liquids Category 2
Liquified gas	Gasses under pressure, liquified gas
Simple Asphy	Simple Asphyxiant
Skin Irrit. 2	Skin corrosion/irritation Category 2

Castaldo Mold Release

STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H220	Extremely flammable gas
H223	Flammable aerosol
H225	Highly flammable liquid and vapor
H280	Contains gas under pressure; may explode if heated

H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H336	May cause drowsiness or dizziness
H411	Toxic to aquatic life with long lasting effects

Party responsible for the preparation of this product

F.E. Knight Inc.

Telephone: (508) 520-1666

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.