

Safety Data Sheet
Castaldo® Jewelry Mold Release Spray



SDS Revision Date:

12/05/2014

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Identity Castaldo® Jewelry Mold Release Spray
Alternate Names Castaldo® Jewelry Mold Release Spray

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use See Technical Data Sheet.
Application Method See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

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

Emergency

24 hour Emergency Telephone No. Chem-Tel: 1-800-255-3924 or 617-969-5399
Customer Service: F. E. Knight Inc. 508-520-1666

2. Hazard identification of the product

2.1. Classification of the substance or mixture

Press. Gas;H280 Contains gas under pressure; may explode if heated.

Simple Asphyxiant May displace oxygen and cause rapid suffocation.

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



Danger

H280 Contains gas under pressure; may explode if heated.
May displace oxygen and cause rapid suffocation.

Mold Release Spray
729021

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[Prevention]:

No GHS prevention statements

[Response]:

No GHS response statements

[Storage]:

P410+403 Protect from sunlight. Store in a well ventilated place.

[Disposal]:

No GHS disposal statements

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
1,1-difluoroethane (HFC-152A) CAS Number: 0000075-37-6	50 - 75	Flam. Gas 1;H220 Liquified Gas;H280 STOT SE 3;H336 Simple Asphyxiant	[1]
Dimethyl ether CAS Number: 0000115-10-6	25 - 50	Flam. Gas 1;H220 Press. Gas;H280	[1]
1,1,1,2-Tetrafluoroethane (HFC-134a) CAS Number: 0000811-97-2	1.0 - 10	Liquified Gas;H280 Simple Asphyxiant	[1]
Aliphatic Hydrocarbon CAS Number: 0064742-49-0	1.0 - 10	Asp. Tox. 1;H304	[1]

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

Eyes Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

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Skin	Wash affected area with soap and water. Remove and launder contaminated clothing before re-use. Treat as frostbite. If irritation develops or if there is evidence of tissue damage, get medical attention.
Ingestion	If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Overview

Liquid and gas under pressure, overheating and overpressurizing may cause gas release or rupturing of container. May decompose on contact with flames or extremely hot metal surfaces to produce toxic and corrosive products. Vapor reduces oxygen available for breathing and is heavier than air. Harmful if inhaled and may cause heart irregularities, unconsciousness or death. Liquid contact with eyes or skin may cause frostbite.

Potential Health Effects Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. As with most liquefied gases, contact with rapidly volatilizing liquid or cold vapor can cause frostbite to any tissue. High vapor concentrations are irritating to the eyes and respiratory tract and may result in central nervous system effects such as headache, dizziness, anesthesia, drowsiness, and in severe exposure, loss of consciousness and death. The dense vapor of this material may reduce the available oxygen for breathing and produce symptoms such as headache, dizziness, drowsiness, cyanosis and lack of muscle control followed by collapse. Prolonged exposure to an oxygen-deficient atmosphere may be fatal. Inhalation of this material may cause an increase in the sensitivity of the heart to adrenaline, which could result in irregular or rapid heartbeats and reduced heart function. Workers with heart disease or compromised heart function should limit exposure to this material. See section 2 for further details.

5. Fire-fighting measures

5.1. Extinguishing media

Dry chemical extinguisher (B-C), Water.

Use of dry chemical, foam, or CO₂; water may be ineffective but should be used to keep exposed containers cool. Stop release of materials if possible. Avoid accumulation of unburned materials. Remove personnel in general area.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Hydrogen fluoride, hydrogen chloride, carbon monoxide carbon dioxide and chlorine.

Keep away from heat / sparks / open flames / hot surfaces - No smoking.

5.3. Advice for fire-fighters

Specific hazards during Firefighting: Container may rupture or explode under fire conditions. Hazardous decomposition products may be formed (see reactivity data in section 9). Vapors are heavier than air and may accumulate in low areas. Vapors confined in a poorly ventilated area may be ignited by a spark or flame. Vapors may travel considerable distances to ignition sources. Under fire conditions, empty containers retain product residue and can be dangerous.

Special protective Equipment for firefighters: In the event of fire and/or explosion do not breathe fumes. Wear self-contained breathing apparatus and protective suit. No unprotected exposed skin areas.

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ERG Guide No. ----

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Immediately evacuate personnel to safe areas. Avoid breathing vapors. Remove all sources of ignition. Vapors may be heavier than air and can cause suffocation by reducing oxygen available for breathing. Ensure adequate ventilation.

6.2. Environmental precautions

Do not allow spills to enter drains or waterways. Prevent further discharge, if it can be done safely. Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Contain spillage and then collect with non-combustible absorbent material (e.g. sand, earth, vermiculite) and place in container for disposal according to local and national regulations

7. Handling and storage

7.1. Precautions for safe handling

Handle with care. For industrial use only. Keep out of reach of children. Do not get in eyes, on skin or on clothing. Do not use in areas without adequate ventilation. Do not breathe vapors or spray mist. If ventilation is not sufficient, wear proper respiratory equipment. Advice on protection against fire and explosion:

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Contents are under pressure and some components may burn. Do not store or use near ignition sources, do not expose to open flame or temperatures above 120°F.

Incompatible materials: Finely divided metals. Can react violently if in contact with alkali or alkaline earth metals such as sodium, potassium or barium.

Read label precautions; do not remove or deface label. Keep containers tightly closed in a dry, cool and well-ventilated area, or not store near ignition sources. Do not store at temperatures above 120°F. Keep out of direct sunlight. See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

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8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0000075-37-6	1,1-difluoroethane (HFC-152A)	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0000115-10-6	Dimethyl ether	OSHA	No Established Limit
		ACGIH	TWA: 1000 ppm
		NIOSH	No Established Limit
		Supplier	No Established Limit
0000811-97-2	1,1,1,2-Tetrafluoroethane (HFC-134a)	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0064742-49-0	Aliphatic Hydrocarbon	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

Carcinogen Data

CAS No.	Ingredient	Source	Value
0000075-37-6	1,1-difluoroethane (HFC-152A)	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0000115-10-6	Dimethyl ether	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0000811-97-2	1,1,1,2-Tetrafluoroethane (HFC-134a)	OSHA	Select Carcinogen: No

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12	(HFC-134a)	NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0064742-49	Aliphatic Hydrocarbon	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

8.2. Exposure controls

- Respiratory** If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.
- Eyes** Wear safety glasses, with side-shields, chemical splash goggles, and/or full-face shield where there is potential for eye contact. An eyewash fountain should be located in areas where the product is used.
- Skin** Wear overalls to keep skin contact to a minimum. Avoid skin contact. Use chemically resistant gloves.
- Engineering Controls** Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.
- Other Work Practices** Safety showers and eye wash stations should be provided in areas where this product is used. Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

Appearance	Clear Colorless Liquid, under pressure
Odor	slight sweet ether-like
Odor threshold	Not Measured
pH	NA
Melting point / freezing point	NA
Initial boiling point and boiling range	NA
Flash Point	NA
Evaporation rate (Ether = 1)	NA
Flammability (solid, gas)	NA
Upper/lower flammability or explosive limits	Lower Explosive Limit: NA Upper Explosive Limit: NA
Vapor pressure (Pa)	69 PSIG @70 F

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Vapor Density	2.6 (AIR=1)
Specific Gravity	NA
Solubility in Water	Insoluble
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	NA
Decomposition temperature	NA
Viscosity (cSt)	NA
VOC %	NA
Form	Aerosol, in cans

9.2. Other information

No other relevant information.

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Do not expose to heat or store at temperature above 120°F. Avoid all ignition sources.

10.5. Incompatible materials

Finely divided metals. Can react violently if in contact with alkali or alkaline earth metals such as sodium, potassium or barium.

10.6. Hazardous decomposition products

Hydrogen fluoride, hydrogen chloride, carbon monoxide carbon dioxide and chlorine.

11. Toxicological information

Acute toxicity

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Exposure to solvent vapor concentrations from the component solvents in excess of the stated occupational exposure limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eyes may cause irritation and soreness with possible reversible damage.

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LD50, ppm
1,1-difluoroethane (HFC-152A) - (75-37-6)	No data available	No data available	No data available	No data available	No data available
Dimethyl ether - (115-10-6)	No data available	No data available	308.00, Rat - Category: NA	No data available	No data available
1,1,1,2-Tetrafluoroethane (HFC-134a) - (811-97-2)	No data available	No data available	No data available	No data available	No data available
Aliphatic Hydrocarbon - (64742-49-0)	5,000.00, Rat - Category: 5	3,160.00, Rabbit - Category: 5	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	---	Not Applicable
Serious eye damage/irritation	---	Not Applicable
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

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12. Ecological information

12.1. Toxicity

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and GHS and is not classified as dangerous for the environment, but contains substance(s) dangerous for the environment. See section 3 for details

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
1,1-difluoroethane (HFC-152A) - (75-37-6)	Not Available	Not Available	Not Available
Dimethyl ether - (115-10-6)	4,000.00, <i>Poecilia reticulata</i>	4,000.00, <i>Daphnia magna</i>	Not Available
1,1,1,2-Tetrafluoroethane (HFC-134a) - (811-97-2)	Not Available	Not Available	Not Available
Aliphatic Hydrocarbon - (64742-49-0)	Not Available	2.60, <i>Chaetogammarus marinus</i>	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Do not puncture or incinerate cans. Empty fully and relieve pressure. Empty containers can be recycled. Observe all Federal, State, and Local Environmental regulations.

14. Transport information

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	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	UN1950	UN1950	UN1950
14.2. UN proper shipping name	Aerosols	Aerosols	Aerosols non-flammable Packing Instruction: Y203 (Passenger Aircraft)
14.3. Transport hazard class(es)	DOT Hazard Class: 2.2 DOT Label: "Limited Quantity" marking	IMDG: 2	Air Class: 2
14.4. Packing group	Not Applicable	Not Applicable	Not Applicable
14.5. Environmental hazards			
IMDG	Marine Pollutant: No		
14.6. Special precautions for user			
	No further information		

15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Toxic Substance Control Act (TSCA) All components of this material are either listed or exempt from listing on the TSCA Inventory.

WHMIS Classification A

US EPA Tier II Hazards Fire: Yes

Sudden Release of Pressure: Yes

Reactive: No

Immediate (Acute): No

Delayed (Chronic): No

EPCRA 311/312 Chemicals and RQs:

(No Product Ingredients Listed)

EPCRA 302 Extremely Hazardous :

(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals:

(No Product Ingredients Listed)

Proposition 65 - Carcinogens (>0.0%):

(No Product Ingredients Listed)

Proposition 65 - Developmental Toxins (>0.0%):

(No Product Ingredients Listed)

Proposition 65 - Female Repro Toxins (>0.0%):

(No Product Ingredients Listed)

Proposition 65 - Male Repro Toxins (>0.0%):

(No Product Ingredients Listed)

N.J. RTK Substances (>1%):

1,1-difluoroethane (HFC-152A)

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Dimethyl ether

Penn RTK Substances (>1%):

Dimethyl ether

16. Other information

The full text of the phrases appearing in section 3 is:

H220 Extremely flammable gas.

H280 Contains gas under pressure; may explode if heated.

H304 May be fatal if swallowed and enters airways.

H336 May cause drowsiness and dizziness.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

Disclaimer: The information contained herein is considered accurate; however, F.E. Knight, Inc. makes no warranty regarding the accuracy of the information. The user must determine the suitability of the product for the intended use and accepts all risk and liability associated with that use.

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