



Material Safety Data Sheet

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

Product:	Cold spray/aerosol (Kältespray/Spraydose)
Manufacturer:	Conrad Electronic SE
Address:	Klaus-Conrad-Str. 1, D-92240 Hirschau
Telephone:	+49 (0) 9604 / 40 - 8988
Erstellungsdatum:	27.09.2019

1.1. Product identifier

Cold spray/aerosol (Kältespray/Spraydose)

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

Cooling Agent



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2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Physical: Aerosol, category 3

Pressurised container: May burst if heated.

Health: Not classified

Environment: Not classified

Other hazards: Avoid contact with skin and eyes, in case of contact with liquid product frostbite symptoms may occur.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

Product identifier:

Signal word: Warning

Hazard statement(s): H229: Pressurised container: May burst if heated.

Precautionary statement(s): P102: Keep out of reach of children.

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking.

P251: Do not pierce or burn, even after use.

P336: Thaw frosted parts with lukewarm water. Do not rub affected area.

P410/412: Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Supplemental Hazard information:

Avoid contact with skin and eyes, in case of contact with liquid product frostbite symptoms may occur.

2.3. Other hazards

In case of contact with liquid product frostbite symptoms may occur.

Aerosols may explode if heated above 50°C

3. Composition/information on ingredients

3.1. Substances

Hazardous ingredient	Registration number	CAS-nr.	EC-nr	w/w %	Hazard Class and Category	Hazard statement	Notes
trans-1,3,3,3-tetrafluoroprop-1-ene	01-0000019758-54	29118-24-9	471-480-0	75-100	Press. Gas	H280	

(* Explanation phrases : see chapter 16)

3.2. Mixtures

Not applicable.



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4. First aid measures

4.1. Description of first aid measures

Contact with eyes:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Contact with skin:

In case of contact with liquid, thaw frosted parts with water, remove clothing carefully and wash with soap & water.

Seek medical advice.

Inhalation:

Fresh air, keep warm and at rest.

Ingestion:

In case of accident or if you feel unwell, seek medical advice (show the label where possible)

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

Inhalation:

Excessive inhalation of solvent vapours may give rise to nausea, headaches and dizziness

Ingestion:

Not available.

Skin contact:

In case of contact with liquid product frostbite symptoms may occur.

Eye contact:

In case of contact with liquid product frostbite symptoms may occur.

4.3. Indication of any immediate medical attention and special treatment needed

General Advice:

In case of accident or if you feel unwell, seek medical advice (show the label where possible)

If symptoms persist always call a doctor

5. Firefighting measures

5.1. Extinguishing media

Water, foam, carbon dioxide or dry agent

5.2. Special hazards arising from the substance or mixture

Aerosols may explode if heated above 50°C

Forms hazardous decomposition products CO, CO₂

HF may be formed under condition of fire

5.3. Advice for firefighters

Keep container(s) exposed to fire cool, by spraying with water

In case of fire, do not breathe fumes



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6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Shut off all ignition sources

Ensure adequate ventilation

Wear suitable protective clothing and gloves.

6.2. Environmental precautions

Do not allow to enter public sewers and watercourses

6.3. Methods and material for containment and cleaning up

Allow product to evaporate

6.4. Reference to other sections

For further information see section 8

7. Handling and storage

7.1. Precautions for safe handling

Keep away from heat and sources of ignition

Do not spray on a naked flame or incandescent material.

Do not pierce or burn aerosols, even after use.

Do not breathe aerosols or vapours.

Ensure adequate ventilation

Avoid contact with skin and eyes.

For use on energized equipment keep ambient temperature below 28°C.

7.2. Conditions for safe storage, including any incompatibilities

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

Store in a well-ventilated place.

Keep out of reach of children.

7.3. Specific end use(s)

Cooling Agent



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8. Exposure controls/personal protection

8.1. Control parameters

Exposure limits:

No information available

8.2. Exposure controls

Control procedures:

Ensure adequate ventilation

Keep away from heat and sources of ignition

Personal protection:

Take precautions to avoid contact with skin and eyes when handling the product.

Ensure adequate ventilation

Inhalation:

In case of insufficient ventilation, wear suitable respiratory equipment.

Compressed air mask.

Hands and skin:

For incidental contact with the product wear chemical-resistant gloves (standard EN 374). The use of disposable gloves is acceptable provided that they are changed immediately after a splash or spill.

In all cases handle and use the product in accordance with good industrial hygiene practices.

Eyes:

Wear safety eyewear according to EN 166.

Environmental protection:

Avoid release to the environment.

Consumer exposure protection:

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.



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9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

(for aerosols data for the product without propellant)

Appearance: physical state:	HFO1234ze propelled liquid
Colour:	Colorless
Odour:	Odorless
pH:	Not applicable
Boiling point/range:	-19 °C
Flash point:	None
Evaporation rate:	Not applicable
Explosion limit:	Upper limit: No UEL was assigned at standard testing conditions(20°C). Exhibits flame limits at temperatures in excess of 28°C. Lower limit: No LEL was assigned at standard testing conditions(20°C). Exhibits flame limits at temperatures in excess of 28°C.
Vapour pressure:	420 kPa (@ 20°C).
Relative density:	1.18 g/cm ³ (@ 20°C).
Solubility in water:	Partly soluble in water
Auto-ignition:	288-293 °C
Viscosity:	Not applicable.

9.2. Other information

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10. Stability and reactivity

10.1. Reactivity

No hazardous reactions known if used for its intended purpose

10.2. Chemical stability

Stable

10.3. Possibility of hazardous reactions

No hazardous reactions known if used for its intended purpose

10.4. Conditions to avoid

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C.

Avoid overheating

10.5. Incompatible materials

Strong oxidising agent

10.6. Hazardous decomposition products

CO, CO₂

HF may be formed under condition of fire



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11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity:

Based on available data the classification criteria are not met

Skin corrosion/irritation:

Based on available data the classification criteria are not met

Serious eye damage/irritation:

Based on available data the classification criteria are not met

Respiratory or skin sensitisation:

Based on available data the classification criteria are not met

Germ cell mutagenicity:

Based on available data the classification criteria are not met

Carcinogenicity:

Based on available data the classification criteria are not met

Toxicity for reproduction:

Based on available data the classification criteria are not met

STOT-single exposure:

Based on available data the classification criteria are not met

STOT repeated exposure:

Based on available data the classification criteria are not met

Aspiration hazard:

Based on available data the classification criteria are not met

Information on likely routes of exposure:

Inhalation:

Inhalation of gas may give rise to nausea, headaches and dizziness.

Ingestion:

Ingestion is unlikely to occur

Skin contact:

In case of contact with liquid product frostbite symptoms may occur.

Eye contact:

In case of contact with liquid product frostbite symptoms may occur.

Toxicological data:

No information available



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12. Ecological information

12.1. Toxicity

Ecotoxicological data:

No information available

12.2. Persistence and degradability

Not readily biodegradable

12.3. Bioaccumulative potential

For all ingredients the octanol-water partition coefficient is below 4.

12.4. Mobility in soil

No information available

12.5. Results of PBT and vPvB assessment

No information available

12.6. Other adverse effects

No experimental data available

GWP (global warming potential): 7 (calculated in accordance with Annex IV of Regulation (EU) No 517/2014 on fluorinated greenhouse gases)

13. Disposal considerations

13.1. Waste treatment methods

Product:

This material and its container must be disposed of in a safe way.

Do not discharge into drains or the environment, dispose to an authorised waste collection point.

Contaminated packaging:

Disposal should be in accordance with local, state or national legislation



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14. Transport information

14.1. UN number

UN-number: 1950

14.2. UN proper shipping name

Proper shipping name:

AEROSOLS

14.3. Transport hazard class(es)

Class: 2.2

ADR/RID - Classification code: 5A

14.4. Packing group

Packing group: Not applicable.

14.5. Environmental hazards

ADR/RID - Environmentally hazardous: No

IMDG - Marine pollutant: No

IATA/ICAO - Environmentally hazardous: No

14.6. Special precautions for user

ADR/RID - Tunnelcode: (E)

IMDG - Ems: F-D, S-U

IATA/ICAO - PAX: 203

IATA/ICAO - CAO: 203

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable.



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15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

The Safety Data Sheet is compiled according to the current European requirements.

Regulation (EC) No 1907/2006 (REACH)

Regulation (EC) No 1272/2008 (CLP)

Dir. 2013/10/EU, 2008/47/EC amendment of the aerosol dispenser directive 75/324/EEC.

15.2. Chemical safety assessment

No information available

16. Other information

*Explanation hazard statements:

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

This product should be stored, handled and used in accordance with good industrial hygiene practices and in conformity with any legal regulation. The information contained herewith is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It does not guarantee any specific properties.