

SAFETY DATA SHEET

Frost Spray CA-224

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name

Frost Spray CA-224

REACH registration number

01-0000019758-54

Other means of identification

EC No.: 471-480-0

CAS No.: 29118-24-9

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

Relevant identified uses of the substance or mixture

Rensemiddel

Use descriptors (REACH)

Sectors of use	Description
LCS "C"	Consumer uses: Private households (= general public = consumers)
LCS "PW"	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Product category	Description
PC 24	Lubricants, Greases and Release Products
Process category	Description
PROC 11	Non industrial spraying
Environmental release category	Description
ERC 8a	Wide dispersive indoor use of processing aids in open systems

Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

▼ Company and address

Pureno A/S

Gefionsvej 20

3400 Hillerød

Denmark

+45 70 260 267

▼ Contact person

Lars Skaarup

▼ E-mail

ls@pureno.dk

Revision

09/10/2024

SDS Version

3.0

Date of previous version

20/04/2023 (2.0)

1.4. Emergency telephone number

Contact the poison hotline: +45 82 12 12 12 (24 hour service)

See section 4 "First aid measures".

SECTION 2: Hazards identification

Classified according to Regulation (EC) No. 1272/2008 (CLP).

2.1. Classification of the substance or mixture

Aerosol 3; H229, Pressurised container: May burst if heated.

2.2. Label elements

Hazard pictogram(s)

Not applicable.

Signal word

Warning

Hazard statement(s)

Pressurised container: May burst if heated. (H229)

Precautionary statement(s)

General

Keep out of reach of children. (P102)

Prevention

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

Do not pierce or burn, even after use. (P251)

Response

-

Storage

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F. (P410+P412)

Disposal

-

Hazardous substances

None known.

Additional labelling

Not applicable.

2.3. Other hazards

▼ Additional warnings

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2023/707.

SECTION 3: Composition/information on ingredients

3.1. Substances

Product/substance	Identifiers	% w/w	Classification	Note
Trans-1,3,3,3-Tetrafluoroprop-1-ene	CAS No.: 29118-24-9 EC No.: 471-480-0 REACH: 01-0000019758-54 Index No.:	95-100%	Press. Gas (Comp.) H280	

3.2. Mixtures

Not applicable. This product is a substance.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

-

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with

him/her.

Skin contact

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

▼ Eye contact

If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.

Ingestion

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

Burns

Not applicable.

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

None known.

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

Treat symptomatically.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Pressurised container. In a fire or if heated, a pressure increase will occur and the container may burst.

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the chemical emergency services on 72 85 20 00 (24 h service) in order to obtain further advice.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No specific requirements.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

6.3. Methods and material for containment and cleaning up

Limit spillage and collect using granular absorbent or similar materials, and dispose of it in accordance with the regulations on dangerous waste.

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

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. ▼ Precautions for safe handling

Do not pierce or burn, even after use.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. ▼ Conditions for safe storage, including any incompatibilities

▼ Recommended storage material

Keep only in original packaging.

Storage conditions

> 0°C

< 50°C

Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No substances are listed in the national list of substances with an occupational exposure limit.

DNEL

No data available.

PNEC

No data available.

8.2. ▼ Exposure controls

Apply general control to prevent unnecessary exposure

General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios

There are no exposure scenarios implemented for this product.

Exposure limits

Occupational exposure limits have not been defined for the substances in this product.

Appropriate technical measures

Apply standard precautions during use of the product. Avoid inhalation of gas or dust.

▼ Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

Measures to avoid environmental exposure

No specific requirements.

Individual protection measures, such as personal protective equipment

Generally

Use only CE marked protective equipment.

Respiratory Equipment

Type	Class	Colour	Standards
No specific requirements			

Skin protection

Recommended	Type/Category	Standards
No specific requirements	-	-

Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
No specific requirements	-	-	-

Eye protection

Type	Standards
No specific requirements	-

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Aerosol

Colour

Colourless

Odour / Odour threshold

None

▼ pH

No relevant or available data due to the nature of the product.

Density (g/cm³)

1.18

▼ Kinematic viscosity

No relevant or available data due to the nature of the product.

▼ Particle characteristics

No relevant or available data due to the nature of the product.

Phase changes

▼ Melting point/Freezing point (°C)

No relevant or available data due to the nature of the product.

Softening point/range (°C)

Does not apply to aerosols.

Boiling point (°C)

-19

▼ Vapour pressure

No relevant or available data due to the nature of the product.

▼ Relative vapour density

No relevant or available data due to the nature of the product.

▼ Decomposition temperature (°C)

No relevant or available data due to the nature of the product.

Data on fire and explosion hazards

Flash point (°C)

Does not apply to aerosols.

Flammability (°C)

368

▼ Auto-ignition temperature (°C)

No relevant or available data due to the nature of the product.

▼ Lower and upper explosion limit (% v/v)

No relevant or available data due to the nature of the product.

Solubility

▼ Solubility in water

No relevant or available data due to the nature of the product.

n-octanol/water coefficient (LogKow)

2.01

▼ Solubility in fat (g/L)

No relevant or available data due to the nature of the product.

9.2. Other information

Other physical and chemical parameters

No data available.

▼ Oxidizing properties

No relevant or available data due to the nature of the product.

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. Possibility of hazardous reactions

None known.

10.4. ▼ Conditions to avoid

Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. ▼ Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Product/substance	Trans-1,3,3,3,-Tetrafluoroprop-1-ene
Species:	Rat
Route of exposure:	Inhalation
Test:	LC50
Result:	>965 mg/l 4h ·

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 sensitisation

Based on available data, the classification criteria are not met.

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.

Reproductive toxicity

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.

11.2. Information on other hazards

Long term effects

None known.

▼ Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

Other information

None known.

SECTION 12: Ecological information

12.1. Toxicity

Product/substance	Trans-1,3,3,3,-Tetrafluoroprop-1-ene
Species:	Daphnia
Duration:	48 hours
Test:	EC50
Result:	>160 mg/l ·

Product/substance	Trans-1,3,3,3,-Tetrafluoroprop-1-ene
Species:	Algae
Duration:	No data available.
Test:	NOEC
Result:	>170 ·

12.2. ▼ Persistence and degradability

Based on available data, the classification criteria are not met.

12.3. ▼ Bioaccumulative potential

Based on available data, the classification criteria are not met.

12.4. Mobility in soil

No data available.

12.5. ▼ Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. ▼ Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. ▼ Waste treatment methods

Product is covered by the regulations on hazardous waste. (*)

Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste.

▼ EWC code

16 05 04* Gases in pressure containers (including halons) containing dangerous substances

▼ Waste group

Gr. Z Waste that cannot be placed in any other waste group

Specific labelling

Not applicable.

▼ Contaminated packing



▼ EWC code

16 05 04* Gases in pressure containers (including halons) containing dangerous substances

▼ Waste group

Gr. Z Waste that cannot be placed in any other waste group

SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR	UN1950	AEROSOLS	Transport hazard class: 2 Label: 2.2 Classification code: 5A 	-	No	Limited quantities: 1 L Tunnel restriction code: (E) See below for additional information .
IMDG	UN1950	AEROSOLS	Transport hazard class: 2 Label: 2.2 Classification code: 5A 	-	No	Limited quantities: 1 L EmS: F-D S-U See below for additional information .
IATA	UN1950	AEROSOLS	Transport hazard class: 2 Label: 2.2	-	No	See below for

14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
		Classification code: 5A 			additional information .

* Packing group

** Environmental hazards

▼ Additional information

This product is within scope of the regulations of transport of dangerous goods.

ADR / See Table A, section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

Restrictions for application

No special.

Demands for specific education

No specific requirements.

SEVESO - Categories / dangerous substances

Not applicable.

Additional information

Not applicable.

Sources

Executive Order no. 247 of 14 March 2014 on interior design, etc. of aerosols, as amended by EO No. 301 of 27 March 2014, EO no. 478 of 25 May 2016 and EO 1336 of 29 November 2017.

Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (CLP).

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

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

The full text of identified uses as mentioned in section 1

LCS "C" = Consumer uses: Private households (= general public = consumers)

LCS "PW" = Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

PROC 11 = Non industrial spraying

PC 24 = Lubricants, Greases and Release Products

ERC 8a = Wide dispersive indoor use of processing aids in open systems

▼ Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 CAS = Chemical Abstracts Service
 CE = Conformité Européenne (European conformity)
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 CSA = Chemical Safety Assessment
 CSR = Chemical Safety Report
 DMEL = Derived Minimal Effect Level
 DNEL = Derived No Effect Level
 EINECS = European Inventory of Existing Commercial chemical Substances
 ES = Exposure Scenario
 EUH statement = CLP-specific Hazard statement
 EuPCS = European Product Categorisation System
 EWC = European Waste Catalogue
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 GWP = Global warming potential
 IARC = International Agency for Research on Cancer (IARC)
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 OECD = Organisation for Economic Co-operation and Development
 PBT = Persistent, Bioaccumulative and Toxic
 PNEC = Predicted No Effect Concentration
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
 RRN = REACH Registration Number
 SCL = A specific concentration limit
 SVHC = Substances of Very High Concern
 STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
 STOT-SE = Specific Target Organ Toxicity - Single Exposure
 TWA = Time weighted average
 UN = United Nations
 UVBC = Unknown or variable composition, complex reaction products or of biological materials
 VOC = Volatile Organic Compound
 vPvB = Very Persistent and Very Bioaccumulative

Additional information

Not applicable.

The safety data sheet is validated by

Lisbet Tetsche

▼ Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: DK-en