

SAFETY DATA SHEET

Frost Spray

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

1.1. Product identifier

Trade name

Frost Spray

REACH registration number

01-0000019758-54

Other means of identification

EC No.: 471-480-0

CAS No.: 29118-24-9

Unique formula identifier (UFI)

No data available

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

Relevant identified uses of the substance or mixture

Industrial purposes

Use descriptors (REACH)

Sector of use	Description
LCS "C"	Consumer uses: Private households (= general public = consumers)
Product categories	Description
PC35	Washing and Cleaning Products (including solvent based products)
Process Categories	Description
PROC11	Non industrial spraying
Environmental release categories	Description
ERC8a	Wide dispersive indoor use of processing aids in open systems

Uses advised against

No special

1.3. Details of the supplier of the safety data sheet

Company and address

Pureno A/S

Rønnevangs Alle 8

3400 Hillerød

Danmark

+45 70 260 267

Contact person

Kenneth Christensen

E-mail

kc@pureno.dk

SDS date

2021-03-22

SDS Version

1.0

1.4. Emergency telephone number

According to EC-Regulation 1907/2006 (REACH), annex II, as implemented by EC-Regulation 2015/830

Contact The National Poisons Information Service (dial 111, 24 h service).
See section 4 "First aid measures".

SECTION 2: Hazards identification

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.

Safety statement(s)

General

P102, Keep out of reach of children.

Prevention

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.

Response

-

Storage

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

Disposal

P501, Dispose of contents/container to an approved waste disposal plant.

Hazardous substances

No special

2.3. Other hazards

Additional labelling

Not applicable

Additional warnings

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

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

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

Other information

No special

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

Upon irritation of the eye: Remove contact lenses and open eyes widely. Flush eyes with water or saline water(20-30°C) for at least 5 minutes. Seek medical assistance and continue flushing during transport.

Ingestion

Provide plenty of water for the person to drink and stay with him/her. 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 victim 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

No special

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

No special

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

Given that it does not present and hazard gas supplies shall be disrupted immediately. Removal of pressurized containers or attempting to cool with water shall be entrusted the fire brigade.

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 National Poisons Information Service (dial 111, 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.

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.

According to EC-Regulation 1907/2006 (REACH), annex II, as implemented by EC-Regulation 2015/830

Use sand, sawdust, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials and place in container for disposal, according to local regulations.
To the extent possible cleaning is performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 on "Disposal considerations" in regard of handling of waste.
See section 8 'Exposure controls/personal protection' for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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

Always store in containers of the same material as the original container.

Storage temperature

> 0°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

Control is unnecessary if the product is used as intended.

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. Always wash 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


Work situation	Type	Class	Colour	Standards
When developing vapour, use respiratory protection with approved	Normally, personal respiratory equipment is not necessary			

According to EC-Regulation 1907/2006 (REACH), annex II, as implemented by EC-Regulation 2015/830

Work situation	Type	Class	Colour	Standards
filter				


Skin protection

Work situation	Recommended	Type/Category	Standards
	Dedicated work clothing should be worn	-	-




Hand protection

Work situation	Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
	Nitrile	-	-	EN374-2



Eye protection

Work situation	Type	Standards
	In the likelihood of direct or incidental exposure, use eye protection.	EN166



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form

Aerosol

Colour

Colourless

Odour

None

Odour threshold (ppm)

Testing not relevant or not possible due to nature of the product.

pH

Testing not relevant or not possible due to nature of the product.

Density (g/cm³)

1.18

Viscosity

Testing not relevant or not possible due to nature of the product.

Phase changes

Melting point (°C)

Testing not relevant or not possible due to nature of the product.

Boiling point (°C)

Testing not relevant or not possible due to nature of the product.

Vapour pressure

Testing not relevant or not possible due to nature of the product.

Vapour density

Testing not relevant or not possible due to nature of the product.

Decomposition temperature (°C)

Testing not relevant or not possible due to nature of the product.

Evaporation rate (n-butylacetate = 100)

Testing not relevant or not possible due to nature of the product.

Data on fire and explosion hazards

Flash point (°C)

Does not apply to aerosols.

Ignition (°C)

Testing not relevant or not possible due to nature of the product.

Auto flammability (°C)

Testing not relevant or not possible due to nature of the product.

Explosion limits (% v/v)

Testing not relevant or not possible due to nature of the product.

Explosive properties

Testing not relevant or not possible due to nature of the product.

Oxidizing properties

Testing not relevant or not possible due to nature of the product.

Solubility

Solubility in water

Testing not relevant or not possible due to nature of the product.

n-octanol/water coefficient

2.01

Solubility in fat (g/L)

Testing not relevant or not possible due to nature of the product.

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

No special

10.4. Conditions to avoid

No special

10.5. Incompatible materials

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

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Product/Ingredient name	Trans-1,3,3,3-Tetrafluoroprop-1-ene
Test method	
Species	Rat
Route of exposure	Inhalation
Test	LC50
Result	>965 mg/l 4h ·
Other information	

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.

Long term effects

No special

Other information

No special

SECTION 12: Ecological information

12.1. Toxicity

Product/Ingredient name	Trans-1,3,3,3,-Tetrafluoroprop-1-ene
Test method	
Species	Daphnia
Compartment	
Duration	48 hours
Test	EC50
Result	>160 mg/l ·
Other information	

Product/Ingredient name	Trans-1,3,3,3,-Tetrafluoroprop-1-ene
Test method	
Species	Algae
Compartment	
Duration	No data available.
Test	NOEC
Result	>170 ·
Other information	

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

12.6. Other adverse effects

According to EC-Regulation 1907/2006 (REACH), annex II, as implemented by EC-Regulation 2015/830

No special

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product is covered by the regulations on hazardous waste.

EWC code

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

Specific labelling

Not applicable

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

14.1 - 14.4

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

ADR/RID

UN- or ID number	UN proper shipping name	Labels	PG	Tunnel restriction code
1950	AEROSOLS	2.2		3 (E)

IMDG

UN- or ID number	UN proper shipping name	Labels	PG	EmS
1950	AEROSOLS	2.2		F-D, S-U

IATA

UN- or ID number	UN proper shipping name	Labels	PG
1950	AEROSOLS	2.2	

"MARINE POLLUTANT"

No

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Not applicable

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

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

The Aerosol Dispensers Regulations 2009 No. 2824, amended in 2014 (No. 1130) and in 2018 (No. 29) Commission Regulation (EU) No 1357/2014 of 18 December 2014 replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council 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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (CLP).

Regulation (EC) 1907/2006 (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

ERC8a = Wide dispersive indoor use of processing aids in open systems

PC35 = Washing and Cleaning Products (including solvent based products)

PROC11 = Non industrial spraying

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

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

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

EWC = European Waste Catalogue

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

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

UVCB = Complex hydrocarbon substance

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

Additional information

Not applicable

The safety data sheet is validated by

LT

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue 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: GB-en