SAFETY DATA SHEET

PRF 4-44 NFL

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

1.1. Product identifier

Trade name

PRF 4-44 NFL

▼Product no.

PE44G22,PE44G40T,PE44G52N,PE44G52T,PE44G52U

REACH registration number

01-0000019758-54-

Other means of identification

EC No.: 471-480-0

CAS No.: 29118-24-9

Unique formula identifier (UFI)

9U8X-A8HH-200N-Q5P9

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

Relevant identified uses of the substance or mixture

Industrial purposes

EuPCS

PC-TEC-28 / Gas products for multiple intended uses

Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Company and address

Taerosol Oy
Hampuntie 21
36220 Kangasala
Finland
+358 033565600
http://www.taerosol.com

E-mail

tilaukset@taerosol.com

▼Revision

18/08/2026

▼SDS Version

10.0

▼Date of previous version

22/06/2026 (9.0)

1.4. Emergency telephone number

HUS Poison Information Center, 24h 0800 147 111
Poison Information Center / HUS, Tukholmankatu 17, 00029 HUS (Helsinki)
See first aid measures section 4.

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

Not applicable.

Storage

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

Disposal

Not applicable.

Hazardous substances

(1E)-1,3,3,3-tetrafluoroprop-1-ene
CAS: 29118-24-9

Additional labelling

UFI: 9U8X-A8HH-200N-Q5P9

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
(1E)-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 (Liq.) , 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

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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.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Halogenated compounds

Carbon oxides (CO / CO2)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the Poison Information Center on: 09-471977, 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

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

Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

Recommended storage material

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

Storage conditions

< 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

The product contains no substances listed in the Finnish list of substances with occupational exposure limit values.

DNEL

(1E)-1,3,3,3-tetrafluoroprop-1-ene

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Inhalation	208.1 mg/m³
Long term – Systemic effects - Workers	Inhalation	1170.8 mg/m³

PNEC

(1E)-1,3,3,3-tetrafluoroprop-1-ene

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		117 µg/L
Freshwater sediment		1.25 mg/kg
Intermittent release (freshwater)		1.17 mg/L
Marine water		11.7 µg/L
Marine water sediment		125 µg/kg
Soil		755 µg/kg

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	
Respiratory protection is not needed in the event of adequate ventilation.				
AX		Brown	EN14387	

Skin protection

Recommended	Type/Category	Standards
No special when used as intended.	-	-

Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
If exposure is likely.				
Fluoropolymer elastomer (e.g. Viton®)	0,35	> 480	EN374-2, EN16523-1, EN388	

Eye protection

Type	Standards	
Use safety glasses if exposure is likely	EN166	

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state
Aerosol

Colour
Colourless

Odour / Odour threshold
Mild

pH
Not applicable - pH is not defined for non-aqueous systems

Density (g/cm^3)
Not applicable - product is an aerosol

Relative density
Not applicable - product is an aerosol

Kinematic viscosity
Not applicable - product is an aerosol

Particle characteristics
Not applicable - product is an aerosol

Phase changes

Melting point/Freezing point (°C)
No data available

Softening point/range (°C)
Does not apply to aerosols.

Boiling point (°C)
-19

Vapour pressure
No data available.

Relative vapour density
Not applicable - product is an aerosol
Decomposition temperature (°C)
No data available
Data on fire and explosion hazards
Flash point (°C)
Not applicable - product is an aerosol
Flammability (°C)
Not applicable - product is an aerosol
Auto-ignition temperature (°C)
Not applicable - product is an aerosol
Lower and upper explosion limit (% v/v)
No data available
Solubility
Solubility in water
0,373 g/L
n-octanol/water coefficient (LogKow)
No data available
Solubility in fat (g/L)
No data available
9.2. Other information
Other physical and chemical parameters
No data available.
Oxidizing properties
No data available.

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
None known.
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
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 sensitization
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.

Symptoms related to the physical, chemical and toxicological characteristics
None known.

11.2. Information on other hazards

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

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 not covered by regulations on dangerous waste.
Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste.

EWC code
Not applicable.

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

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/ADN/RID	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.

	14.1 UN / ID ***	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other 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 Classification code: 5A 	-	No	See below for additional information.

* Packing group
** Environmental hazards
*** UN number or ID number

Additional information

This product is within scope of the regulations of transport of dangerous goods.
ADR/ADN/RID / 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

Law for compliance of aerosols 13.11.2020/794
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.

▼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
EC = Effective concentration
ED = Effective dose
EINECS = European Inventory of Existing Commercial chemical Substances
EL = Effective Loading
ErC = Concentration associated with x% growth rate response
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
HP = Hazardous Property code
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IC = X maximum inhibitory concentration
IMDG = International Maritime Dangerous Goods
LC = Lethal concentration
LCLo = Value is the lowest concentration of a material in air reported to have caused the death of animals or humans
LD = Lethal dose
LOAEC = Lowest Observed Adverse Effect Concentration
LOAEL = Lowest Observed Adverse Effect Level
LOEC = Lowest Observed Effect Concentration
LogKow = logarithm of the n-octanol/water coefficient
LL = Lethal Loading
M = For multiplication factor
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NOAEC = No Observed Adverse Effect Concentration
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
NOELR = No Observable Effect Loading Rate
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 = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP). The classification of the substance/mixture in regard of environmental hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP). The classification of the mixture in regard to physical hazards has been based on the flammability classification procedure given by Regulation (EC) No. 1272/2008 (CLP).

The safety data sheet is validated by

Taerosol Oy

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: FI-en