SAFETY DATA SHEET

Fire Fighter

The safety data sheet is in accordance with Commission Regulation (EU) 2020/878 of 18 June 2020 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

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

Date issued	09.05.2023
Revision date	22.06.2023

1.1. Product identifier

Product name	Fire Fighter
Article no.	PFFI1PA65N

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

Use of the substance / mixture	Fire fighting
Main intended use	PC-TEC-5 Fire extinguishers

1.3. Details of the supplier of the safety data sheet

Company name	Taerosol Oy
Postal address	Hampuntie 21
Postcode	36220
City	Kangasala
Country	Finland
Telephone number	+358 33565600
Website	www.taerosol.com
Enterprise No.	02847686

1.4. Emergency telephone number

Emergency telephone	Telephone number: 112 / Finnish Poison Information Center: 0800 147 111, 24/7

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]	Aerosol 3; H229

Substance / mixture hazardous properties	May explode if heated
Additional information on classification	For the full text of the statements mentioned in this Section, see Section 16.

2.2. Label elements

Signal word	Warning
Hazard statements	H229 Pressurised container: May burst if heated.
Precautionary statements	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. P410+P412 Protect from sunlight. Do no expose to temperatures exceeding 50 °C / 122°F.

2.3. Other hazards

PBT / vPvB	See section 12.5
Health effect	See section 11.2

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Substance	Identification	Classification	Contents	Notes
2-(2-butoxyethoxy) ethanol	CAS No.: 112-34-5 EC No.: 203-961-6 Index No.: 603-096-00-8	Eye Irrit. 2; H319	≤ 0,5 %	
Alcohols, C6-12, ethoxylated, sulfates, sodium salts	CAS No.: 161025-28-1 EC No.: 500-485-3	Skin Irrit. 2; H315 Eye Dam. 1; H318	≤ 0,1 %	
Sodium Octyl Sulfate	CAS No.: 142-31-4 EC No.: 205-535-5	Skin Irrit. 2; H315 Eye Irrit. 2; H319	≤ 0,1 %	
Substance comments	Aerosol propellants: N2 For the full text of the statements mentioned in this Section, see Section 16.			

SECTION 4: First aid measures

4.1. Description of first aid measures

General	Take off contaminated clothing and wash it before reuse.
Inhalation	Remove person to fresh air and keep comfortable for breathing. When symptoms persist or in all cases of doubt seek medical advice.
Skin contact	Wash with plenty of soap and water. When symptoms persist or in all cases of doubt seek medical advice.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. When symptoms persist or in all cases of doubt seek medical advice. If eye irritation persists: Get medical advice/ attention.

Ingestion	Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

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

General symptoms and effects	Eye irritation

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

Medical treatment	Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Will not burn

5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	May explode if heated

5.3. Advice for firefighters

Personal protective equipment	In accordance with the requirements of EN 469, firefighter's clothing with a helmet, protective boots and gloves provides a basic level of protection against chemical accidents. In case of inadequate ventilation wear respiratory protection. See section 8.2
Fire fighting procedures	Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	Use personal protective equipment. See section 8.2 Eliminate all ignition sources if safe to do so. Ensure adequate ventilation. Stop leak if safe to do so. Evacuate area.
For emergency responders	Use personal protective equipment. See section 8.2

6.2. Environmental precautions

Environmental precautionary measures	Try to prevent the material from entering drains or water courses. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Containment	Prevent further leakage or spillage if safe to do so.
Clean up	Absorb spillage to prevent material damage.

6.4. Reference to other sections

Other instructions	See section 7, 8, 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling	Keep away from oxidising agents and strongly acid or alkaline materials. Try to prevent the material from entering drains or water courses. Handle in accordance with good industrial hygiene and safety practice. Do not taste or swallow. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Wash hands and skin thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage	Keep away from oxidising agents and strongly acid or alkaline materials. Protect from sunlight. Do not expose to temperatures exceeding 50 °C /122 °F. Keep away from food, drink and animal feedingstuffs. Keep only in original container.

7.3. Specific end use(s)

Specific use(s)	None known.

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Substance	Identification	Exposure limits	TWA Year
2-(2-butoxyethoxy) ethanol	CAS No.: 112-34-5	Country of origin: EU Limit value (8 h) : 10 ppm Limit value (8 h) : 67,5 mg/m³ **Limit value (short term)** Value: 15 ppm **Limit value (short term)** Appraisal period: 15 min **Limit value (short term)** Value: 101,2 mg/m³ **Limit value (short term)** Appraisal period: 15 min Recommended monitoring procedures: This information is not available. Source: 2006/15/EC	

8.2. Exposure controls

Precautionary measures to prevent exposure

Appropriate engineering controls	See section 7.1, 7.2

Eye / face protection

Eye protection equipment	Description: Tightly fitting safety goggles Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Reference to relevant standard: SFS-EN ISO 4007:2018

	SFS-EN ISO 16321-1:2022 SFS-EN ISO 18526-1:2020 SFS-EN ISO 16321-3:2022 SFS-EN ISO 16321-2:2021 SFS-EN ISO 18526-3:2020 SFS-EN ISO 18526-2:2020 SFS-EN ISO 18526-4:2020 SFS-EN ISO 19734:2021 SFS-EN 13911:2017 SFS-EN 16473 SFS-EN 167 SFS-EN 168 SFS-EN 443

Hand protection

Breakthrough time	Comments: As the product is a mixture of several substances, the durability of the glove materials cannot be calculated in advance and has to be tested before use. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Thickness of glove material	Comments: As the product is a mixture of several substances, the durability of the glove materials cannot be calculated in advance and has to be tested before use.
Hand protection equipment	Description: Protective gloves Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. It is good practice in industrial hygiene to avoid contact with solvents by using appropriate protective measures whenever possible. Reference to relevant standard: SFS-EN ISO 374-1:2017 SFS-EN ISO 374-5:2017 SFS-EN 511 SFS-EN 659 + A1 SFS-EN 1082-1 SFS-EN 1082-2 SFS-EN 1082-3 SFS-EN 14325:2018 SFS-EN 16350

Skin protection

Recommended protective clothing	Description: Protective clothing Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. It is good practice in industrial hygiene to avoid contact with solvents by using appropriate protective measures whenever possible. Reference to relevant standard: SFS-EN 863 SFS-EN 1149-2 SFS-EN 1149-3 SFS-EN 13034 + A1 SFS-EN 16689:2017 SFS-EN ISO 6530 CEN ISO/TR 11610

	SFS-EN ISO 11612 SFS-EN ISO 13688 SFS-EN ISO 13982-1 SFS-EN ISO 13982-2 SFS-EN ISO 13995 SFS-EN ISO 13997 SFS-EN ISO 14116 SFS-EN 15090 CEN ISO/TR 18690

Respiratory protection

Recommended respiratory protection	Description: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Use respirator when performing operations involving potential exposure to vapour of the product. In case of inadequate ventilation wear respiratory protection. The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used. Reference to relevant standard: SFS-EN ISO 16972:2020 SFS-EN 13274-1 SFS-EN 148-1:2019 SFS-EN 144-1:2018 SFS-EN 14593-1:2018 SFS-EN 1146 SFS-EN 12021 SFS-EN 12083 + AC SFS-EN 12941 + A1 + A2 SFS-EN 12942 + A1 + A2 SFS-EN 13274-2:2019 SFS-EN 13274-4:2020 SFS-EN 13274-5 SFS-EN 13274-6 SFS-EN 13274-3 SFS-EN 13274-8 SFS-EN 13274-5 SFS-EN 13274-7:2019 SFS-EN 134 SFS-EN 135 SFS-EN 136 + AC SFS-EN 137 SFS-EN 13794 SFS-EN 138 SFS-EN 140 + AC SFS-EN 142 SFS-EN 143:2021 SFS-EN 14387:2021 SFS-EN 144-3 + AC SFS-EN 144-2:2018 SFS-EN 14435 SFS-EN 145/A1 SFS-EN 145

	SFS-EN 14529 SFS-EN 14594:2018 SFS-EN 148-2 SFS-EN 148-3 SFS-EN 149 + A1 SFS-EN 15333-2 SFS-EN 1825-2 SFS-EN 1827 + A1 SFS-EN 250 SFS-EN 269 SFS-EN 402 SFS-EN 403 SFS-EN 404 SFS-EN 405 + A1 SFS-EN 529

Thermal hazards

Thermal hazards	Not applicable.

Appropriate environmental exposure control

Environmental exposure controls	See section 6.2

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	Aerosol dispenser: foam aerosol
Colour	light yellowish
Odour	characteristic
Odour limit	Reason for waiving data: No data.
pH	Value: 6,5 - 8,5 Temperature: 20 °C
Melting point / melting range	Value: - 1 °C
Boiling point / boiling range	Value: 100 °C
Flash point	Reason for waiving data: Not applicable
Flammability	Not applicable.
Lower explosion limit with unit of measurement	Reason for waiving data: No data.
Upper explosion limit with units of measurement	Reason for waiving data: No data.
Vapour pressure	Reason for waiving data: No data.
Vapour density	Reason for waiving data: Not applicable
Particle characteristics	Reason for waiving data: Not applicable
Relative density	Reason for waiving data: Not applicable
Density	Reason for waiving data: Not applicable

Solubility	Medium: Water
Partition coefficient: n-octanol/ water	Reason for waiving data: No data.
Auto-ignition temperature	Reason for waiving data: Not applicable
Decomposition temperature	Reason for waiving data: Not applicable
Viscosity	Type: Kinematic Reason for waiving data: Not applicable

9.2. Other information

Other physical and chemical properties

Physical and chemical properties	This information is not available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	See section 5.2

10.2. Chemical stability

Stability	Stable

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	See section 5.2

10.4. Conditions to avoid

Conditions to avoid	See section 7.1, 7.2

10.5. Incompatible materials

Materials to avoid	See section 7.1, 7.2

10.6. Hazardous decomposition products

Hazardous decomposition products	See section 5.2

SECTION 11: Toxicological information

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

Other information regarding health hazards

Assessment of acute toxicity, classification	Based on available data, the classification criteria are not met.
Assessment of skin corrosion / irritation, classification	Based on available data, the classification criteria are not met.

Assessment of eye damage or irritation, classification	Based on available data, the classification criteria are not met.
Assessment of respiratory sensitisation, classification	Based on available data, the classification criteria are not met.
Assessment of skin sensitisation, classification	Based on available data, the classification criteria are not met.
Assessment of germ cell mutagenicity, classification	Based on available data, the classification criteria are not met.
Assessment of carcinogenicity, classification	Based on available data, the classification criteria are not met.
Assessment of reproductive toxicity, classification	Based on available data, the classification criteria are not met.
Assessment of specific target organ toxicity - single exposure, classification	Based on available data, the classification criteria are not met.
Assessment of specific target organ toxicity - repeated exposure, classification	Based on available data, the classification criteria are not met.
Assessment of aspiration hazard, classification	Based on available data, the classification criteria are not met.

Symptoms of exposure

In case of ingestion	See section 4.2
In case of skin contact	See section 4.2
In case of inhalation	See section 4.2
In case of eye contact	See section 4.2

11.2 Other information

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

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity	This information is not available.

12.2. Persistence and degradability

Persistence and degradability description/evaluation	This information is not available.

12.3. Bioaccumulative potential

Bioaccumulation, evaluation	This information is not available.

12.4. Mobility in soil

Mobility	This information is not available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	This information is not available.

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

Additional ecological information	This information is not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate methods of disposal for the chemical	Dispose of product residue in accordance with the instructions of the person responsible for waste disposal. Avoid putting the substance into waste water.
Appropriate methods of disposal for the contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Where possible recycling is preferred to disposal. Do not pierce or burn, even after use.
EU Regulations	Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives

SECTION 14: Transport information

14.1. UN number

ADR/RID/ADN	1950
IMDG	1950
ICAO/IATA	1950

14.2. UN proper shipping name

Proper shipping name English ADR/RID/ADN	AEROSOLS
ADR/RID/ADN	AEROSOLS
IMDG	AEROSOLS
ICAO/IATA	AEROSOLS, NON-FLAMMABLE

14.3. Transport hazard class(es)

ADR/RID/ADN	2.2
Classificaton code ADR/RID/ADN	5A

14.4. Packing group

Comments	-

14.5. Environmental hazards

Comments	No

14.6. Special precautions for user

Special safety precautions for user	This information is not available.

14.7. Maritime transport in bulk according to IMO instruments

Product name	AEROSOLS, NON-FLAMMABLE

Additional information

Hazard label ADR/RID/ADN	2.2
Hazard label IMDG	2.2
Hazard label ICAO/IATA	2.2

ADR/RID Other information

Tunnel restriction code	E
Limited quantity	1 L
Excepted quantity	E0
Special provisions	190 327 344 625
Transport category	3

ADN Other information

Special provisions	190 327 344 625
Limited quantity	1 L
Excepted quantity	E0

IMDG Other information

EmS	F-D, S-U
Limited quantity	1000 mL
Excepted quantity	E0
Special provisions	63, 190, 277, 327, 344, 381, 959

ICAO/IATA Other information

Limited quantity	30 kg
Excepted quantity	E0
Special provisions	A145 A165 A802
Additional information ICAO/IATA	Cargo: max. 150 kg (203), Pas.: max. 75 kg (203)

SECTION 15: Regulatory information

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

Legislation and regulations	Council Directive 75/324/EEC on the approximation of the laws of the Member States relating to aerosol dispensers The rules which cover amongst other things the requirement for ventilation, protective clothing, personal protective equipment etc. can be obtained from the National Occupational Health and Safety Board.

15.2. Chemical safety assessment

Chemical safety assessment performed	No

SECTION 16: Other information

List of relevant H-phrases (Section 2 and 3)	H229 Pressurised container: May burst if heated. H315 Causes skin irritation. H318 Causes serious eye damage. H319 Causes serious eye irritation.
CLP classification, notes	Calculation method.
Training advice	Provide adequate information, instruction and training for operators. Take notice of the directions of use on the label. To avoid risks to man and the environment, comply with the instructions for use.
Key literature references and sources for data	Information taken from reference works and the literature. http://echa.europa.eu http://eur-lex.europa.eu http://echa-term.echa.europa.eu Ingredient Safety Data Sheets
Abbreviations and acronyms used	CAS = Chemical Abstracts Service CLP = Classification, Labelling and Packaging DMEL = derived minimal effect level DNEL = derived no-effect level EC50 = The effective concentration of substance that causes 50% of the maximum response. ECHA = European Chemicals Agency EINECS = European Inventory of Existing Commercial Chemical Substances ELINCS = European List of Notified Chemical Substances EEA = European Economic Area EU = European Union EC number = The three European lists of substances from the previous EU chemicals regulatory framework, EINECS, ELINCS and the NLP-list, in combination are called the EC Inventory. The EC Inventory is the source for the seven-digit EC number, an identifier of substances commercially available within the European Union. GHS = Global Harmonised System SDS = safety data sheet LC50 = median lethal concentration LDx = lethal dose x% LOAEC = lowest observed adverse effect concentration LOAEL = lowest observed adverse effect level LOEC = lowest observed effect concentration LOEL = lowest observed effect level

	NOAEC = no observed adverse effect concentration NOAEL = no observed adverse effect level NOEC = no observed effect concentration NOEL = no observed effect level PBT = persistent, bioaccumulative and toxic PNEC = predicted no-effect concentration ppm = parts per million QSAR = quantitative structure-activity relationship REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals STOT = specific target organ toxicity UFI = unique formula identifier vPvB = very persistent and very bioaccumulative
Information added, deleted or revised	Relevant changes compared to the previous version of the safety data sheet are indicated with verticle lines in the left margin.
Version	1