





MSDS - FOAM/SP/WH_Rev. 3

Date: 01/01/2025

MATERIAL SAFETY DATA SHEET

FOAM / WATER + ADDITIVE FIRE EXTINGUISHER PRESSURIZED WITH <u>NITROGEN</u>

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1. PRODUCT IDENTIFIER

<u>TRADE NAME</u>: foam / water + additive trolley fire extinguisher (25 to 150 liters size), pressurized with NITROGEN (for the identification of the contained **extinguishing agent** and of the **pressurizing substances / agents**, please refer also to the MSDS issued by the manufacturer of the extinguishing agent and / or pressurizing substances / agents, see note * later on in this MSDS)

DATA SHEET: FOAM/SP/TRO Rev. 2

PRODUCT: FIRE EXTINGUISHER WITH COMPRESSED OR LIQUEFIED GAS

UN NUMBER: 1044 - CLASS OR DIVISION: 2.2 - PACKING INSTRUCTIONS: P003

PACKAGE LABELS AND MARKS (FOR SEA SHIPPING):



CHEMICAL NAME OF PROPELLANT: NITROGEN

CAS N°: 7727 - 37 - 9

EC N°: 231 - 783 - 9

Index N°: ----

1.2. RELEVANT USE

RELEVANT USE OF THE FIRE EXTINGUISHER: Fire extinguishing.

<u>RELEVANT USE OF THE PROPELLANT</u>: Industrial and professional, test and calibration gas, pressurizing gas, laboratory use, alimentary use. For any other use, contact the manufacturer.







MSDS - FOAM/SP/WH_Rev. 3

RELEVANT USE OF THE EXTINGUISHING AGENT: extinguishing agent as foam additive.

1.3. COMPANY IDENTIFICATION

<u>COMPANY IDENTIFICATION (PRODUCER OF THE FIRE EXTINGUISHER)</u>: M.B. S.r.I., 20025 Legnano (MI), ITALY, Via Don Milani 7/9/11

COMPANY IDENTIFICATION (PROPELLANT): SICO Società Italiana Carburo Ossigeno S.p.A. T +39 02 9642661 - F +39 02 9603044

E - MAIL ADDRESS OF COMP. PERSON (FIRE EXTINGUISHER): export@mb-fire.it

1.4. EMERGENCY PHONE NUMBERS

FIRE EXTINGUISHER: + 39 0331 46.52.84

PROPELLANT: + 39 0362 552839

SECTIONS 2 TO 16 FOR THE PROPELLING GAS

*Please be so kind to refer to also to the MSDS of the <u>propelling gas</u> as latest issue from the supplier of the substance.

Reference: MSDS - EIGA089B, Dated 22/02/2023, issued by SICO

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

Hazard Class and Category Code Regulation EC 1272/2008 (CLP)

• **Physical hazards**: Gases under pressure - Refrigerated liquefied gas - Warning - (CLP: Press. Gas Ref. Liq.) - H281

2.2. Label elements

Labelling Regulation EC 1272/2008 (CLP)



Hazard pictograms



CERTIFICATO 9002 OF ONLY OF SINCERT



Date: 01/01/2025

Sede operativa: 20025 Legnano (Mi) - Via Don Milani, 16/18 Tel. 0331 46.52.84 - Fax 0331 46.52.58

MSDS - FOAM/SP/WH_Rev. 3

• Hazard pictograms code : GHS04

• Signal word: Warning

• Hazard statements: H281 - Contains refrigerated gas; may cause cryogenic burns or injury.

• Precautionary statements

- **Prevention**: P282 - Wear cold insulating gloves/face shield/eye protection.

- **Response**: P336+P315 - Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice / attention.

- Storage: P403 - Store in a well-ventilated place.

2.3. Other hazards: Asphyxiant in high concentrations.

SECTION 3. Composition/information on ingredients

3.1. Substance / 3.2. Mixture

Substance.

Substance Name	Contents	CAS No	EC No	Index No	Registration No	Classification (CLP)
Nitrogen (refrigerated)	100%	7727-37-9	231-783-9	-	*1	Press. Gas Ref. Liq. (H281)

Contains no other components or impurities which will influence the classification of the product.

- * 1: Listed in Annex IV / V REACH, exempted from registration.
- * 2: Registration deadline not expired.
- * 3: Registration not required: Substance manufactured or imported < 1t/y.

Full text of H-statements see section 16.

SECTION 4. First aid measures







MSDS - FOAM/SP/WH Rev. 3

4.1. Description of first aid measures

- **Inhalation**: Remove victim to uncontaminated area wearing self-contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.
- **Skin contact**: In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistance.
- Eye contact: Immediately flush eyes thoroughly with water for at least 15 minutes.
- **Ingestion**: Ingestion is not considered a potential route of exposure.
- **4.2. Most important symptoms and effects, both acute and delayed**: In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation.
- **4.3.** Indication of any immediate medical attention and special treatment needed: None.

SECTION 5. Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media: Water spray or fog.

- Unsuitable extinguishing media: Do not use water jet to extinguish.

5.2. Special hazards arising from the substance or mixture

Specific hazards: Exposure to fire may cause containers to rupture/explode.

Hazardous combustion products: None.

5.3. Advice for fire fighters

Specific methods: If possible, stop flow of product. Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas receptacles to rupture. Cool endangered receptacles with water spray jet from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems. Move containers away from the fire area if this can be done without risk. If leaking do not spray water onto container. Water surrounding area (from protected position) to contain fire. Use water spray or fog to knock down fire fumes if possible.

Special protective equipment for fire: Use self-contained breathing apparatus.

fighters Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters. Standard EN 469 - Protective clothing for firefighters. Standard - EN 659: Protective gloves







MSDS - FOAM/SP/WH Rev. 3

Date: 01/01/2025

for firefighters. Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask.

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

: Evacuate area. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Use protective clothing. Try to stop release. Stay upwind. Ensure adequate air ventilation. Act in accordance with local emergency plan. Monitor concentration of released product. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

- **6.2. Environmental precautions**: Try to stop release.
- **6.3. Methods and material for containment and cleaning up**: Ventilate area. Liquid spillages can cause embrittlement of structural materials.
- **6.4. Reference to other sections**: See also sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Safe use of the product: Only experienced and properly instructed persons should handle gases under pressure.

The substance must be handled in accordance with good industrial hygiene and safety procedures.

Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt.

Do not smoke while handling product.

Do not breathe gas.

Avoid release of product into atmosphere.

Ensure the complete gas system was (or is regularly) checked for leaks before use.

Consider pressure relief device(s) in gas installations.

Safe handling of the gas receptacle: Suck back of water into the container must be prevented.







MSDS - FOAM/SP/WH Rev. 3

Do not allow backfeed into the container.

Never attempt to repair or modify container valves or safety relief devices.

Damaged valves should be reported immediately to the supplier.

Keep container valve outlets clean and free from contaminants, particularly oil and water.

Replace valve outlet caps or plugs and container caps where supplied as soon as container is disconnected from equipment.

Close container valve after each use and when empty, even if still connected to equipment.

Never attempt to transfer gases from one cylinder/container to another.

Never use direct flame or electrical heating devices to raise the pressure of a container.

Do not remove or deface labels provided by the supplier for the identification of the cylinder contents.

7.2. Conditions for safe storage, including any incompatibilities

: Observe all regulations and local requirements regarding storage of containers. Keep container below 50°C in a well ventilated place. Store containers in location free from fire risk and away from sources of heat and ignition. Containers should not be stored in conditions likely to encourage corrosion. Containers should be stored in the vertical position and properly secured to prevent them from falling over. Stored containers should be periodically checked for general condition and leakage. Container valve guards or caps should be in place. Keep away from combustible materials.

7.3. Specific end use(s): None.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

DNEL: Derived no effect level (Workers): No data available.

PNEC: Predicted no effect concentration: No data available.

8.2. Exposure controls

8.2.1. Appropriate engineering: Oxygen detectors should be used when asphyxiating gases may be released.

controls Provide adequate general and local exhaust ventilation.

Systems under pressure should be regularly checked for leakages.







MSDS - FOAM/SP/WH Rev. 3

Date: 01/01/2025

Consider work permit system e.g. for maintenance activities.

- **8.2.2.** Individual protection measures, : A risk assessment should be conducted and documented in each work area to
- **e.g. personal protective equipment** assess the risks related to the use of the product and to select the PPE that matches the relevant risk. The following recommendations should be considered: PPE compliant to the recommended EN/ISO standards should be selected. Protect eyes, face and skin from liquid splashes.
- **Eye/face protection**: Wear safety glasses with side shields. Wear goggles and a face shield when transfilling or breaking transfer connections.

Standard EN 166 - Personal eye-protection.

- Skin protection
- Hand protection: Wear working gloves when handling gas containers.

Standard EN 388 - Protective gloves against mechanical risk.

Wear cold insulating gloves when transfilling or breaking transfer connections.

Standard EN 511 - Cold insulating gloves.

- Other: Wear safety shoes while handling containers.

Standard EN ISO 20345 - Personal protective equipment - Safety footwear.

• **Respiratory protection**: Self contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmospheres.

Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus

with full face mask.

Thermal hazards: None necessary.

8.2.3. Environmental exposure: None necessary.

controls

SECTION 9. Physical and chemical properties

FOR THE CHEMICAL AND PHYSICAL PROPERTIES OF THE FOAM ADDITIVE, PLEASE BE SO KIND TO REFER TO THE MSDS OF THE EXTINGUISHING AGENT AS LATEST ISSUE FROM THE SUPPLIER OF THE SUBSTANCE. REFERENCE: SOLBERG XGARD 1%, VERS. 2 DATED 19/01/2022, PROFOAM MSDS OF PROFILM AFFF, DATED 26/09/2011, ISSUED BY PROFOAM S.R.L.



CERTIFICATO 11 50 9002 SINCERT



Sede operativa: 20025 Legnano (Mi) - Via Don Milani, 16/18 Tel. 0331 46.52.84 - Fax 0331 46.52.58

MSDS - FOAM/SP/WH Rev. 3

Date: 01/01/2025

9.1. Information on basic physical and chemical properties

Appearance

Physical state at 20°C / 101.3kPa : Gas.

Colour: Colourless.

Odour: No odour warning properties.

Odour threshold: Odour threshold is subjective and inadequate to warn of overexposure.

pH value: Not applicable.

Molar mass [g/mol]: 28

Melting point [°C]: -210

Boiling point [°C]: -196

Critical temperature [°C]: -147

Flash point [°C]: Not applicable for gases and gas mixtures.

Evaporation rate (ether=1): Not applicable for gases and gas mixtures.

Flammability range [vol% in air]: Non flammable.

Vapour pressure [20°C]: Not applicable.

Relative density, gas (air=1): 0.97

Relative density, liquid (water=1): 0.8

Solubility in water [mg/l]: 20

Partition coefficient n-octanol/water [: Not applicable for inorganic gases.

log Kow]

Auto-ignition temperature [°C]: Not applicable.

Decomposition point [°C]: Not applicable.

Viscosity at 20°C [mPa.s]: Not applicable.

Explosive Properties: Not applicable.

Oxidising Properties: None.

9.2. Other information







MSDS - FOAM/SP/WH Rev. 3

spaces, particularly at or

Other data: Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

SECTION 10. Stability and reactivity

FOR THE STABILITY AND REACTIVITY OF THE FOAM ADDITIVE, PLEASE BE SO KIND TO REFER TO THE MSDS OF THE <u>EXTINGUISHING AGENT</u> AS LATEST ISSUE FROM THE SUPPLIER OF THE SUBSTANCE. <u>REFERENCE</u>: SOLBERG XGARD 1%, VERS. 2 DATED 19/01/2022, PROFOAM MSDS OF PROFILM AFFF, DATED 26/09/2011, ISSUED BY PROFOAM S.R.L.10.1.

Reactivity: No reactivity hazard other than the effects described in sub-sections below.

- **10.2. Chemical stability**: Stable under normal conditions.
- 10.3. Possibility of hazardous reactions: None.
- **10.4.** Conditions to avoid: None under recommended storage and handling conditions (see section 7).
- 10.5. Incompatible materials: None. For additional information on compatibility refer to ISO 11114.
- **10.6. Hazardous decomposition products**: None.

SECTION 11. Toxicological information

FOR THE TOXICOLOGICAL INFORMATION OF THE FOAM ADDITIVE, PLEASE BE SO KIND TO REFER TO THE MSDS OF THE <u>EXTINGUISHING AGENT</u> AS LATEST ISSUE FROM THE SUPPLIER OF THE SUBSTANCE. <u>REFERENCE</u>: SOLBERG XGARD 1%, VERS. 2 DATED 19/01/2022, PROFOAM MSDS OF PROFILM AFFF, DATED 26/09/2011, ISSUED BY PROFOAM S.R.L.

11.1. Information on toxicological effects

Acute toxicity: No known toxicological effects from this product.

Skin corrosion/irritation: No known effects from this product.

Serious eye damage/irritation: No known effects from this product.

Respiratory or skin sensitisation: No known effects from this product.

Carcinogenicity: No known effects from this product.







MSDS – FOAM/SP/WH_Rev. 3 Date: 01/01/2025

Germ cell mutagenicity: No known effects from this product.

Reproductive toxicity: No known effects from this product.

STOT-single exposure: No known effects from this product.

STOT-repeated exposure: No known effects from this product.

Aspiration hazard: Not applicable for gases and gas mixtures.

SECTION 12. Ecological information

FOR THE ECOLOGICAL INFORMATION OF THE FOAM ADDITIVE, PLEASE BE SO KIND TO REFER TO THE MSDS OF THE <u>EXTINGUISHING AGENT</u> AS LATEST ISSUE FROM THE SUPPLIER OF THE SUBSTANCE. <u>REFERENCE</u>: SOLBERG XGARD 1%, VERS. 2 DATED 19/01/2022, PROFOAM MSDS OF PROFILM AFFF, DATED 26/09/2011, ISSUED BY PROFOAM S.R.L.

12.1. Toxicity

Assessment: No ecological damage caused by this product.

12.2. Persistence and degradability

Assessment: No ecological damage caused by this product.

12.3. Bioaccumulative potential

Assessment: No ecological damage caused by this product.

12.4. Mobility in soil

Assessment: No ecological damage caused by this product.

12.5. Results of PBT and vPvB assessment

: Not classified as PBT or vPvB.

12.6. Other adverse effects

: Can cause frost damage to vegetation.

Effect on the ozone layer: None.

Effect on global warming: None.

SECTION 13. Disposal considerations







MSDS - FOAM/SP/WH Rev. 3

FOR THE DISPOSAL CONSIDERATION OF THE FOAM ADDITIVE, PLEASE BE SO KIND TO REFER TO THE MSDS OF THE <u>EXTINGUISHING AGENT</u> AS LATEST ISSUE FROM THE SUPPLIER OF THE SUBSTANCE. <u>REFERENCE</u>: SOLBERG XGARD 1%, VERS. 2 DATED 19/01/2022, PROFOAM MSDS OF PROFILM AFFF, DATED 26/09/2011, ISSUED BY PROFOAM S.R.L.

13.1. Waste treatment methods: May be vented to atmosphere in a well-ventilated place. Do not discharge into any place where its accumulation could be dangerous. Consult supplier for specific recommendations.

List of hazardous waste codes (from: 16 05 05: Gases in pressure containers other than those mentioned in 16 05 04.

Commission Decision 2001/118/EC)

13.2. Additional information: None.

SECTION 14. Transport information

14.1. UN number

UN number: 1977



Labelling ADR, IMDG, IATA

: 2.2 : Non-flammable, non-toxic gases

14.2. UN proper shipping name

Transport by road/rail (ADR/RID): NITROGEN, REFRIGERATED LIQUID

Transport by air (ICAO-TI / IATA-DGR): NITROGEN, REFRIGERATED LIQUID

Transport by sea (IMDG): NITROGEN, REFRIGERATED LIQUID

14.3. Transport hazard class(es)

Transport by road/rail (ADR/RID)

- Class : 2

- Classification code: 3 A



Sede operativa: 20025 Legnano (Mi) - Via Don Milani, 16/18 Tel. 0331 46.52.84 - Fax 0331 46.52.58





Date: 01/01/2025

MSDS - FOAM/SP/WH Rev. 3

- H.I. nr: 22

- Tunnel Restriction: C/E Tank carriage: Passage forbidden through tunnels of category C, D and E;

Other carriage: Passage forbidden through tunnels of category E

Transport by air (ICAO-TI / IATA-DGR)

- Class / Division (Subsidiary risk(s)): 2.2

Transport by sea (IMDG)

- Class / Division (Subsidiary risk(s)): 2.2

- Emergency Schedule (EmS) - Fire : F-C

- Emergency Schedule (EmS) - : S-V

Spillage

14.4. Packing group

Transport by road/rail (ADR/RID): Not applicable.

Transport by air (ICAO-TI / IATA-DGR): Not applicable.

Transport by sea (IMDG): Not applicable.

14.5. Environmental hazards

Transport by road/rail (ADR/RID): None.

Transport by air (ICAO-TI / IATA-DGR): None.

Transport by sea (IMDG): -

14.6 Special precautions for user

Packing Instruction(s)

Transport by road/rail (ADR/RID): P203

Transport by air (ICAO-TI / IATA-DGR)

- Passenger and Cargo Aircraft : Allowed.

- Packing instruction - Passenger and: 202

Cargo Aircraft

- Cargo Aircraft only : Allowed.

- Packing instruction - Cargo Aircraft: 202







MSDS - FOAM/SP/WH_Rev. 3

Date: 01/01/2025

only

Transport by sea (IMDG): P203

Special precautions for user: Avoid transport on vehicles where the load space is not separated from the driver's compartment.

Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.

Before transporting product containers:

- Ensure there is adequate ventilation.
- Ensure that containers are firmly secured.
- Ensure cylinder valve is closed and not leaking.
- Ensure valve outlet cap nut or plug (where provided) is correctly fitted.

Transport emergency phone number: (+39) 0362.512869 (operating 24h/24h, 365d/y, c/o centro di Risposta Nazionale del Servzio Emergenze Trasporti S.E.T.).

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Transport in bulk according to Annex: Not applicable.

II of MARPOL 73/78 and the IBC Code

SECTION 15. Regulatory information

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

mixture

EU legislation

Restrictions on use: None.

Seveso directive 96/82/EC: Not covered.

National legislation

National legislation: Ensure all national/local regulations are observed.

15.2. Chemical safety assessment

: A CSA does not need to be carried out for this product.







MSDS – FOAM/SP/WH_Rev. 3 Date: 01/01/2025

SECTION 16. Other information

Indication of changes: Revised safety data sheet in accordance with commission regulation (EU) No 453/2010. Annex II.

Training advice: The hazard of asphyxiation is often overlooked and must be stressed during operator training.

Sources of key data used: EIGA (European Industrial Gases Association).

List of full text of H-statements in: H281 - Contains refrigerated gas; may cause cryogenic burns or injury.

section 3.

Further information: This Safety Data Sheet has been established in accordance with the applicable

European Union legislation.

For any further information please dial (+39) 0362.512869 (operating 24h/24h, 365d/y, c/o centro di Risposta Nazionale del Servzio Emergenze Trasporti S.E.T.).

DISCLAIMER OF LIABILITY: Details given in this document are believed to be correct at the time of going to press. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted. Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out.

This is the English translation of the original SDS in Italian language.

It is intended only for use in Italy, the State where the product to which the SDS refers is placed on the market.

SECTION 14 TRANSPORT INFORMATION

UN NUMBER: UNI N° 1044 fire extinguishers provided with protection against inadvertent discharge

<u>Carriage of fire Extinguishers</u> - Fire Extinguishers are considered exempt from the requirements of the ADR according to special provision 594.

SECTION 16 OTHER INFORMATION



M.B. SRL

Sede operativa: 20025 Legnano (Mi) - Via Don Milani, 16/18 Tel. 0331 46.52.84 - Fax 0331 46.52.58





Date: 01/01/2025

MSDS - FOAM/SP/WH Rev. 3

The fire extinguisher is not classified as a substance or item in accordance with EC regulation N° . 1907/2006. So they must be considered as articles, and no substance is intended to be released during the correct handling and transport of the fire extinguisher. Therefore there is NO obligation to provide a MSDS as required by Article 31 of EC 1907/2006.

The MSDS here proposed is therefore nothing more than a <u>not</u> exhaustive sum up of the main substances contained in the pressure vessel of the fire extinguisher. In order to have a detailed information about the specific hazards of the various components (such as mainly for the propelling gas and for the extinguishing agent), please refer to the MSDS of the respective manufacturers, or contact the fire extinguisher producer.

<u>KEY DATA SOURCES</u>: MSDS of the producers of the propelling gas and extinguishing agent, as indicated above.

NOTE: this MSDS has been made taking into consideration the respective MSDS of the propelling gas and extinguishing agent.

DISCLAIMER: Proper care has been taken in preparing this document, nevertheless no liability for any injury or damage resulting from it can be charged on our company. The details and info contained in this document are believed to be correct at the time of the preparation of it. Before using this product in any new process, the user should carry out a material compatibility test and safety study.

END OF THE DOCUMENT