WHEELED FIRE EXTINGUISHER – STORED PRESSURE – FS-DM FF

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

1.1 – Product identifier	WHEELED FIRE EXTINGUISHER Stored pressure – FS-DM FF
1.2 – Relevant identified uses of the substance or mixture and uses advised against	*Relevant identified uses:* Fire extinguisher for type A and B fires. The extinguishing agent acts as an inhibitor of solid and liquid fuels. *Uses advised against:* uses other than those identified as relevant.
1.3 – Details of the supplier of the safety data sheet	ANAF FIRE PROTECTION S.P.A. Via del Commercio, 4 27020 Torre d'Isola (PV), Italy Tel.: +39 (0)382 45 33 Fax.: + 39 (0)283 92 02 79 e-mail: info@anaf.eu internet: www.anaf.eu
1.4 – Emergency telephone number	Tel.: +39 (0)382 45 33 Number available only at the following: 8.30-12.30, 13.30-17.30 (UTC) – Monday to Friday

SECTION 2 – Hazards identification

2.1 – Classification of the substance or mixture	*Classification of the substance or mixture according to Reg. (EC) no. 1272/2008* Not applicable since the product described by this SDS is defined as "article".
2.2 – Label elements	Not applicable since the product described by this SDS is defined as "article".
2.3 – Other hazards	*Identification as PBT, vPvB:* the article doesn't contain any substance meeting the criteria for persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) in accordance with Annex XIII of Reg. (EC) 1907/2006 (REACh). *Identification as endocrine disrupting properties:* the article doesn't contain any substance included in the list established in accordance with Article 59(1) of Reg. (EC) 1907/2006 (REACh) for having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. *Information on other hazards which do not lead to classification:* I The fire extinguisher is equipped with a cylinder containing compressed nitrogen. Nitrogen is an asphyxiating, non-flammable, and non-toxic gas. Containers containing pressurized gas may burst if subjected to violent shock or excessive heating. The extinguishing agent mixture contains <0.05% 1,2-benzoisothiazol-3(2H)-one (CAS 2634-33-5), which may cause an allergic reaction.

SECTION 3 – Composition/information on ingredients

3.1 – Substances	Not relevant.

3.2 – Mixtures

Refer to section 16 for the full text of the hazard statements

Extinguishing agent

Substance	Identification number	REACH registration number	Quantity (% weight)	Classification (Reg. EC no. 1272/2008)
urea	CAS 57-13-6 EC 200-315-5	Not available	0,3 - 0,9%	Not classified
2-(2-butoxyethoxy)ethanol	CAS 112-34-5 EC 203-961-6 Index: 603-096-00-8	Not available	0,1 – 0,3%	Eye Irrit. 2, H319
ethane-1,2-diol	CAS 107-21-1 EC 203-473-3 Index: 603-027-00-1	Not available.	0,1 – 0,2%	Acute Tox.4 (oral), H302
sulfuric acid, mono-C12-14-alkyl esters, compds. with triethanolamine	CAS 90583-18-9 EC 292-216-9	Not available.	< 0,2%	Acute Tox.4 (oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 3, H412
sodium octyl sulphate	CAS 142-31-4 CE 205-535-5	01-2119966154-35	< 0,2%	Skin Irrit. 2, H315 Eye Dam. 1, H318

Gas propellant

Substance	Identification number	REACH registration number	Quantity *(% weight)*	Classification (Reg. EC no. 1272/2008)
Compressed nitrogen	CAS 7727-37-9 EC 231-783-9	*substance not subject to registration (included in Annex IV and V, Reg. REACH)*	100%	H280 *Press. Gas (Comp.)*

SECTION 4 – First aid measures

The information refers to the extinguishing agent.

4.1 – Description of first aid measures	Inhalation: remove the patient from the contaminated environment and keep him at rest in a well-ventilated area. In case of injury consult a doctor. Skin contact (of the pure product): wash thoroughly with water. Eye contact: wash immediately with plenty of water for at least 20 minutes, also under eyelids. If the symptom persists, consult a specialist doctor. Ingestion: in case of injury consult a doctor.
4.2 – Most important symptoms and effects, both acute and delayed	Inhalation: no known effects. Skin Contact: no known effects. Eye Contact: weak irritation. Ingestion: no known effects
4.3 – Indication of any immediate medical attention and special treatment needed	Treat symptomaticaly

SECTION 5 – Firefighting measures

5.1 – Extinguishing media	Suitable fire-extinguishing methods: not applicable. The product is a fire-extinguisher for type A and B fires. Unsuitable fire-extinguishing media: not applicable.
5.2 – Special hazards arising from the substance or mixture	When heated to decomposition, toxic vapors may be released. Exposure to flames or excessive heat may cause the container to break or explode.

5.3 – Advice for firefighters	Specific methods of fighting fires: (information relating to the extinguishing agent) open doors and windows of the room to allow maximum ventilation. Avoid breathing vapours. Position yourself in favor of the wind in relation to the fire. Special protection in fighting fires: in case of presence of vapours, use self-contained breathing apparatus. Dispose of fire residues and contaminated water according to official regulations.

SECTION 6 – Accidental release measures

The information refers to the extinguishing agent.

6.1 – Personal precautions, protective equipment and emergency procedures	6.1.1 For non-emergency personnel: wear safety mask, gloves and proctive clothes. 6.1.2 For emergency responders: wear safety mask, gloves and proctive clothes. Ensure adequate vantilation.
6.2 – Environmental precautions	Avoid release into the environment
6.3 – Methods and material for containment and cleaning up	6.3.1 For containment: collect the product for re-use, if possible, or disposal. 6.3.2 For cleaning: after collection, wash the affected area and materials with water. 6.3.3 Other information: nothing in particular.
6.4 – Reference to other sections	Refer to sections 8 and 13 for more information.

SECTION 7 – Handling and storage

The information refers to the extinguishing agent.

7.1 – Precautions for safe handling	Ensure adequate ventilation. Avoid contact with eyes and skin. Do not eat, drink or smoke while handling. After handling, wash your hands with soap and water. Contaminated work clothing must not be taken out of the workplace. For exposure controls and personal protection measures, see section 8.
7.2 – Conditions for safe storage, including any incompatibilities	Mixture approved as an extinguishing agent for type A and B fires.
7.3 – Specific end use(s)	Mixture approved as an extinguishing agent for type A and B fires.

SECTION 8 – Exposure controls/personal protection

The information refers to the extinguishing agent.

8.1 – Control parameters

2-(2-butoxyethoxy)ethanol (CAS: 112-34-5)

EUROPEAN UNION – Professional exposure limit value - Recommended	Exp. 8 h: 67,5 mg/m^3, 10 ppm Exp. short term: 101,2 mg/m^3, 15 ppm
MAK	10 ml/m^3 – 67 mg/m^3 Peak limiting category: I(1) Pregnancy risk group: C (DFG 2003)
DNEL – Systemic effects, long term, workers, inhalation	67,5 mg/m^3
DNEL – Systemic effects, long term, workers, dermal	20 mg/kg bw/day
DNEL – Systemic effects, long term, population, inhalation	34 mg/m^3
DNEL – Systemic effects, long term, population, dermal	10 mg/kg bw/day
DNEL – Systemic effects, short term, population, oral	1,25 mg/kg bw/day
DNEL – Local effects, long term, workers, inhalation	67,5 mg/m^3

DNEL – Local effects, long term, population, inhalation	34 mg/m^3
DNEL – Local effects, short term, population, inhalation	50,6 mg/m^3
PNEC – Fresh water	1 mg/L
PNEC – Sediments, fresh water	4 mg/kg sediments
PNEC – Sea water	0,1 mg/L
PNEC – Sediments, sea water	0,4 mg/kg sediments
PNEC – Intermittent emissions	3,9 mg/L
PNEC – STP	200 mg/L
PNEC - Soil	0,4 mg/kg soil

Ethylene glycol (CAS: 107-21-1)

EUROPEAN UNION – Professional exposure limit value - Recommended	Exp. 8 h: 52 mg/m^3, 20 ppm Exp. short term (15 minutes average time): 104 mg/m^3, 40 ppm

8.2 – Exposure controls

8.2.1 Appropriate technical controls

During handling do not eat, drink or smoke. Wash your hands after handling the product and before eating, drinking or smoking. Observe the usual safety measures when handling chemicals.

Systems under pressure must be checked periodically for leaks.

8.2.2. Individual protection

Eye/face protection: use safety goggles (frame goggles).

Hand protection: not necessary in case of normal use.

Other: wear work protective clothes.

Respiratory protection: not necessary in case of normal use.

Thermal hazards: no hazards to report.

Environmental exposure controls use according to good working practices, avoiding dispersal of the product in the environment.

SECTION 9 – Physical and chemical properties

9.1 – Information on basic physical and chemical properties

a. physical state	pressure vessel (fire extinguisher)
b. colour	not applicable
c. odour	not applicable
d. melting point/freezing point	not applicable
e. boiling point or initial boiling point and boiling range	not applicable
f. flammability	not flammable
g. lower and upper explosion limit	not applicable
h. flash point	not applicable
i. auto-ignition temperature	not applicable
j. decomposition temperature	not applicable
k. pH	Extinguishing agent: 6-9
l. kinematic viscosity	not applicable
m. solubility	entirely water soluble
n. partition coefficient n-octanol/water (log value)	not available
o. vapour pressure	not available
p. density and/or relative density	1.06-1.2 g/cm^3
q. relative vapour density	not available

	r. particle characteristics	not available
9.2 – Other information	*Information relating to physical hazard classes:* The fire extinguisher contains an under pressure asphyxiant gas.	

SECTION 10 – Stability and reactivity

The information refers to the extinguishing agent.

10.1 – Reactivity	No risk of reactivity.
10.2 – Chemical stability	No hazardous reactions if handled or stored in accordance with regulations.
10.3 – Possibility of hazardous reactions	No dangerous reactions are expected.
10.4 – Conditions to avoid	None, if normal storage conditions apply
10.5 – Incompatible materials	None, if normal storage conditions apply
10.6 – Hazardous decomposition products	None, if normal storage conditions apply

SECTION 11 – Toxicological information

The information refers to the extinguishing agent.

ATE(mix) oral = ∞

ATE(mix) dermal = ∞

ATE(mix) inhal = ∞

11.1 – Information on hazard classes as defined in Regulation (EC) No 1272/2008	a. **acute toxicity:** based on available data, the classification criteria are not met. 2-(2-butoxyethoxy)ethanol: DL50 (oral, rat): 2410 mg/kg bw DL50 (dermal, rabbit): 2700 mg/kg bw
	b. **skin corrosion/irritation**: based on available data, the classification criteria are not met. 2-(2-butoxyethoxy)ethanol: skin dryness
	c. **serious eye damage/irritation:** based on available data, the classification criteria are not met. 2-(2-butoxyethoxy)ethanol: eye pain, irritant to eyes.
	d. **respiratory or skin sensitisation:** based on available data, the classification criteria are not met.
	e. **germ cell mutagenicity:** based on available data, the classification criteria are not met.
	f. **carcinogenicity:** based on available data, the classification criteria are not met.
	g. **reproductive toxicity:** based on available data, the classification criteria are not met.
	h. **STOT- Specific target organ toxicity - single exposure:** based on available data, the classification criteria are not met.
	i. **STOT- Specific target organ toxicity - repeated exposure:** based on available data, the classification criteria are not met. 2-(2-butoxyethoxy)ethanol: degreases the skin.
	j. **aspiration hazard:** based on available data, the classification criteria are not met.
11.2 – Information on other hazards	a. **endocrine disrupting properties**: The mixture does not contain any endocrine-disrupting substances.
	b. **other information:**

	no data available.

SECTION 12 – Ecological information

The information refers to the extinguishing agent..

12.1 – Toxicity	2-(2-butoxyethoxy)ethanol: DL50 (fish, 96h): 1300 mg/L CE50 (invertebrates *(Daphnia Magna)*, 48h): 100 mg/L CE50 (algae, 192h): 53 mg/L C(E)L50 (algae): 100 mg/L
12.2 – Persistence and degradability	2-(2-butoxyethoxy)ethanol: short-term hazardous degradation products are not likely. However, long-term degradation products can arise. Readily biodegradable.
12.3 – Bioaccumulative potential	No data available.
12.4 – Mobility in soil	No data available.
12.5 – Results of PBT and vPvB assessment	The product does not contain any persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) substances in concentrations of 0.1% or higher.
12.6 – Endocrine disrupting properties	No data available.
12.7 – Other adverse effects	No adverse effects found.

SECTION 13 – Disposal considerations

13.1 – Waste treatment methods	Dispose of waste in accordance with current regulations by handing over empty containers to an approved waste disposal center equipped to safely handle pressurized containers containing residual flammable liquids and gases. Empty containers heated above 50°C may explode. Recover if possible. Operate according to local or national regulations in force. For handling and measures in the event of accidental dispersion of the waste, the indications provided in sections 6 and 7 generally apply; however, specific precautions and actions must be evaluated in relation to the composition of the waste. Resort to waste disposal after having evaluated the possibilities of reuse or reuse in the same or another production cycle, or of recovery from authorized companies in accordance with current legislation. Disposal via discharge into sewage is not permitted.

SECTION 14 – Transport information

14.1 – UN number or ID number

Regulations	UN number
ADR/RID/ADN	UN 1044
IMDG Code	
ICAO-TI/IATA-DGR	

14.2 – UN proper shipping name

Regulations	Proper shipping number (the small print description is not part of the official shipping name)
ADR/RID/ADN	FIRE EXTINGUISHERS with compressed or liquefied gas
IMDG Code	FIRE EXTINGUISHERS with compressed or liquefied gas
ICAO-TI/IATA-DGR	FIRE EXTINGUISHERS with compressed or liquefied gas

14.3 – Transport hazard class(es)

Regulations	Transport hazard class(es)
ADR/RID/ADN	Class 2 Label 2.2 Classification code 6A
IMDG Code	Division 2.2
ICAO-TI/IATA-DGR	Division 2.2

14.4 – Packing group

Regulations	Packing group
ADR/RID/ADN	not applicable
IMDG Code	
ICAO-TI/IATA-DGR	

14.5 – Environmental hazards

Regulations	Environmental hazards
ADR/RID/ADN	not applicable
IMDG Code	
ICAO-TI/IATA-DGR	

14.6 – Special precautions for user

All phases of preparation, handling and transport of dangerous goods, including packaging, documentation, marking and labelling, loading and unloading activities, must be carried out by personnel who have received the necessary training required by the modal regulations.

Specific provisions for ADR/RID/ADN
The fire extinguisher is manufactured, tested, approved and labelled in accordance with the provisions applied in the country of manufacture (as per Special Provision 225).

This article is manufactured and filled in accordance with the provisions applicable in the country of manufacture and is equipped with protection against accidental discharge. If packed according to the provisions described in Special Provision 594, it is not subject to the provisions of ADR/RID/ADN.

Specific provisions for the IMDG-Code:
The fire extinguisher is manufactured, tested, approved and labelled in accordance with the provisions applied in the country of manufacture (as per Special Provision 225).

	Specific provisions for ICAO-TI/IATA-DGR: The fire extinguisher is manufactured, tested, approved and labelled in accordance with the provisions applied in the country of manufacture (as per Special Provision A19).
14.7 – Maritime transport in bulk according to IMO instruments	Not applicable.

SECTION 15 – Regulatory information

15.1 – Safety, health and environmental regulations/legislation specific for the substance or mixture	Reg. (EC) n. 1907/2006 (REACH) The mixture contains substances subject to restriction, included in Annex XVII of the REACH Reg. However, these restrictions do not apply to this type of product. Reg. (EC) n. 1272/2008 (CLP) The mixture contains a substance included in the list of substances with harmonized classification (Annex VI, part 3). Directive (EC) n. 2006/15 The mixture contains a substance for which occupational exposure limits have been set at Community level. WGK – German Water Hazard Class Substance n. 46 (2-(2-butoxyethoxy)ethanol) WGK 1 – Low risk for water Nitrogen: Substance n. 1351
15.2 – Chemical safety assessment	Not applicable.

SECTION 16 – Other information

Document information

The product does not fall under the obligation to draw up and supply a Safety Data Sheet, as it meets the definition of "article". However, the product supplier has drawn up this document, on a voluntary basis, according to the standard required for SDSs, as governed by Annex II of Reg. (EC) 1907/2006 as amended by Reg. (EU) 2020/878.

Notice to users

This document is intended to provide guidance: 1) for appropriate and careful handling of the product by qualified personnel or personnel who work under the supervision of personnel skilled in the handling of chemical substances; 2) for emergency management; 3) for the assessment and management of risks deriving from the use, handling, transport and storage of the product. The product must not be used for purposes other than those indicated in section 1. The information contained in this SDS is based on the knowledge available at the date of compilation relating to the requirements for safety, health, environmental protection and correct use of the product.

The person responsible for this document cannot provide warnings about all the dangers deriving from the use or interaction with other chemicals or materials. The user is responsible for the safe use of the product, the adequacy of the product for the use for which it is applied and its correct disposal.
The information provided is not to be considered a declaration or guarantee, either expressed or implied, of merchantability, fitness for a particular purpose, quality, or of any nature.
The user must bear in mind the possible risks associated with a use other than that for which the product is supplied.
This SDS does not in any case dispense the user from knowledge and from the application of the set of regulations pertinent to his activity.
This SDS does not exempt the user from ensuring that he does not have obligations other than those mentioned and regulating the possession and use of the product for which he is solely responsible.

Change list
Rev. 0 – First emission
Changes since the previous revision
-
Abbreviations and acronyms
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS [Number]: Chemical American Society [Number]
CE50: Median effective concentration
CL50: Average lethal concentration
DL50: Average lethal dose.
DNEL: Derived No Effect Level.
PPE: Personal Protective Equipment
IARC: International Agency for Research on Cancer
ICAO-TI: International Civil Aviation Organization – Technical Instruction
IMDG-Code: International Maritime Dangerous Goods Code
LEL: Lower Explosion Level
PBT: Persistent, Bioaccumulative, Toxic
RID: European Agreement concerning the International Carriage of Dangerous Goods by Railroad
STOT: Specific Target Organ Toxicity
UEL: Upper Explosion Level
vPvB: very persistent, very bioaccumulative.
Hazard statements mentioned in the safety data sheet:
H280 *(Press. Gas (Comp.))* Contains gas under pressure: may explode if heated.
H315 *Skin Irrit. 2*: causes skin irritation
H318 *Eye Dam. 1*: causes serious eye damage.
H319 *Eye Irrit. 2*: causes serious eye irritation.
H302 *Acute Tox. 4 (oral)*: harmful if swallowed
H411 *Aquatic Chronic 2*: toxic to aquatic life with long lasting effects..
Bibliography:
SDS of components
ECHA website
IFA-Gestis website