

REFILL KIT FS6-9 E

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

1.1 – Product identifier	REFILL KIT FS6-9 E
1.2 – Relevant identified uses of the substance or mixture and uses advised against	<i>Relevant identified uses:</i> Foam extinguisher refill additive. Sector of use: professional uses [SU22]. <i>Uses advised against:</i> 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	<i>Classification of the substance or mixture according to Reg. (EC) no. 1272/2008</i> The product does not meet the classification criteria in any hazard class in accordance with Regulation (EC) no. 1272/2008 relating to the classification, labelling and packaging of substances and mixtures.
2.2 – Label elements	Pictograms: <i>none</i> Warning: <i>none</i> Hazard statements: <i>none</i> Precautionary statements: <i>none</i>
2.3 – Other hazards	<i>PBT, vPvB identification:</i> the mixture does not contain substances that meet the criteria set out in Annex XIII of Reg. 1907/2006 (REACH) as PBT or vPvB. <i>Properties as an endocrine disruptor:</i> the mixture does not contain substances included in the list of art. 59, par. 1, of Reg. 1907/2006 (REACH) due to properties of interference with the endocrine system. The mixture does not contain substances identified as disrupting the endocrine system in accordance with the criteria established in Reg. (EU) 2017/2100 or in Reg. (EU) 2018/605. <i>Information on other hazards which do not lead to classification:</i> In the event of contact with the eyes, the product causes considerable irritation which can last for more than 24 hours.

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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

Substance	Identification number	REACH registration number	Quantity (% weight)	Classification (Reg. EC no. 1272/2008)
2-(2-butoxyethoxy)ethanol	CAS 112-34-5 EC 203-961-6 Index 603-096-00-8	01-2119475104-44	< 1 %	Eye Irrit. 2 (H319) substance with Community exposure limit

SECTION 4 – First aid measures

4.1 – Description of first aid measures

Inhalation: ventilate the room. Immediately remove the patient from the contaminated environment and keep him at rest in a well-ventilated area. In case of injury consult a doctor. In case of inhalation of aerosols in high concentrations or vapors deriving from heating of the material, respiratory disturbances could occur. After medical consultation, administer glucocorticoids by inhalation spray to the injured person.

Skin contact (of the pure product): wash thoroughly with soap and water. Remove contaminated clothing.

Eye contact: wash immediately with plenty of water for at least 10 minutes, protecting the uncontaminated eye.

Ingestion: rinse the mouth and spit out the rinsing liquid. Do not induce vomiting.

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

Inhalation: irritation of the mucous membranes. After exposure to high concentrations, gastrointestinal and central nervous system disorders.

Skin Contact: short-term contact with small amounts may precipitate hyperemia without serious resorption effects.

Eye Contact: direct contact with eyes may trigger conjunctivitis and corneal damage (reversible).

Ingestion: dizziness, intoxication, stomach pain, diarrhea.

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

Note to the physician

After direct eye contact with the liquid substance, the injured person must undergo a further intensive rinsing with water/physiological saline solution and subsequent control examination by a specialist.

In most cases, the symptoms caused by skin contact require no treatment and are reversible after thorough rinsing.

After inhalation of higher aerosol concentrations, the victim may require prolonged glucocorticoid administration due to local irritation in deeper lung sections.

Ingestions should be treated primarily by dilution with water and subsequent application of a saline laxative.

At the same time the electrolyte status and acid/base balance must be carefully monitored.

Hemolysis may help with severe ingestion toxicity.

Provide the doctor with information about the substance and the treatment already administered.

Particular attention should be paid to liver and kidney function during follow-up examinations or during any required intensive care.

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SECTION 5 – Firefighting measures

5.1 – Extinguishing media	<p><u>Suitable fire-extinguishing methods</u>: not applicable. The product is a fire-extinguishing agent.</p> <p><u>Unsuitable fire-extinguishing media</u>: not applicable.</p>
5.2 – Special hazards arising from the substance or mixture	Cool the containers with spray water trying to keep them away from the fire.
5.3 – Advice for firefighters	<p>Use respiratory protection.</p> <p>Safety helmet and full protective clothing.</p> <p>Water spray can be used to protect people engaged in firefighting. It is also advisable to use self-contained breathing apparatus, especially if you work in closed and poorly ventilated places and in any case if you use halogenated extinguishers (fluobrene, solkane 123, naf, etc.).</p> <p>Cool the containers with jets of water.</p>

SECTION 6 – Accidental release measures

6.1 – Personal precautions, protective equipment and emergency procedures	<p><u>6.1.1 For non-emergency personnel</u>: move away from the surrounding area. The floor can become slippery.</p> <p><u>6.1.2 For emergency responders</u>: wear adequate personal protective equipment. The floor can become slippery.</p>
6.2 – Environmental precautions	<p>Contain losses.</p> <p>Notify the appropriate authorities.</p> <p>Dispose of the residue in compliance with current regulations.</p>
6.3 – Methods and material for containment and cleaning up	<p><u>6.3.1 For containment</u>: collect the product for re-use, if possible, or disposal.</p> <p><u>6.3.2 For cleaning</u>: after collection, wash the affected area and materials with water.</p> <p><u>6.3.3 Other information</u>: nothing in particular.</p>
6.4 – Reference to other sections	Refer to sections 8 and 13 for more information.

SECTION 7 – Handling and storage

7.1 – Precautions for safe handling	<p>Avoid contact and inhalation of vapours.</p> <p>Use extreme caution when handling the product. Avoid bumps.</p> <p>Protect from sunlight and do not expose to temperatures exceeding 60°C.</p> <p>Use in sufficiently ventilated areas.</p> <p>See also the next section 8.</p>
7.2 – Conditions for safe storage, including any incompatibilities	Store in well-ventilated places, in the original packaging away from heat sources and direct sunlight. Keep away from open flames, sparks and heat sources. Avoid direct exposure to the sun.
7.3 – Specific end use(s)	Professional uses: follow good hygiene in the workplace.

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SECTION 8 – Exposure controls/personal protection

8.1 – Control parameters

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

EUROPEAN UNION – Professional exposure limit value	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

8.2 – Exposure controls

8.2.1 Appropriate technical controls

Professional uses. Ventilate the room well. Observe the usual safety measures for handling chemicals.

8.2.2. Individual protection

Eye/face protection: when handling the product use safety goggles (frame goggles) (EN 166).

Hand protection: use chemical-resistant safety gloves (EN374-1/EN374-2/EN374-3) when handling the pure product. The product contains a substance belonging to the chemical group: glycols, ethers, polyethers.

Other: when handling the pure product, wear complete skin protection clothing.

Respiratory protection: operate in sufficiently ventilated environments avoiding to inhale the product.

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	liquid
b. colour	dark
c. odour	typical
d. melting point/freezing point	2-(2-butoxyethoxy)ethanol: -68 °C
e. boiling point or initial boiling point and boiling range	2-(2-butoxyethoxy)ethanol: 231 °C
f. flammability	not flammable
g. lower and upper explosion limit	2-(2-butoxyethoxy)ethanol: LEL 0,77 % vol; UEL 5,9 % vol.
h. flash point	2-(2-butoxyethoxy)ethanol: 100-110 °C

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<i>i. auto-ignition temperature</i>	2-(2-butoxyethoxy)ethanol: 225 °C
<i>j. decomposition temperature</i>	data not available
<i>k. pH</i>	not relevant
<i>l. kinematic viscosity</i>	2-(2-butoxyethoxy)ethanol: 5,85 mPa·s a 20 °C
<i>m. solubility</i>	2-(2-butoxyethoxy)ethanol: entirely water soluble
<i>n. partition coefficient n-octanol/water (log value)</i>	2-(2-butoxyethoxy)ethanol: 0,56
<i>o. vapour pressure</i>	2-(2-butoxyethoxy)ethanol: 0,03 hPa a 20 °C
<i>p. density and/or relative density</i>	2-(2-butoxyethoxy)ethanol: 0,96 g/cm ³ a 20 °C
<i>q. relative vapour density</i>	2-(2-butoxyethoxy)ethanol: 5,59
<i>r. particle characteristics</i>	not relevant

9.2 – Other information

Information relating to physical hazard classes:
no data available.
Other security features:
2-(2-butoxyethoxy)ethanol: decomposes when heated.

SECTION 10 – Stability and reactivity

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	Exposure to direct sunlight and temperatures above 60°C.
10.5 – Incompatible materials	None in particular.
10.6 – Hazardous decomposition products	Not subject to decomposition when used for its intended purpose. In case of strong heating it can decompose into dangerous partial combustion products.

SECTION 11 – Toxicological information

ATE(mix) oral = ∞
ATE(mix) dermal = ∞
ATE(mix) inhal = ∞

No experimental data on the mixture are available.

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

- a. acute toxicity:**
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:**
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.

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	<p>f. carcinogenicity: based on available data, the classification criteria are not met.</p> <p>g. reproductive toxicity: based on available data, the classification criteria are not met.</p> <p>h. STOT-single exposure: based on available data, the classification criteria are not met.</p> <p>i. STOT-repeated exposure: 2-(2-butoxyethoxy)ethanol: degreases the skin.</p> <p>j. aspiration hazard: based on available data, the classification criteria are not met.</p>
11.2 – Information on other hazards	<p>a. endocrine disrupting properties: The mixture does not contain any endocrine-disrupting substances.</p> <p>b. other information: no data available.</p>

SECTION 12 – Ecological information

No experimental data on the mixture are available.

12.1 – Toxicity	<p>2-(2-butoxyethoxy)ethanol o: DL50 (fish, 96h): 1300 mg/L CE50 (invertebrates (<i>Daphnia Magna</i>), 48h): 100 mg/L CE50 (algae, 192h): 53 mg/L C(E)L50 (algae): 100 mg/L</p>
12.2 – Persistence and degradability	<p>2-(2-butoxyethoxy)ethanol: short-term hazardous degradation products are not likely. However, long-term degradation products can arise. Readily biodegradable.</p>
12.3 – Bioaccumulative potential	<p>No data available.</p>
12.4 – Mobility in soil	<p>No data available.</p>
12.5 – Results of PBT and vPvB assessment	<p>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.</p>
12.6 – Endocrine disrupting properties	<p>No data available.</p>
12.7 – Other adverse effects	<p>No adverse effects found.</p>

SECTION 13 – Disposal considerations

13.1 – Waste treatment methods	<p>Residues must be disposed of in compliance with current regulations by delivering the empty containers to an authorized waste disposal company. 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.</p>
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SECTION 14 – Transport information

14.1 – UN number or ID number	Regulations	UN number
	ADR/RID/ADN	not applicable
	IMDG Code	
	ICAO-TI/IATA-DGR	
14.2 – UN proper shipping name	Regulations	Proper shipping number
	ADR/RID/ADN	not applicable
	IMDG Code	
	ICAO-TI/IATA-DGR	
14.3 – Transport hazard class(es)	Regulations	Transport hazard class(es)
	ADR/RID/ADN	not applicable
	IMDG Code	
	ICAO-TI/IATA-DGR	
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	None in particular.	
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 WGK 1 – Low risk for water
15.2 – Chemical safety assessment	The supplier has not carried out a chemical safety assessment.

REFILL KIT FS6-9 E**SECTION 16 – Other information****Informazioni sul documento**

The product described in the SDS falls within the scope of the art. 31, par. 1, of EC Reg. 1907/2006, for which an SDS must be provided without prior request. The SDS was drawn up in compliance with Annex II of EC Reg. 1907/2006 as updated by EU Reg. 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. 1 – Update of 06/12/2015

Changes since the previous revision

General adaptation to the new format provided for by Reg. (EU) 2020/878

The entire SDS has been updated based on the new CLP classification.

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.

IARC: International Agency for Research on Cancer

ICAO-TI: International Civil Aviation Organization – Technical Instruction

IMDG-Code: International Maritime Dangerous Goods Code

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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:

H315 *Skin Irrit. 2* (Skin corrosion/irritation, category 2): causes skin irritation

H318 *Eye Dam. 1* (Serious eye damage/eye irritation, category 1): causes serious eye damage.

H319 *Eye Irrit. 2* (Serious eye damage/eye irritation, category 1): causes serious eye irritation.

H411 *Aquatic Chronic 2* (Hazardous to the aquatic environment – Chronic aquatic, category 2): toxic to aquatic life with long lasting effects..

Bibliography:

SDS of similar extinguishing mixtures

ECHA website

IFA-Gestis website