

# Safety Data Sheet





According to 1907/2006/EC (REACH), 453/2010/EC Phos-Chek 3% AFFF Freeze Protected - [AQUAFILM AF-3R FP]

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

- 1.1 Product identifier:** Phos-Chek 3% AFFF Freeze Protected - [AQUAFILM AF-3R FP]
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
Relevant uses: Fire-extinguishing. For professional use only.  
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet:** AUXQUIMIA, S.A.U.  
Polígono Industrial de Baiña, parcela 23  
33682 Baiña (Mieres) - Asturias - Spain  
Phone.: +34 985 242 945 / +34 985 242 946 -  
Fax: +34 985 253 809  
sds@perimeter-solutions.com  
www.auxquimia.com
- 1.4 Emergency telephone number:** +34 985 242 945 / +34 985 242 946

## SECTION 2: HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture:**
- NFPA 704:**  
Health Hazards: 3  
Flammability Hazards: 0  
Instability Hazards: 0  
Special Hazards: Non-applicable
- Directive 67/548/EC and Directive 1999/45/EC:**  
This product was classified in accordance with Directive 67/548/EC and Directive 1999/45/EC, adapting the requirements to Regulation (EC) n°1907/2006 (REACH regulation).  
Xi: R36 - Irritating to eyes
- 2.2 Label elements:**
- NFPA 704:**
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- Directive 67/548/EC and Directive 1999/45/EC:**  
In accordance with the legislation, the elements on the label are as follows:
- Xi**
- 
- Irritant
- R Phrases:**  
R36: Irritating to eyes
- S Phrases:**  
S25: Avoid contact with eyes
- Supplementary information:**  
Non-applicable
- 2.3 Other hazards:**  
Non-applicable

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- Chemical description:** Aqueous solution of tensoactives
- Components:**  
In accordance with Annex II of Regulation (EC) n°1907/2006 (point 3), the product contains:

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**Phos-Chek 3% AFFF Freeze Protected - [AQUAFILM AF-3R FP]**

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continue)**

Identification	Chemical name/Classification	Concentration
CAS: 107-21-1 EC: 203-473-3 Index: 603-027-00-1 REACH:01-2119456816-28-XXXX	<b>Ethane-1,2-diol</b> ATP CLP00 Directive 67/548/EC Xn: R22 Regulation 1272/2008 Acute Tox. 4: H302 - Warning	20 - <25 % 
CAS: 112-34-5 EC: 203-961-6 Index: 603-096-00-8 REACH:01-2119475104-44-XXXX	<b>2-(2-butoxiethoxy)etanol</b> ATP CLP00 Directive 67/548/EC Xi: R36 Regulation 1272/2008 Eye Irrit. 2: H319 - Warning	15 - <20 % 
CAS: Non-applicable EC: Non-applicable Index: Non-applicable REACH:Non-applicable	<b>Non-ionic hydrocarbon surfactant 6607730000</b> ATP CLP00 Directive 67/548/EC Xi: R41 Regulation 1272/2008 Eye Dam. 1: H318 - Danger	1 - <3 % 
CAS: Non-applicable EC: Non-applicable Index: Non-applicable REACH:Non-applicable	<b>Mixture of fluorosurfactants</b> Not classified Directive 67/548/EC Regulation 1272/2008	1 - <3 %
CAS: Non-applicable EC: Non-applicable Index: Non-applicable REACH:Non-applicable	<b>Anionic hydrocarbon surfactant 6608700000</b> Self-classified Directive 67/548/EC Xi: R38, R41 Regulation 1272/2008 Eye Dam. 1: H318; Skin Irrit. 2: H315 - Danger	1 - <3 % 
CAS: Non-applicable EC: Non-applicable Index: Non-applicable REACH:Non-applicable	<b>Amphoteric hydrocarbon surfactant 6608110000</b> Self-classified Directive 67/548/EC Xi: R36, R43 Regulation 1272/2008 Eye Irrit. 2: H319; Skin Sens. 1: H317 - Warning	0,1 - <1 % 
CAS: 67-56-1 EC: 200-659-6 Index: 603-001-00-X REACH:01-2119433307-44-XXXX	<b>Methanol</b> ATP CLP00 Directive 67/548/EC F: R11; T: R23/24/25, R39/23/24/25 Regulation 1272/2008 Acute Tox. 3: H301+H311+H331; Flam. Liq. 2: H225; STOT SE 1: H370 - Danger	<0,1 % 

To obtain more information on the risk of the substances consult sections 8, 11, 12 and 16.

**SECTION 4: FIRST AID MEASURES**

**4.1 Description of first aid measures:**

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the MSDS of this product.

**By inhalation:**

This product is not classified as dangerous through inhalation, however, it is recommended in case of intoxication symptoms to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

**By skin contact:**

This product is not classified as dangerous when in contact with the skin. However, in case of skin contact it is recommended to remove contaminated clothes and shoes, rinse the skin or shower the person affected if necessary thoroughly with cold water and neutral soap. In case of serious reaction consult a doctor.

**By eye contact:**

Rinse eyes thoroughly with luke warm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the MSDS of the product.

**By consumption:**

Do not induce vomiting, but if it does happen keep the head up to avoid inhalation. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

**4.2 Most important symptoms and effects, both acute and delayed:**

Acute and delayed effects are indicated in sections 2 and 11.

**4.3 Indication of any immediate medical attention and special treatment needed:**

Non-applicable

**SECTION 5: FIREFIGHTING MEASURES**

**5.1 Extinguishing media:**

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## Phos-Chek 3% AFFF Freeze Protected - [AQUAFILM AF-3R FP]

### SECTION 5: FIREFIGHTING MEASURES (continue)

Product is non-flammable under normal conditions of storage, manipulation and use, containing flammable substances. In the case of inflammation as a result of improper manipulation, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems. IT IS NOT RECOMMENDED to use tap water as an extinguishing agent.

#### 5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive subproducts are created that can become highly toxic and, consequently, can present a serious health risk.

#### 5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

#### Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures:

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inertizing agent. Destroy any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

#### 6.2 Environmental precautions:

This product is not classified as dangerous to the environment. Keep product away from drains, surface and underground water.

#### 6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

#### 6.4 Reference to other sections:

See sections 8 and 13.

### SECTION 7: HANDLING AND STORAGE

#### 7.1 Precautions for safe handling:

##### A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

##### B.- Technical recommendations for the prevention of fires and explosions

Avoid the evaporation of the product as it contains flammable substances, which could form flammable vapour/air mixtures in the presence of sources of ignition. Control sources of ignition (mobile phones, sparks,...) and transfer at slow speeds to avoid the creation of electrostatic charges. Avoid projections and pulverizations. Consult section 10 for conditions and materials that should be avoided.

##### C.- Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

##### D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

#### 7.2 Conditions for safe storage, including any incompatibilities:

##### A.- Technical measures for storage

Minimum Temp.: -20 °C

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**Phos-Chek 3% AFFF Freeze Protected - [AQUAFILM AF-3R FP]**

**SECTION 7: HANDLING AND STORAGE (continue)**

Maximun Temp.: 50 °C

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

**7.3 Specific end use(s):**

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters:**

Substances whose occupational exposure limits have to be monitored in the work environment

Identification	Environmental limits		
	TLV-TWA	TLV-STEL	Year
Ethane-1,2-diol CAS: 107-21-1 EC: 203-473-3		100 mg/m <sup>3</sup>	2014
Methanol CAS: 67-56-1 EC: 200-659-6	200 ppm	250 ppm	2014

**DNEL (Workers):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Ethane-1,2-diol CAS: 107-21-1 EC: 203-473-3	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	106 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	Non-applicable	35 mg/m <sup>3</sup>
2-(2-butoxiethoxy)etanol CAS: 112-34-5 EC: 203-961-6	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	20 mg/kg	Non-applicable
	Inhalation	Non-applicable	101,2 mg/m <sup>3</sup>	67,5 mg/m <sup>3</sup>	67,5 mg/m <sup>3</sup>
Anionic hydrocarbon surfactant 6608700000 CAS: Non-applicable EC: Non-applicable	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	4060 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	285 mg/m <sup>3</sup>	Non-applicable
Methanol CAS: 67-56-1 EC: 200-659-6	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	40 mg/kg	Non-applicable	40 mg/kg	Non-applicable
	Inhalation	260 mg/m <sup>3</sup>	260 mg/m <sup>3</sup>	260 mg/m <sup>3</sup>	260 mg/m <sup>3</sup>

**DNEL (Population):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Ethane-1,2-diol CAS: 107-21-1 EC: 203-473-3	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	53 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	Non-applicable	7 mg/m <sup>3</sup>
2-(2-butoxiethoxy)etanol CAS: 112-34-5 EC: 203-961-6	Oral	Non-applicable	Non-applicable	1,25 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	10 mg/kg	Non-applicable
	Inhalation	Non-applicable	50,6 mg/m <sup>3</sup>	34 mg/m <sup>3</sup>	34 mg/m <sup>3</sup>
Anionic hydrocarbon surfactant 6608700000 CAS: Non-applicable EC: Non-applicable	Oral	Non-applicable	Non-applicable	24 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	2440 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	85 mg/m <sup>3</sup>	Non-applicable
Methanol CAS: 67-56-1 EC: 200-659-6	Oral	8 mg/kg	Non-applicable	8 mg/kg	Non-applicable
	Dermal	8 mg/kg	Non-applicable	8 mg/kg	Non-applicable
	Inhalation	50 mg/m <sup>3</sup>	50 mg/m <sup>3</sup>	50 mg/m <sup>3</sup>	50 mg/m <sup>3</sup>

**PNEC:**

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continue)**

Identification				
Ethane-1,2-diol CAS: 107-21-1 EC: 203-473-3	STP	199,5 mg/L	Fresh water	10 mg/L
	Soil	1,53 mg/kg	Marine water	1 mg/L
	Intermittent	10 mg/L	Sediment (Fresh water)	37 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	3,7 mg/kg
2-(2-butoxiethoxy)etanol CAS: 112-34-5 EC: 203-961-6	STP	200 mg/L	Fresh water	1 mg/L
	Soil	0,4 mg/kg	Marine water	0,1 mg/L
	Intermittent	3,9 mg/L	Sediment (Fresh water)	4 mg/kg
	Oral	56 g/kg	Sediment (Marine water)	0,4 mg/kg
Anionic hydrocarbon surfactant 6608700000 CAS: Non-applicable EC: Non-applicable	STP	1,35 mg/L	Fresh water	0,1357 mg/L
	Soil	0,22 mg/kg	Marine water	0,01357 mg/L
	Intermittent	Non-applicable	Sediment (Fresh water)	1,5 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,15 mg/kg
Methanol CAS: 67-56-1 EC: 200-659-6	STP	100 mg/L	Fresh water	154 mg/L
	Soil	23,5 mg/kg	Marine water	15,4 mg/L
	Intermittent	1540 mg/L	Sediment (Fresh water)	570,4 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	Non-applicable

**8.2 Exposure controls:**

**A.- General security and hygiene measures in the work place**

If product is used at the concentration dosing conditions specified in the relevant instructions for use (section 15), personal protective equipment described in section 8.2 for UNDILUTED products will not be required.

Safe handling recommendations for undiluted product:



As a preventative measure it is recommended to use basic Personal Protection Equipment, with the corresponding ""CE marking"" in accordance with Directive 89/686/EC. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.



**B.- Respiratory protection**

The use of protection equipment will be necessary if a mist forms or if the professional exposure limits are exceeded.



**C.- Specific protection for the hands**

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Chemical protective gloves		EN 374-1:2003 EN 374-3:2003/AC:2006 EN 420:2003+A1:2009	Replace the gloves at any sign of deterioration.

**D.- Ocular and facial protection**

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against liquid splash		EN 166:2001 EN 172:1994/A1:2000 EN 172:1994/A2:2001 EN ISO 4007:2012	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

**E.- Bodily protection**



Pictogram	PPE	Labelling	CEN Standard	Remarks
	Work clothing		EN ISO 13688:2013	For professional use only.
	Anti-slip work shoes		EN ISO 20347:2012 EN ISO 20344:2011	None

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continue)**

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2002	 Eyewash stations	DIN 12 899 ISO 3864-1:2002

**Environmental exposure controls:**

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties:**

For complete information see the product datasheet.

**Appearance:**

Physical state at 20 °C: Liquid  
Appearance: Transparent  
Color: Amber  
Odor: Characteristic

**Volatility:**

Boiling point at atmospheric pressure: Non-applicable \*  
Vapour pressure at 20 °C: Non-applicable \*  
Vapour pressure at 50 °C: Non-applicable \*  
Evaporation rate at 20 °C: Non-applicable \*

**Product description:**

Density at 20 °C: 1035 - 1075 kg/m<sup>3</sup>  
Relative density at 20 °C: Non-applicable \*  
Dynamic viscosity at 20 °C: 6 cP  
Kinematic viscosity at 20 °C: Non-applicable \*  
Kinematic viscosity at 40 °C: Non-applicable \*  
Concentration: Non-applicable \*  
pH: 7,5 - 8,5  
Vapour density at 20 °C: Non-applicable \*  
Partition coefficient n-octanol/water 20 °C: Non-applicable \*  
Solubility in water at 20 °C: Non-applicable \*  
Solubility property: Non-applicable \*  
Decomposition temperature: Non-applicable \*  
Melting point/freezing point: Non-applicable \*

**Flammability:**

Flash Point: Non Flammable (>60 °C)  
Autoignition temperature: Non-applicable \*  
Lower flammability limit: Non-applicable \*  
Upper flammability limit: Non-applicable \*

**9.2 Other information:**

Surface tension at 20 °C: Non-applicable \*  
Refraction index: Non-applicable \*

\*Not relevant due to the nature of the product, not providing information property of its hazards.

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## Phos-Chek 3% AFFF Freeze Protected - [AQUAFILM AF-3R FP]

### SECTION 10: STABILITY AND REACTIVITY

#### 10.1 Reactivity:

No hazardous reactions are expected if the following technical instructions storage of chemicals. See section 7.

#### 10.2 Chemical stability:

Chemically stable under the conditions of storage, handling and use.

#### 10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

#### 10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Precaution	Avoid direct impact	Not applicable

#### 10.5 Incompatible materials:

Acids	Water	Combustive materials	Combustible materials	Others
Not applicable	Not applicable	Avoid direct impact	Avoid direct impact	Not applicable

#### 10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects:

No experimental information is available on the product itself in relation to the toxicological properties. When performing the danger classification on corrosive or irritant effects the recommendations included in section 3.2.5 of Annex VI of Directive 67/548/EC, in paragraphs b) and c) of section 3 of article 6 of Directive 1999/45/EC and in section 3.2.3.3.5. of Annex I of CLP Regulation were taken into account.

Contains glycols. With possibility of effects that are hazardous to the health, it is recommended not to breathe the vapours for long periods of time.

##### Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

##### A- Ingestion:

Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.

##### B- Inhalation:

Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for inhalation. For more information see section 3.

##### C- Contact with the skin and the eyes:

Produces eye damage after contact.

##### D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3.

##### E- Sensitizing effects:

Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous with sensibilizing effects. For more information see section 3.

##### F- Specific target organ toxicity (STOT)-time exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

##### G- Specific target organ toxicity (STOT)-repeated exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

##### H- Aspiration hazard:

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**SECTION 11: TOXICOLOGICAL INFORMATION (continue)**

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**Other information:**

Non-applicable

**Specific toxicology information on the substances:**

Identification	Acute toxicity		Genus
Ethane-1,2-diol	LD50 oral	500 mg/kg	Rat
CAS: 107-21-1	LD50 dermal	9530 mg/kg	Rabbit
EC: 203-473-3	LC50 inhalation	Non-applicable	
Non-ionic hydrocarbon surfactant 6607730000	LD50 oral	5100 mg/kg	Rat
CAS: Non-applicable	LD50 dermal	2380 mg/kg	Rat
EC: Non-applicable	LC50 inhalation	Non-applicable	
Methanol	LD50 oral	100 mg/kg	Rat
CAS: 67-56-1	LD50 dermal	300 mg/kg	Rabbit
EC: 200-659-6	LC50 inhalation	3 mg/L (4 h)	Rat

**SECTION 12: ECOLOGICAL INFORMATION**

The experimental information related to the ecotoxicological properties of the product itself is not available

**12.1 Toxicity:**

Identification	Acute toxicity		Specie	Genus
Ethane-1,2-diol	LC50	53000 mg/L (96 h)	Pimephales promelas	Fish
CAS: 107-21-1	EC50	51000 mg/L (48 h)	Daphnia magna	Crustacean
EC: 203-473-3	EC50	24000 mg/L (168 h)	Selenastrum capricornutum	Alga
2-(2-butoxiethoxy)etanol	LC50	1300 mg/L (96 h)	Lepomis macrochirus	Fish
CAS: 112-34-5	EC50	2850 mg/L (24 h)	Daphnia magna	Crustacean
EC: 203-961-6	EC50	53 mg/L (192 h)	Microcystis aeruginosa	Alga
Non-ionic hydrocarbon surfactant 6607730000	LC50	310 mg/L (96 h)	Oncorhynchus mykiss	Fish
CAS: Non-applicable	EC50	Non-applicable		
EC: Non-applicable	EC50	Non-applicable		
Methanol	LC50	15400 mg/L (96 h)	Lepomis macrochirus	Fish
CAS: 67-56-1	EC50	12000 mg/L (96 h)	Nitrocras spinipes	Crustacean
EC: 200-659-6	EC50	530 mg/L (168 h)	Microcystis aeruginosa	Alga

**12.2 Persistence and degradability:**

Identification	Degradability		Biodegradability	
Ethane-1,2-diol	BOD5	0.47 g O2/g	Concentration	100 mg/L
CAS: 107-21-1	COD	1.29 g O2/g	Period	14 days
EC: 203-473-3	BOD5/COD	0.36	% Biodegradable	90 %
2-(2-butoxiethoxy)etanol	BOD5	0.25 g O2/g	Concentration	100 mg/L
CAS: 112-34-5	COD	2.08 g O2/g	Period	28 days
EC: 203-961-6	BOD5/COD	0.12	% Biodegradable	92 %
Methanol	BOD5	Non-applicable	Concentration	100 mg/L
CAS: 67-56-1	COD	1.42 g O2/g	Period	14 days
EC: 200-659-6	BOD5/COD	Non-applicable	% Biodegradable	92 %

**12.3 Bioaccumulative potential:**

Identification	Bioaccumulation potential	
Ethane-1,2-diol	BCF	10
CAS: 107-21-1	Pow Log	-1,36
EC: 203-473-3	Potential	Low
2-(2-butoxiethoxy)etanol	BCF	0,46
CAS: 112-34-5	Pow Log	0,56
EC: 203-961-6	Potential	Low

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**SECTION 12: ECOLOGICAL INFORMATION (continue)**

Identification	Bioaccumulation potential	
Methanol	BCF	3
CAS: 67-56-1	Pow Log	-0,77
EC: 200-659-6	Potential	Low

**12.4 Mobility in soil:**

Identification	Absorption/desorption		Volatility	
Ethane-1,2-diol	Koc	0	Henry	1,327E-1 Pa·m <sup>3</sup> /mol
CAS: 107-21-1	Conclusion	Very High	Dry soil	No
EC: 203-473-3	Surface tension	49890 N/m (25 °C)	Moist soil	No
2-(2-butoxiethoxy)etanol	Koc	48	Henry	7,2E-9 Pa·m <sup>3</sup> /mol
CAS: 112-34-5	Conclusion	Very High	Dry soil	No
EC: 203-961-6	Surface tension	33950 N/m (25 °C)	Moist soil	No
Methanol	Koc	Non-applicable	Henry	Non-applicable
CAS: 67-56-1	Conclusion	Non-applicable	Dry soil	Non-applicable
EC: 200-659-6	Surface tension	23550 N/m (25 °C)	Moist soil	Non-applicable

**12.5 Results of PBT and vPvB assessment:**

Non-applicable

**12.6 Other adverse effects:**

Not described

**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods:**

Code	Description	Waste class (Directive 2008/98/EC)
16 05 08*	Discarded organic chemicals consisting of or containing dangerous substances	Dangerous

**Waste management (disposal and evaluation):**

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2000/532/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommend disposal down the drain. See paragraph 6.2.

**Regulations related to waste management:**

In accordance with Annex II of Regulation (EC) n°1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2000/532/EC: Commission Decision of 3 May 2000

**SECTION 14: TRANSPORT INFORMATION**

This product is not regulated for transport (ADR/RID,IMDG,IATA)

**SECTION 15: REGULATORY INFORMATION**

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

Candidate substances for authorisation under the Regulation (EC) 1907/2006 (REACH): Non-applicable

Regulation (EC) 1005/2009, about substances that deplete the ozone layer: Non-applicable

Active substances for which a decision of non-inclusion onto Annex I (Regulation (EU) No 528/2012): Non-applicable

Regulation (EC) 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

**Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII, REACH):**

Non-applicable

**Specific provisions in terms of protecting people or the environment:**

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## Phos-Chek 3% AFFF Freeze Protected - [AQUAFILM AF-3R FP]

### SECTION 15: REGULATORY INFORMATION (continue)

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

#### Relevant instructions for use:

This product is intended for the production of low expansion foam for fire extinguishing purposes. It should be diluted at 3% in water and used with appropriate foam-generating equipment.

#### Other legislation:

Non-applicable

#### 15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

### SECTION 16: OTHER INFORMATION

#### Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) N° 1907/2006 (Regulation (EC) N° 453/2010)

#### Modifications related to the previous security card which concerns the ways of managing risks. :

Non-applicable

#### Text of R-phrases considered in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

#### Directive 67/548/EC and Directive 1999/45/EC:

R11: Highly flammable

R22: Harmful if swallowed

R23/24/25: Toxic by inhalation, in contact with skin and if swallowed

R36: Irritating to eyes

R38: Irritating to skin

R39/23/24/25: Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed

R41: Risk of serious damage to eyes

R43: May cause sensitisation by skin contact

#### CLP Regulation (EC) n° 1272/2008:

Acute Tox. 3: H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled

Acute Tox. 4: H302 - Harmful if swallowed

Eye Dam. 1: H318 - Causes serious eye damage

Eye Irrit. 2: H319 - Causes serious eye irritation

Flam. Liq. 2: H225 - Highly flammable liquid and vapour

Skin Irrit. 2: H315 - Causes skin irritation

Skin Sens. 1: H317 - May cause an allergic skin reaction

STOT SE 1: H370 - Causes damage to organs

#### Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

#### Principal bibliographical sources:

<http://esis.jrc.ec.europa.eu>

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

#### Abbreviations and acronyms:

- ADR: European agreement concerning the international carriage of dangerous goods by road

-IMDG: International maritime dangerous goods code

-IATA: International Air Transport Association

-ICAO: International Civil Aviation Organisation

-COD: Chemical Oxygen Demand

-BOD5: 5-day biochemical oxygen demand

-BCF: Bioconcentration factor

-LD50: Lethal Dose 50

-CL50: Lethal Concentration 50

-EC50: Effective concentration 50

-Log-POW: Octanol-water partition coefficient

-Koc: Partition coefficient of organic carbon

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Safety data sheet

According to 1907/2006/EC (REACH), 453/2010/EC

**Phos-Chek 3% AFFF Freeze Protected - [AQUAFILM AF-3R FP]**

The information contained in this security data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this security data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -