

# Safety Data Sheet





According to 1907/2006/EC (REACH), 453/2010/EC Phos-Chek 1x1 AR-AFFF Low Viscosity - [AQUAFILM ARN-1]

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

- 1.1 Product identifier:** Phos-Chek 1x1 AR-AFFF Low Viscosity - [AQUAFILM ARN-1]
- 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:**
- 
- Directive 67/548/EC and Directive 1999/45/EC:**  
In accordance with the legislation, the elements on the label are as follows:
- Xi**
- 
- 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 1x1 AR-AFFF Low Viscosity - [AQUAFILM ARN-1]

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

| Identification   | Chemical name/Classification   | Concentration        |
|--|--|----------------------|
| CAS: 112-34-5<br>EC: 203-961-6<br>Index: 603-096-00-8<br>REACH:01-2119475104-44-XXXX       | <b>2-(2-butoxiethoxy)etanol</b> ATP CLP00  | <b>15 - &lt;20 %</b> |
|  | Directive 67/548/EC Xi: R36<br>Regulation 1272/2008 Eye Irrit. 2: H319 - Warning                         |                      |
| CAS: Non-applicable<br>EC: Non-applicable<br>Index: Non-applicable<br>REACH:Non-applicable | <b>Mixture of fluorinated polymers</b> Not classified  | <b>4 - &lt;6 %</b>   |
|  | Directive 67/548/EC<br>Regulation 1272/2008  |                      |
| CAS: Non-applicable<br>EC: Non-applicable<br>Index: Non-applicable<br>REACH:Non-applicable | <b>Anionic hydrocarbon surfactant 6608700000</b> Self-classified   | <b>4 - &lt;6 %</b>   |
|  | Directive 67/548/EC Xi: R38, R41<br>Regulation 1272/2008 Eye Dam. 1: H318; Skin Irrit. 2: H315 - Danger  |                      |
| CAS: Non-applicable<br>EC: Non-applicable<br>Index: Non-applicable<br>REACH:Non-applicable | <b>Mixture of fluorosurfactants</b> Not classified   | <b>4 - &lt;6 %</b>   |
|  | Directive 67/548/EC<br>Regulation 1272/2008  |                      |
| CAS: 107-21-1<br>EC: 203-473-3<br>Index: 603-027-00-1<br>REACH:01-2119456816-28-XXXX       | <b>Ethane-1,2-diol</b> ATP CLP00   | <b>4 - &lt;6 %</b>   |
|  | Directive 67/548/EC Xn: R22<br>Regulation 1272/2008 Acute Tox. 4: H302 - Warning                         |                      |
| CAS: Non-applicable<br>EC: Non-applicable<br>Index: Non-applicable<br>REACH:Non-applicable | <b>Amphoteric hydrocarbon surfactant 6201213000</b> Self-classified                                      | <b>2 - &lt;4 %</b>   |
|  | Directive 67/548/EC Xi: R41<br>Regulation 1272/2008 Eye Dam. 1: H318 - Danger                            |                      |
| CAS: 107-41-5<br>EC: 203-489-0<br>Index: 603-053-00-3<br>REACH:01-2119539582-35-XXXX       | <b>Hexylene Glycol</b> ATP CLP00   | <b>2 - &lt;4 %</b>   |
|  | Directive 67/548/EC Xi: R36/38<br>Regulation 1272/2008 Eye Irrit. 2: H319; Skin Irrit. 2: H315 - Warning |                      |
| CAS: Non-applicable<br>EC: Non-applicable<br>Index: Non-applicable<br>REACH:Non-applicable | <b>Amphoteric hydrocarbon surfactant 6201220000</b> Self-classified                                      | <b>0,1 - &lt;2 %</b> |
|  | Directive 67/548/EC Xi: R36<br>Regulation 1272/2008 Eye Irrit. 2: H319 - Warning                         |                      |

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 does not contain substances classified as dangerous for inhalation, however, in case of symptoms of intoxication remove the person affected from the exposure area and provide with fresh air. Seek medical attention if the symptoms get worse or 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

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## Phos-Chek 1x1 AR-AFFF Low Viscosity - [AQUAFILM ARN-1]

### SECTION 5: FIREFIGHTING MEASURES

#### 5.1 Extinguishing media:

Product is non-flammable under normal conditions of storage, manipulation and use. 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. Personal protection equipment must be used against potential contact with the spilled product (See section 8). Evacuate the area and keep out those who do not have protection.

#### 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

Product is non-flammable under normal conditions of storage, manipulation and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on 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

Maximum Temp.: 50 °C

B.- General conditions for storage

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**Phos-Chek 1x1 AR-AFFF Low Viscosity - [AQUAFILM ARN-1]**

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

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 |                       |
|---|----------|----------------------|-----------------------|
| Ethane-1,2-diol<br>CAS: 107-21-1<br>EC: 203-473-3 | TLV-TWA  |                      |                       |
|   | TLV-STEL |                      | 100 mg/m <sup>3</sup> |
|   | Year     | 2014                 |                       |
| Hexylene Glycol<br>CAS: 107-41-5<br>EC: 203-489-0 | TLV-TWA  |                      |                       |
|   | TLV-STEL | 25 ppm               |                       |
|   | Year     | 2014                 |                       |

**DNEL (Workers):**

| Identification  |            | Short exposure |                         | Long exposure          |                        |
|---|------------|----------------|-------------------------|------------------------|------------------------|
|   |            | Systemic       | Local                   | Systemic               | Local                  |
| 2-(2-butoxiethoxy)etanol<br>CAS: 112-34-5<br>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<br>CAS: Non-applicable<br>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         |
| Ethane-1,2-diol<br>CAS: 107-21-1<br>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>   |
| Amphoteric hydrocarbon surfactant 6201213000<br>CAS: Non-applicable<br>EC: Non-applicable | Oral       | Non-applicable | Non-applicable          | Non-applicable         | Non-applicable         |
|   | Dermal     | Non-applicable | Non-applicable          | 12,5 mg/kg             | Non-applicable         |
|   | Inhalation | Non-applicable | Non-applicable          | 44 mg/m <sup>3</sup>   | Non-applicable         |
| Hexylene Glycol<br>CAS: 107-41-5<br>EC: 203-489-0   | Oral       | Non-applicable | Non-applicable          | Non-applicable         | Non-applicable         |
|   | Dermal     | Non-applicable | Non-applicable          | 2 mg/kg                | Non-applicable         |
|   | Inhalation | Non-applicable | 98 mg/m <sup>3</sup>    | 14 mg/m <sup>3</sup>   | 49 mg/m <sup>3</sup>   |

**DNEL (Population):**

| Identification  |            | Short exposure |                        | Long exposure         |                      |
|---|------------|----------------|------------------------|-----------------------|----------------------|
|   |            | Systemic       | Local                  | Systemic              | Local                |
| 2-(2-butoxiethoxy)etanol<br>CAS: 112-34-5<br>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<br>CAS: Non-applicable<br>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       |
| Ethane-1,2-diol<br>CAS: 107-21-1<br>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>  |
| Amphoteric hydrocarbon surfactant 6201213000<br>CAS: Non-applicable<br>EC: Non-applicable | Oral       | Non-applicable | Non-applicable         | 7,5 mg/kg             | Non-applicable       |
|   | Dermal     | Non-applicable | Non-applicable         | 7,5 mg/kg             | Non-applicable       |
|   | Inhalation | Non-applicable | Non-applicable         | Non-applicable        | Non-applicable       |
| Hexylene Glycol<br>CAS: 107-41-5<br>EC: 203-489-0   | Oral       | Non-applicable | Non-applicable         | 1 mg/kg               | Non-applicable       |
|   | Dermal     | Non-applicable | Non-applicable         | 1 mg/kg               | Non-applicable       |
|   | Inhalation | Non-applicable | 49 mg/m <sup>3</sup>   | 3,5 mg/m <sup>3</sup> | 25 mg/m <sup>3</sup> |

**PNEC:**

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**Phos-Chek 1x1 AR-AFFF Low Viscosity - [AQUAFILM ARN-1]**

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

| Identification  |              |                |                         |              |
|---|--------------|----------------|-------------------------|--------------|
| 2-(2-butoxiethoxy)etanol<br>CAS: 112-34-5<br>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<br>CAS: Non-applicable<br>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   |
| Ethane-1,2-diol<br>CAS: 107-21-1<br>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    |
| Amphoteric hydrocarbon surfactant 6201213000<br>CAS: Non-applicable<br>EC: Non-applicable | STP          | 3000 mg/L      | Fresh water             | 0,0135 mg/L  |
|   | Soil         | 0,8 mg/kg      | Marine water            | 0,00135 mg/L |
|   | Intermittent | Non-applicable | Sediment (Fresh water)  | 1 mg/kg      |
|   | Oral         | Non-applicable | Sediment (Marine water) | 0,1 mg/kg    |
| Hexylene Glycol<br>CAS: 107-41-5<br>EC: 203-489-0   | STP          | 20 mg/L        | Fresh water             | 0,429 mg/L   |
|   | Soil         | 0,11 mg/kg     | Marine water            | 0,0429 mg/L  |
|   | Intermittent | 4,29 mg/L      | Sediment (Fresh water)  | 1,79 mg/kg   |
|   | Oral         | 100 g/kg       | Sediment (Marine water) | 0,179 mg/kg  |

**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  |
|--|----------------------------|---|---|--|
| <br>Mandatory hand protection | Chemical protective gloves |  | EN 374-1:2003<br>EN 374-3:2003/AC:2006<br>EN 420:2003+A1:2009 | Replace the gloves at any sign of deterioration. |

**D.- Ocular and facial protection**

| Pictogram  | PPE                                     | Labelling   | CEN Standard  | Remarks   |
|--|---|---|---|---|
| <br>Mandatory face protection | Panoramic glasses against liquid splash |  | EN 166:2001<br>EN 172:1994/A1:2000<br>EN 172:1994/A2:2001<br>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. |



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

| Pictogram | PPE                  | Labelling   | CEN Standard                           | Remarks |
|-----------|----------------------|---|--|---------|
|           | Anti-slip work shoes |  | EN ISO 20347:2012<br>EN ISO 20344:2011 | None    |

F.- Additional emergency measures

| Emergency measure   | Standards                      | Emergency measure  | Standards                     |
|---|--------------------------------|--|-------------------------------|
| <br>Emergency shower | ANSI Z358-1<br>ISO 3864-1:2002 | <br>Eyewash stations | DIN 12 899<br>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: Brown  
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: 1080 - 1120 kg/m<sup>3</sup>  
Relative density at 20 °C: Non-applicable \*  
Dynamic viscosity at 20 °C: 25 cP  
Kinematic viscosity at 20 °C: Non-applicable \*  
Kinematic viscosity at 40 °C: Non-applicable \*  
Concentration: Non-applicable \*  
pH: 8 - 9  
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: Highly water-soluble  
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 \*

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

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## Phos-Chek 1x1 AR-AFFF Low Viscosity - [AQUAFILM ARN-1]

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continue)

Upper flammability limit: Non-applicable \*

#### 9.2 Other information:

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

Refraction index: 1,405

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

### 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   | Not applicable          | Not applicable | Not applicable |

#### 10.5 Incompatible materials:

| Acids          | Water          | Combustive materials | Combustible materials | Others         |
|----------------|----------------|----------------------|-----------------------|----------------|
| Not applicable | Not applicable | Not applicable       | Not applicable        | 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, as it does not contain 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:

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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 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:

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<br>CAS: 107-21-1<br>EC: 203-473-3   | LD50 oral       | 500 mg/kg      | Rat    |
|   | LD50 dermal     | 9530 mg/kg     | Rabbit |
|   | LC50 inhalation | Non-applicable |        |
| Amphoteric hydrocarbon surfactant 6201213000<br>CAS: Non-applicable<br>EC: Non-applicable | LD50 oral       | 5100 mg/kg     | Rat    |
|   | LD50 dermal     | Non-applicable |        |
|   | LC50 inhalation | Non-applicable |        |

**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      |
|---|----------------|--------------------|---------------------------|------------|
|   |                |                    |                           |            |
| 2-(2-butoxiethoxy)etanol<br>CAS: 112-34-5<br>EC: 203-961-6                                | LC50           | 1300 mg/L (96 h)   | Lepomis macrochirus       | Fish       |
|   | EC50           | 2850 mg/L (24 h)   | Daphnia magna             | Crustacean |
|   | EC50           | 53 mg/L (192 h)    | Microcystis aeruginosa    | Alga       |
| Ethane-1,2-diol<br>CAS: 107-21-1<br>EC: 203-473-3   | LC50           | 53000 mg/L (96 h)  | Pimephales promelas       | Fish       |
|   | EC50           | 51000 mg/L (48 h)  | Daphnia magna             | Crustacean |
|   | EC50           | 24000 mg/L (168 h) | Selenastrum capricornutum | Alga       |
| Amphoteric hydrocarbon surfactant 6201213000<br>CAS: Non-applicable<br>EC: Non-applicable | LC50           | 1,9 mg/L (96 h)    | Cyprinus carpio           | Fish       |
|   | EC50           | 1,9 mg/L (48 h)    | Daphnia magna             | Crustacean |
|   | EC50           | Non-applicable     |                           |            |
| Hexylene Glycol<br>CAS: 107-41-5<br>EC: 203-489-0   | LC50           | 9910 mg/L (96 h)   | Gambusia affinis          | Fish       |
|   | EC50           | 5410 mg/L (48 h)   | Daphnia magna             | Crustacean |
|   | EC50           | Non-applicable     |                           |            |

**12.2 Persistence and degradability:**

| Identification  | Degradability |                | Biodegradability |          |
|---|---------------|----------------|------------------|----------|
|   |               |                |                  |          |
| 2-(2-butoxiethoxy)etanol<br>CAS: 112-34-5<br>EC: 203-961-6                                | BOD5          | 0.25 g O2/g    | Concentration    | 100 mg/L |
|   | COD           | 2.08 g O2/g    | Period           | 28 days  |
|   | BOD5/COD      | 0.12           | % Biodegradable  | 92 %     |
| Ethane-1,2-diol<br>CAS: 107-21-1<br>EC: 203-473-3   | BOD5          | 0.47 g O2/g    | Concentration    | 100 mg/L |
|   | COD           | 1.29 g O2/g    | Period           | 14 days  |
|   | BOD5/COD      | 0.36           | % Biodegradable  | 90 %     |
| Amphoteric hydrocarbon surfactant 6201213000<br>CAS: Non-applicable<br>EC: Non-applicable | BOD5          | Non-applicable | Concentration    | 100 mg/L |
|   | COD           | Non-applicable | Period           | 28 days  |
|   | BOD5/COD      | Non-applicable | % Biodegradable  | 95 %     |
| Hexylene Glycol<br>CAS: 107-41-5<br>EC: 203-489-0   | BOD5          | 0.002 g O2/g   | Concentration    | 100 mg/L |
|   | COD           | 0.2 g O2/g     | Period           | 14 days  |
|   | BOD5/COD      | 0.009          | % Biodegradable  | 76,4 %   |

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**Phos-Chek 1x1 AR-AFFF Low Viscosity - [AQUAFILM ARN-1]**

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

**12.3 Bioaccumulative potential:**

| Identification           | Bioaccumulation potential |       |
|--------------------------|---------------------------|-------|
| 2-(2-butoxiethoxy)etanol | BCF                       | 0,46  |
| CAS: 112-34-5            | Pow Log                   | 0,56  |
| EC: 203-961-6            | Potential                 | Low   |
| Ethane-1,2-diol          | BCF                       | 10    |
| CAS: 107-21-1            | Pow Log                   | -1,36 |
| EC: 203-473-3            | Potential                 | Low   |
| Hexylene Glycol          | BCF                       |       |
| CAS: 107-41-5            | Pow Log                   | 0,14  |
| EC: 203-489-0            | Potential                 |       |

**12.4 Mobility in soil:**

| Identification                               | Absorption/desorption |                   | Volatility |                                 |
|--|-----------------------|-------------------|------------|---------------------------------|
| 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                              |
| 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                              |
| Amphoteric hydrocarbon surfactant 6201213000 | Koc                   | 3063              | Henry      | Non-applicable                  |
| CAS: Non-applicable                          | Conclusion            | Low               | Dry soil   | Non-applicable                  |
| EC: Non-applicable                           | Surface tension       | Non-applicable    | Moist soil | Non-applicable                  |
| Hexylene Glycol                              | Koc                   | Non-applicable    | Henry      | Non-applicable                  |
| CAS: 107-41-5                                | Conclusion            | Non-applicable    | Dry soil   | Non-applicable                  |
| EC: 203-489-0                                | Surface tension       | 15770 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:**

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## Phos-Chek 1x1 AR-AFFF Low Viscosity - [AQUAFILM ARN-1]

### SECTION 15: REGULATORY INFORMATION (continue)

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:**

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 foam for fire extinguishing purposes. For this purpose it should be diluted in water and used with appropriate foam-generating equipment. Use at 1% on both hydrocarbon and polar solvent fires.

**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. :**

COMPOSITION/INFORMATION ON INGREDIENTS:

- Added Content
  - Ethane-1,2-diol (107-21-1)
- Removed Content
  - Acetic acid (64-19-7)
  - Methanol (67-56-1)

**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:**

- R22: Harmful if swallowed
- R36: Irritating to eyes
- R36/38: Irritating to eyes and skin
- R38: Irritating to skin
- R41: Risk of serious damage to eyes

**CLP Regulation (EC) n° 1272/2008:**

- Acute Tox. 4: H302 - Harmful if swallowed
- Eye Dam. 1: H318 - Causes serious eye damage
- Eye Irrit. 2: H319 - Causes serious eye irritation
- Skin Irrit. 2: H315 - Causes skin irritation

**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:**

- CONTINUED ON NEXT PAGE -

**Phos-Chek 1x1 AR-AFFF Low Viscosity - [AQUAFILM ARN-1]**

**SECTION 16: OTHER INFORMATION (continue)**

- 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

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 -