

**H2Pro Flow Smart  
08897**

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

- 1.1 Product identifier:** H2Pro Flow Smart  
08897
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
Relevant uses: Surface Modifier. For professional user/industrial user 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:**  
Amega Sciences plc  
Unit 17 Lanchester Way  
NN11 8PH Daventry - Northamptonshire - United Kingdom  
Phone.: 44 1327 704444 -  
Fax: +44 (0) 1327 311 226  
admin@amega-sciences.com
- 1.4 Emergency telephone number:** +44 (0) 7802844234 (for Emergency ONLY)

**SECTION 2: HAZARDS IDENTIFICATION**

- 2.1 Classification of the substance or mixture:**  
**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).  
R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
- CLP Regulation (EC) n° 1272/2008:**  
Classification of this product has been carried out in accordance with CLP Regulation (EC) n° 1272/2008.  
Aquatic Chronic 3: Hazardous to the aquatic environment, long-term hazard, Category 3, H412
- 2.2 Label elements:**  
**CLP Regulation (EC) n° 1272/2008:**  
**Hazard statements:**  
Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects
- Precautionary statements:**  
P273: Avoid release to the environment  
P501: Dispose of contents and / or containers in accordance with regulations on hazardous waste or packaging and packaging waste respectively
- 2.3 Other hazards:**  
Non-applicable



**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

- 3.1 Substance:**  
Non-applicable
- 3.2 Mixture:**  
**Chemical description:** Polymer/s
- Components:**  
In accordance with Annex II of Regulation (EC) n°1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 34590-94-8	<b>Dipropylene Glycol Methyl Ether</b> Not classified	<b>5 - &lt;10 %</b>
EC: 252-104-2		
Index: Non-applicable		
REACH: 01-2119450011-60-XXXX	Regulation 1272/2008	

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

Identification	Chemical name/Classification	Concentration
CAS: 27306-78-1 EC: Non-applicable Index: Non-applicable REACH: Non-applicable	<b>Poly(oxy-1,2-ethanediyl), amethyl- w-[3-[1,3,3,3- tetramethyl-1- [(trimethylsilyl)oxy] disiloxanyl] propoxy]</b> Self-classified	3 - <5 %
Directive 67/548/EC	N: R51/53; Xi: R36; Xn: R20 	
Regulation 1272/2008	Acute Tox. 4: H332; Aquatic Chronic 2: H411; Eye Irrit. 2: H319 - Warning 	

To obtain more information on the risk of the substances consult sections 8, 11, 12, 15 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 SDS of this product.

**By inhalation:**

This product is not classified as hazardous 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:**

In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of modifications on the skin (stinging, redness, rashes, blisters,...), seek medical advice with this Safety data Sheet

**By eye contact:**

Rinse eyes thoroughly with water for at least 15 minutes. 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 SDS of the product.

**By ingestion/aspiration:**

In case of consumption, seek immediate medical assistance showing the SDS of this product.

**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:**

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 sub-products 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:**

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**SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)**

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:**

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

**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

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

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

A.- Technical measures for storage

Minimum Temp.: 0 °C  
Maximum Temp.: 40 °C  
Maximum time: 24 Months

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 (EH40/2005 Workplace exposure limits):

Identification	Environmental limits		
	Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	WEL (8h)	50 ppm
WEL (15 min)			
Year		2015	

**DNEL (Workers):**

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

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	65 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	310 mg/m <sup>3</sup>	Non-applicable

**DNEL (General population):**

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	Oral	Non-applicable	Non-applicable	1.67 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	15 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	37.2 mg/m <sup>3</sup>	Non-applicable

**PNEC:**

Identification					
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	STP	4168 mg/L	Fresh water	19 mg/L	
	Soil	2.74 mg/kg	Marine water	1.9 mg/L	
	Intermittent	190 mg/L	Sediment (Fresh water)	70.2 mg/kg	
	Oral	Non-applicable	Sediment (Marine water)	7.02 mg/kg	



**8.2 Exposure controls:**

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



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**

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Compulsory use of face mask	Filter mask for particles		EN 149:2001+A1:2009	Replace when an increase in resistance to breathing is observed.


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

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Protective gloves against minor risks			Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420 and EN 374.

**D.- Ocular and facial protection**


Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against liquid splash		EN 166:2001 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			



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

Pictogram	PPE	Labelling	CEN Standard	Remarks
	Anti-slip work shoes		EN ISO 20347:2012	

**F.- Additional emergency measures**

It is not necessary to take 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

**Volatile organic compounds:**

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	5 % weight
V.O.C. density at 20 °C:	52.5 kg/m <sup>3</sup> (52.5 g/L)
Average carbon number:	7
Average molecular weight:	148.2 g/mol

**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:	Characteristic
Colour:	Colourless
Odour:	Characteristic

**Volatility:**

Boiling point at atmospheric pressure:	188 °C
Vapour pressure at 20 °C:	51 Pa
Vapour pressure at 50 °C:	Non-applicable *
Evaporation rate at 20 °C:	Non-applicable *

**Product description:**

Density at 20 °C:	1040 - 1060 kg/m <sup>3</sup>
Relative density at 20 °C:	1.04 - 1.06
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *

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

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)**

Solubility in water at 20 °C:	Non-applicable *
Solubility properties:	Miscible
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *
Explosive properties:	Non-applicable *
Oxidising properties:	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.

**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity:**

No hazardous reactions are expected because the product is stable under recommended storage conditions. 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
Avoid strong acids	Not applicable	Not applicable	Not applicable	Avoid alkalis or strong bases

**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:**

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

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 (acute effect):

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

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: 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.
- B- Inhalation (acute effect):
  - Acute toxicity : 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.
  - Corrosivity/Irritability: 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.
- C- Contact with the skin and the eyes (acute effect):
  - Contact with the skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for skin contact. For more information see section 3.
  - Contact with the eyes: Based on available data, the classification criteria are not met, however it does contain substances classified as dangerous for this effect. For more information see section 3.
- D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):
  - Carcinogenicity: 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.
  - Mutagenicity: 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.
  - Reproductive toxicity: 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.
- E- Sensitizing effects:
  - Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3.
  - Cutaneous: 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.
- F- Specific target organ toxicity (STOT) - single 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:
  - 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.
  - Skin: 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
	LD50 oral	LD50 dermal	
Poly(oxy-1,2-ethanediyl), amethyl- w-[3-[1,3,3,3- tetramethyl-1- [(trimethylsilyl)oxy] disiloxanyl] propoxy] CAS: 27306-78-1 EC: Non-applicable	2001 mg/kg	2001 mg/kg	Rat
	11.78 mg/L (4 h)		Rat
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	5180 mg/kg	>2000 mg/kg	Rat
		>20 mg/L (4 h)	

**SECTION 12: ECOLOGICAL INFORMATION**

The experimental information related to the eco-toxicological properties of the product itself is not available

**12.1 Toxicity:**

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

Identification	Acute toxicity		Species	Genus
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	LC50	10000 mg/L (96 h)	Pimephales promelas	Fish
	EC50	1919 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	Non-applicable		
Poly(oxy-1,2-ethanediyl), amethyl- w-[3-[1,3,3,3- tetramethyl-1- [(trimethylsilyl)oxy]disiloxanyl] propoxy] CAS: 27306-78-1 EC: Non-applicable	LC50	1 - 10 mg/L (96 h)		Fish
	EC50	1 - 10 mg/L		Crustacean
	EC50	1 - 10 mg/L		Algae

**12.2 Persistence and degradability:**

Identification	Degradability		Biodegradability	
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	BOD5	Non-applicable	Concentration	Non-applicable
	COD	0.00202 g O2/g	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	73 %

**12.3 Bioaccumulative potential:**

Identification	Bioaccumulation potential	
Dipropylene Glycol Methyl Ether CAS: 34590-94-8 EC: 252-104-2	BCF	1
	Pow Log	-0.06
	Potential	Low

**12.4 Mobility in soil:**

Not available

**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 (Regulation (EU) No 1357/2014)
	It is not possible to assign a specific code, as it depends on the intended use by the user	Dangerous

**Type of waste (Regulation (EU) No 1357/2014):**

HP14 Ecotoxic

**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, The Waste Regulations 2011, 2011 No. 988). As under 15 01 (2014/955/EU) 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 recommended 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, 2014/955/EU, Regulation (EU) No 1357/2014

**SECTION 14: TRANSPORT INFORMATION**
**Transport of dangerous goods by land:**

With regard to ADR 2015 and RID 2015:

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**SECTION 14: TRANSPORT INFORMATION (continued)**

- |   |                |
|---|----------------|
| <b>14.1 UN number:</b>  | Non-applicable |
| <b>14.2 UN proper shipping name:</b>  | Non-applicable |
| <b>14.3 Transport hazard class(es):</b>   | Non-applicable |
| Labels:   | Non-applicable |
| <b>14.4 Packing group:</b>  | Non-applicable |
| <b>14.5 Dangerous for the environment:</b>                                      | No             |
| <b>14.6 Special precautions for user</b>  |                |
| Special regulations:  | Non-applicable |
| Tunnel restriction code:  | Non-applicable |
| Physico-Chemical properties:  | see section 9  |
| Limited quantities:   | Non-applicable |
| <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:</b> | Non-applicable |

**Transport of dangerous goods by sea:**

With regard to IMDG 37-14:

- |   |                |
|---|----------------|
| <b>14.1 UN number:</b>  | Non-applicable |
| <b>14.2 UN proper shipping name:</b>  | Non-applicable |
| <b>14.3 Transport hazard class(es):</b>   | Non-applicable |
| Labels:   | Non-applicable |
| <b>14.4 Packing group:</b>  | Non-applicable |
| <b>14.5 Dangerous for the environment:</b>                                      | No             |
| <b>14.6 Special precautions for user</b>  |                |
| Special regulations:  | Non-applicable |
| EmS Codes:  |                |
| Physico-Chemical properties:  | see section 9  |
| Limited quantities:   | Non-applicable |
| <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:</b> | Non-applicable |

**Transport of dangerous goods by air:**

With regard to IATA/ICAO 2015:

- |   |                |
|---|----------------|
| <b>14.1 UN number:</b>  | Non-applicable |
| <b>14.2 UN proper shipping name:</b>  | Non-applicable |
| <b>14.3 Transport hazard class(es):</b>   | Non-applicable |
| Labels:   | Non-applicable |
| <b>14.4 Packing group:</b>  | Non-applicable |
| <b>14.5 Dangerous for the environment:</b>                                      | No             |
| <b>14.6 Special precautions for user</b>  |                |
| Physico-Chemical properties:  | see section 9  |
| <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:</b> | Non-applicable |

**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

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

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

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**SECTION 15: REGULATORY INFORMATION (continued)**

Article 95, REGULATION (EU) No 528/2012: Non-applicable

REGULATION (EU) No 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, etc ....):**

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.

**Other legislation:**

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009, 2009 No. 716

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDG 2009), SI 2009 No 1348

The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment (Amendment) Regulations 2011, 2011 No. 1885

Control of Substances Hazardous to Health Regulations 2002 (as amended)

EH40/2005 Workplace exposure limits

The Waste Regulations 2011, 2011 No. 988

**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 (EU) N° 453/2010, Regulation (EC) N° 2015/830)

**Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:**

COMPOSITION/INFORMATION ON INGREDIENTS:

- Added Content  
Dipropylene Glycol Methyl Ether (34590-94-8)
- Removed Content  
Polyethylene glycol allylmethyl ether (27252-80-8)

**Texts of the legislative phrases mentioned in section 2:**

H412: Harmful to aquatic life with long lasting effects

**Texts of the legislative phrases mentioned 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:**

R20: Harmful by inhalation

R36: Irritating to eyes

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

**CLP Regulation (EC) n° 1272/2008:**

Acute Tox. 4: H332 - Harmful if inhaled

Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects

Eye Irrit. 2: H319 - Causes serious eye irritation

**Classification procedure:**

Aquatic Chronic 3: Calculation method

**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:**

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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 safety 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 safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -

# Safety Data Sheet

Issue Date 24-Feb-2015

Revision Date 10-Oct-2019

Version: 7.01

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

### 1.1. Product identifier

**Product Name** Greenmaster Liquid 0-0-0-6.3Fe  
**Product Code:** 31070120DA  
**Pure substance/mixture** Mixture.

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Recommended Use** Fertilizer (PC12). Restricted to professional users.  
**Uses Advised Against:** Consumer use [SU 21].

### 1.3. Details of the supplier of the safety data sheet

Everris International B.V. Nijverheidsweg 1-5; 6422 PD Heerlen (NL); Tel: +31 (0)45-5609100; Fax: +31 (0)45-5609190.

**For further information, please contact:** INFO-MSDS@EVERRIS.COM.

**1.4. Emergency telephone number:** IN CASE OF AN EMERGENCY CALL: +44 1235 239 670 (24h).

## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

Mixture

*Regulation (EC) No 1272/2008 (CLP)*

<b>Acute toxicity - Oral</b>	Category 4 - (H302)
<b>Skin Corrosion or Irritation</b>	Category 2 - (H315)
<b>Eye Irritation</b>	Category 2 - (H319)
<b>Chronic aquatic toxicity</b>	Category 3 - (H412)

### 2.2. Label elements



**Signal Word:** Warning

#### Hazard Statements:

H319 - Causes serious eye irritation  
H412 - Harmful to aquatic life with long lasting effects  
H302 - Harmful if swallowed  
H315 - Causes skin irritation

#### Precautionary Statements:

P264 - Wash hands thoroughly after handling  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P337 + P313 - If eye irritation persists: Get medical advice/attention  
P501 - Dispose of container in accordance with local regulation

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Chemical Name	EC-No.	CAS No	Weight %	Classification according Regulation (EC) 1272/2008 [CLP]	REACH registration number
Iron sulphate; FeSO <sub>4</sub> +7H <sub>2</sub> O	231-753-5	7782-63-0	25 - 40%	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	01-2119513203-57
Citric acid; C <sub>6</sub> H <sub>8</sub> O <sub>7</sub>	201-069-1	77-92-9	1 - 5%	Eye Irrit. 2 (H319)	01-2119457026-42
Ethanolamine	205-483-8	141-43-5	0.1 - 1%	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Skin Corr. 1B (H314)	01-2119486455-28
Zinc sulphate mono hydrate; ZnSO <sub>4</sub> +1H <sub>2</sub> O	231-793-3	7446-19-7	< 0.1%	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	01-2119474684-27
Manganese sulphate; MnSO <sub>4</sub> +1H <sub>2</sub> O	232-08-99	7785-87-7	< 0.1%	STOT RE 2 (H373) Eye Dam. 1 (H318) Aquatic Chronic 2 (H411)	01-2119456624-35
Copper sulfate pentahydrate; CuSO <sub>4</sub> +5H <sub>2</sub> O	231-847-6	7758-99-8	< 0.1%	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	01-2119520566-40

Full text of H- and EUH-phrases: see section 16.

### Section 4: FIRST AID MEASURES

#### 4.1. Description of first aid measures

**General Advice:** First aid measures should be executed by trained personnel only.

**Inhalation** If not breathing, give artificial respiration. If symptoms persist, call a physician. If fumes from reactions are inhaled, move to fresh air immediately.

**Skin Contact:** If skin irritation persists, call a physician.

**Eye Contact:** Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.

**Ingestion:** Call a physician or Poison Control Centre immediately.

#### 4.2. Most important symptoms and effects, both acute and delayed

None under normal processing

#### 4.3. Indication of any immediate medical attention and special treatment needed

None under normal processing.

### Section 5: FIRE FIGHTING MEASURES

#### 5.1. Extinguishing media

Suitable Extinguishing Media:

Powder(s).

Unsuitable Extinguishing Media:

Water. High volume water jet.

**5.2. Special hazards arising from the substance or mixture**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

**5.3. Advice for firefighters**

Use extinguishing agent suitable for type of surrounding fire. In the event of fire and/or explosion do not breathe fumes. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

**Section 6: ACCIDENTAL RELEASE MEASURES****6.1. Personal precautions, protective equipment and emergency procedures****Personal Precautions:** Wear personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas.**For Emergency Responders:** Use personal protection recommended in Section 8.**6.2. Environmental precautions**

Do not allow material to contaminate ground water system.

**6.3. Methods and material for containment and cleaning up***Methods for Containment:* Prevent further leakage or spillage if safe to do so.*Methods for Cleanup:* Take up mechanically and collect in suitable container for disposal.**6.4. Reference to other sections**

§ 8, 12, 13.

**Section 7: HANDLING AND STORAGE****7.1. Precautions for safe handling**

General hygiene considerations:

Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. When using, do not eat, drink or smoke.

**7.2. Conditions for safe storage, including any incompatibilities**

Technical measures/storage conditions:

Keep containers tightly closed in a cool, well-ventilated place. Keep at temperatures between 0 °C and 40 °C.

Packaging Materials:  
LGK (Germany)Store in original container.  
13**7.3. Specific end use(s)**

Specific use(s)

Fertilizer; www.everris.com; Read and follow label instructions  
Mixture. Not required.

Exposure scenario

**Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters**

<i>Iron sulphate; FeSO<sub>4</sub>·7H<sub>2</sub>O</i>	
Belgium - 8 Hr TWA	1 mg/m <sup>3</sup>
Denmark	TWA: 1 mg/m <sup>3</sup>
Finland	TWA: 1 mg/m <sup>3</sup>
Ireland	TWA: 1 mg/m <sup>3</sup> STEL: 2 mg/m <sup>3</sup>
Norway	TWA: 1 mg/m <sup>3</sup> STEL: 2 mg/m <sup>3</sup>
Portugal	TWA: 1 mg/m <sup>3</sup>
Spain - Valores Limite Ambientales - VLE	TWA: 1 mg/m <sup>3</sup>
Switzerland	TWA: 1 mg/m <sup>3</sup>
United Kingdom - Occupational Exposure	1 mg/m <sup>3</sup> 8hr TWA. 2 mg/m <sup>3</sup> 15 min TWA
<i>Citric acid; C<sub>6</sub>H<sub>8</sub>O<sub>7</sub></i>	
greece OEL 15 minute	1
<i>Ethanolamine</i>	

European Union	TWA: 1 ppm TWA: 2.5 mg/m <sup>3</sup> Skin
Austria	Skin STEL 3 ppm STEL 7.6 mg/m <sup>3</sup> TWA: 1 ppm TWA: 2.5 mg/m <sup>3</sup>
Australia	3 ppm TWA 7.5 mg/m <sup>3</sup> TWA
Belgium - 8 Hr TWA	1 ppm TWA 2.5 mg/m <sup>3</sup> TWA
Bulgaria - OEL - TWAs	1 ppm TWA; 2.5 mg/m <sup>3</sup> TWA
Croatia - OEL - STELs (KGVI)	3 ppm STEL [KGVI]; 7.6 mg/m <sup>3</sup> STEL [KGVI]
Czech Republic OEL	2.5 mg/m <sup>3</sup> TWA
Denmark	TWA: 1 ppm TWA: 2.5 mg/m <sup>3</sup> Skin
Estonia - OEL - STELs	3 ppm STEL; 7.6 mg/m <sup>3</sup> STEL
Finland	TWA: 1 ppm TWA: 2.5 mg/m <sup>3</sup> STEL: 3 ppm STEL: 7.6 mg/m <sup>3</sup> Skin
FR - OEL - 8h VMEs	TWA: 1 ppm TWA: 2.5 mg/m <sup>3</sup> STEL: 3 ppm STEL: 7.6 mg/m <sup>3</sup>
greece OEL 15 minute	3 ppm STEL 7.6 mg/m <sup>3</sup> STEL
Hungary - OEL - TWAs	2.5 mg/m <sup>3</sup> TWA
Iceland - OEL - 8 Hour	1 ppm TWA 2.5 mg/m <sup>3</sup> TWA
Indonesia - OEL - STELs (PSDs)	6 ppm STEL
Italy OEL Data - TWA:	TWA: 1 ppm TWA: 2.5 mg/m <sup>3</sup> STEL: 3 ppm STEL: 7.6 mg/m <sup>3</sup> Skin
Ireland	TWA: 1 ppm TWA: 2.5 mg/m <sup>3</sup> STEL: 3 ppm STEL: 7.6 mg/m <sup>3</sup> Skin
Japan	3 ppm OEL 7.5 mg/m <sup>3</sup> OEL
Korea - ISHA - OEL - TWAs	3 ppm TWA (Serial No. 394, listed under 2-Aminoethanol)
Latvia - OEL - TWAs	0.2 ppm TWA; 0.5 mg/m <sup>3</sup> TWA
Malaysia	3 ppm TWA; 7.5 mg/m <sup>3</sup> TWA
NL MAC - TWA:	Skin STEL: 7.6 mg/m <sup>3</sup> TWA: 2.5 mg/m <sup>3</sup>
Norway	TWA: 1 ppm TWA: 2.5 mg/m <sup>3</sup> Skin STEL: 2 ppm STEL: 5 mg/m <sup>3</sup>
Poland	STEL: 7.5 mg/m <sup>3</sup> TWA: 2.5 mg/m <sup>3</sup>
Portugal	STEL: 3 ppm STEL: 7.6 mg/m <sup>3</sup> TWA: 1 ppm TWA: 2.5 mg/m <sup>3</sup>
Romania - OEL - TWAs	1 ppm TWA; 2.5 mg/m <sup>3</sup> TWA
Slovenia - OEL - TWAs	1 ppm TWA; 2.5 mg/m <sup>3</sup> TWA
Spain - Valores Limite Ambientales - VLE	S* STEL: 3 ppm STEL: 7.5 mg/m <sup>3</sup> TWA: 1 ppm TWA: 2.5 mg/m <sup>3</sup>

Singapore - OEL:PELs	3 ppm PEL 7.5 mg/m <sup>3</sup> PEL
Switzerland	STEL: 4 ppm STEL: 10 mg/m <sup>3</sup> TWA: 2 ppm TWA: 5 mg/m <sup>3</sup>
UK EH40 WEL (8h)	3 ppm TWA 7.6 mg/m <sup>3</sup> TWA
<i>Manganese sulphate; MnSO<sub>4</sub>+1H<sub>2</sub>O</i>	
Austria	STEL 2 mg/m <sup>3</sup> TWA: 0.5 mg/m <sup>3</sup>
Australia	0.2 mg/m <sup>3</sup>
Belgium - 8 Hr TWA	0.2 mg/m <sup>3</sup>
Denmark	TWA: 0.2 mg/m <sup>3</sup>
Finland	TWA: 0.02 mg/m <sup>3</sup> TWA: 0.2 mg/m <sup>3</sup>
Ireland	TWA: 0.2 mg/m <sup>3</sup> STEL: 0.6 mg/m <sup>3</sup>
Japan	0.2 mg/m <sup>3</sup> OEL Mn
NL MAC - TWA:	STEL: 0.05 mg/m <sup>3</sup> TWA: 0.2 mg/m <sup>3</sup>
Norway	TWA: 0.1 mg/m <sup>3</sup> STEL: 0.1 ppm
Poland	TWA: 0.05 mg/m <sup>3</sup>
Portugal	TWA: 0.2 mg/m <sup>3</sup>
Spain - Valores Limite Ambientales - VLE	TWA: 0.2 mg/m <sup>3</sup> TWA: 0.05 mg/m <sup>3</sup>
Switzerland	TWA: 0.5 mg/m <sup>3</sup>
UK EH40 WEL (8h)	5 mg/m <sup>3</sup>
<i>Copper sulfate pentahydrate; CuSO<sub>4</sub>+5H<sub>2</sub>O</i>	
Austria	STEL 0.4 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>
Finland	TWA: 0.02 mg/m <sup>3</sup>
Poland	TWA: 0.2 mg/m <sup>3</sup>
Switzerland	STEL: 0.2 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>

**Derived No Effect Level (DNEL)**

Component	Oral	Dermal	Inhalation
Zinc sulphate mono hydrate; ZnSO <sub>4</sub> +1H <sub>2</sub> O 7446-19-7 (< 0.1% )		8.3 mg/kg bw/day	1 mg/m <sup>3</sup>
Manganese sulphate; MnSO <sub>4</sub> +1H <sub>2</sub> O 7785-87-7 (< 0.1% )	37.6 mg/m <sup>3</sup>	0.004 mg/kg bw/day	0.2 mg/m <sup>3</sup>

**Predicted No Effect Concentration (PNEC)**

No data available

Component	Fresh Water	Freshwater sediment	Sea Water	Sea sediment	Soil	Impact on Sewage Treatment
Zinc sulphate mono hydrate; ZnSO <sub>4</sub> +1H <sub>2</sub> O 7446-19-7 (< 0.1% )	20.6 µg/l		6.1 µg/l	56.5 mg/kg	35.6 mg/kg	100 µg/l
Manganese sulphate; MnSO <sub>4</sub> +1H <sub>2</sub> O 7785-87-7 (< 0.1% )	0.013 mg/l	0.011 mg/kg	0 mg/l	0.001 mg/kg	25.1 mg/kg	25.1 mg/kg

**8.2. Exposure controls****Personal protective equipment****Eye/Face Protection**

Not required

**Hand protection**

Gloves. Nitrile rubber (0.26 mm). Break through time. &gt; 8 h.

**Respiratory Protection**

Not required; except in case of aerosol formation. In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit



**Skin and body protection:** Lightweight protective clothing  
**Hygiene Measures:** When using, do not eat, drink or smoke. Keep away from food, drink and animal feeding stuffs.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

<b>Physical State:</b>	Liquid
<b>Appearance:</b>	aqueous solution
<b>Odor:</b>	None
<b>pH:</b>	3.2
<b>Melting Point/Freezing Point:</b>	No data available
<b>Boiling Point/Range:</b>	no data available. .
<b>Flash Point:</b>	no data available. .
<b>Evaporation Rate:</b>	no data available. .
<b>Flammability (solid, gas):</b>	Not flammable
<b>Vapor Pressure:</b>	no data available. .
<b>Vapour density</b>	no data available. .
<b>Relative density</b>	No data available
<b>Water Solubility:</b>	No data available
<b>Solubility(ies)</b>	No data available
<b>Partition Coefficient:</b>	no data available. .
<b>Autoignition Temperature:</b>	No data available
<b>Decomposition temperature:</b>	No data available
<b>Explosive Properties:</b>	Doesn't present explosion hazard.
<b><u>9.2. Other information</u></b>	
<b>VOC Content (%):</b>	Solid. Not applicable.

## Section 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Not reactive.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

None under normal processing. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

### 10.4. Conditions to avoid

For quality reasons: Keep out of reach of direct sunlight, store under dry conditions, partly used packaging should be closed well.

### 10.5. Incompatible materials

Keep away from catalysts like derivatives of hexavalent chromium and metal halides. Keep away from flammable products (fuels) like charcoal, wood, flour, soot etc.

### 10.6. Hazardous decomposition products

None under normal processing. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

## Section 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### Product Information

If this product is a mixture, the classification is not based on toxicology studies for this product, but is based solely on toxicology studies for ingredients found within this product. More detailed substance and/or ingredient information may be provided in the other sections of this SDS

#### Information on the Likely Routes of Exposure (inhalation, ingestion, skin and eye contact):

**Inhalation** Inhalation of dust in high concentration may cause irritation of respiratory system.

<b>Eye contact</b>	May cause slight irritation.
<b>Skin Contact</b>	May cause irritation.
<b>Ingestion</b>	May cause gastrointestinal discomfort if consumed in large amounts.

**Information on Toxicological Effects**

None known

**Acute Toxicity**

The following values are calculated based on chapter 3.1 of the GHS document:

ATEmix (oral): 1,936.00 mg/kg

**Unknown Acute Toxicity:** 0% of the mixture consists of ingredient(s) of unknown toxicity.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Iron sulphate; FeSO <sub>4</sub> +7H <sub>2</sub> O	= 1520 mg/kg		
Citric acid; C <sub>6</sub> H <sub>8</sub> O <sub>7</sub>	= 3 g/kg ( Rat ) = 3000 mg/kg ( Rat )		
Ethanolamine	= 1720 mg/kg ( Rat )	= 1 mL/kg ( Rabbit ) = 1000 mg/kg ( Rabbit )	
Manganese sulphate; MnSO <sub>4</sub> +1H <sub>2</sub> O	= 2125 mg/kg ( Rat )		> 4.98 mg/L (Rat) 4h
Copper sulfate pentahydrate; CuSO <sub>4</sub> +5H <sub>2</sub> O	= 960 mg/kg ( Rat )	> 2 g/kg ( Rat ) > 8 g/kg ( Rabbit )	

**Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure:**

If this product is a mixture, the classification is not based on toxicology studies for this product, but is based solely on toxicology studies for ingredients found within this product. More detailed substance and/or ingredient information may be provided in the other sections of this SDS

<b>Serious eye damage/eye irritation</b>	Classification based on individual ingredients of the mixture.
<b>Respiratory or skin sensitization</b>	Classification based on individual ingredients of the mixture.
<b>Germ Cell Mutagenicity</b>	Classification based on individual ingredients of the mixture.
<b>Carcinogenicity</b>	Classification based on individual ingredients of the mixture.
<b>Reproductive Toxicity</b>	Classification based on individual ingredients of the mixture.
<b>STOT - Single Exposure</b>	Classification based on individual ingredients of the mixture.
<b>STOT - Repeated Exposure</b>	Classification based on individual ingredients of the mixture.
<b>Aspiration Hazard</b>	Classification based on individual ingredients of the mixture.

## Section 12: ECOLOGICAL INFORMATION

**12.1. Toxicity****Ecotoxicity**

Should not be released into the environment

**Unknown Aquatic Toxicity**

0% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Citric acid; C <sub>6</sub> H <sub>8</sub> O <sub>7</sub>	-	1516: 96 h Lepomis macrochirus mg/L LC50 static	-	120: 72 h Daphnia magna mg/L EC50
Ethanolamine	15: 72 h Desmodesmus subspicatus mg/L EC50	227: 96 h Pimephales promelas mg/L LC50 flow-through 3684: 96 h Brachydanio rerio mg/L LC50 static 300 - 1000:	-	65: 48 h Daphnia magna mg/L EC50

		96 h Lepomis macrochirus mg/L LC50 static 200: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 114 - 196: 96 h Oncorhynchus mykiss mg/L LC50 static		
Copper sulfate pentahydrate; CuSO <sub>4</sub> +5H <sub>2</sub> O	-	0.66 - 1.15: 96 h Lepomis macrochirus mg/L LC50 semi-static 0.96 - 1.8: 96 h Lepomis macrochirus mg/L LC50 static 0.6752: 96 h Pimephales promelas mg/L LC50 static 0.09 - 0.19: 96 h Oncorhynchus mykiss mg/L LC50 static 0.1478 - 0.165: 96 h Oncorhynchus mykiss mg/L LC50 flow-through	-	0.147 - 0.227: 48 h Daphnia magna mg/L EC50 Static

**12.2. Persistence and degradability****Persistence and Degradability:**

No persistent or cumulative effects were observed.

**12.3. Bioaccumulative potential****Bioaccumulation:**

Does not bioaccumulate.

Chemical Name	LOGPOW
Citric acid; C <sub>6</sub> H <sub>8</sub> O <sub>7</sub>	-1.72
Ethanolamine	-1.91

**12.4. Mobility in soil**

No data available.

**12.5. PBT and vPvB assessment**

No data available.

**12.6. Other adverse effects**

No data available.

## Section 13: DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods****Disposal of Wastes:**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging:**

Do not reuse container.

**Other Information**

Use up product completely. Packaging material is industrial waste.

## Section 14: TRANSPORT INFORMATION

**IMO / IMDG****14.1****UN-No:**

Not regulated

**14.2****Proper shipping name:**

Not regulated

**14.3****Hazard Class:**

Not regulated

**14.4****Packing group:**

Not regulated

**14.5****Marine Pollutant:**

No information available

**14.6**

**Special Provisions** None  
**14.7**  
**Bulk transport according Annex II of MARPOL and IBC Code** No data available

**ADR/RID**

**14.1**  
**UN-No:** Not regulated  
**14.2**  
**Proper shipping name:** Not regulated  
**14.3**  
**Hazard Class:** Not regulated  
**14.4**  
**Packing group:** Not regulated  
**14.5**  
**Environmental Hazard** Not regulated  
**14.6**  
**Special Provisions** None

**IATA**

**14.1**  
**UN-No:** Not regulated  
**14.2**  
**Proper shipping name:** Not regulated  
**14.3**  
**Hazard Class:** Not regulated  
**14.4**  
**Packing group:** Not regulated  
**14.5**  
**Environmental Hazard** Not regulated  
**14.6**  
**Special Provisions** None

**Section 15: REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Belgium****Denmark**

Denmark No data available

**France**

ICPE Not regulated

**Germany**

LGK (Germany) 13  
 Water Endangering Class (WGK): 1 (Everris classification)  
 Gefahrstoffverordnung (Germany) TRGS 511 Not regulated

Component	German WGK Section
Iron sulphate; FeSO <sub>4</sub> +7H <sub>2</sub> O 7782-63-0 ( 25 - 40% )	class 3
Citric acid; C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> 77-92-9 ( 1 - 5% )	class 1
Ethanolamine 141-43-5 ( 0.1 - 1% )	class 1
Zinc sulphate mono hydrate; ZnSO <sub>4</sub> +1H <sub>2</sub> O 7446-19-7 ( < 0.1% )	3
Manganese sulphate; MnSO <sub>4</sub> +1H <sub>2</sub> O 7785-87-7 ( < 0.1% )	2
Copper sulfate pentahydrate; CuSO <sub>4</sub> +5H <sub>2</sub> O 7758-99-8 ( < 0.1% )	class 3

**15.2 Chemical safety assessment**

Substance(s) usage is covered according to Reach regulation 1907/2006

Take note of Dir. 98/24/EC on the protection of the health and safety of workers from risks related to chemical agents at work

**Section 16: OTHER INFORMATION**
**Full text of H-Statements referred to under sections 2 and 3**

- H302 - Harmful if swallowed
- H312 - Harmful in contact with skin
- H332 - Harmful if inhaled
- H314 - Causes severe skin burns and eye damage
- H318 - Causes serious eye damage
- H400 - Very toxic to aquatic life
- H410 - Very toxic to aquatic life with long lasting effects
- H319 - Causes serious eye irritation
- H315 - Causes skin irritation
- H373 - May cause damage to organs through prolonged or repeated exposure in contact with skin
- H411 - Toxic to aquatic life with long lasting effects
- H412 - Harmful to aquatic life with long lasting effects

**Key or legend to abbreviations and acronyms used in the safety data sheet**

RID: Regulations Concerning the International Transport of Dangerous Goods by Rail

ICAO: International Civil Aviation Organization

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PNEC: Predicted No Effect Concentration

DNEL: Derived No-Effect Level

REACH: Registration, Evaluation, Authorization of Chemicals

CLP: EU-GHS; Classification, Labelling and Packaging

OEL: Occupational Exposure Limit

TWA: Time Weighted Average

ATE: Acute Toxicity Estimate

EUH phrase: CLP (EU) specific hazard statement

LD50: Lethal dose, 50%.

LC50: Lethal concentration, 50%.

SVHC: Substance of Very High Concern.

**Classification procedure**

- Calculation method
- Expert judgment and weight of evidence determination

**Key literature references and sources for data**

According to EC Regulation 1907/2006 (Reach), Regulation EU No. 2015/830. Regulation (EC) No 1272/2008 (CLP).

**Prepared by**

Regulatory Affairs Department (INFO-MSDS@EVERRIS.COM)

**Issue Date**

24-Feb-2015

**Restrictions on use**

Restricted to professional users

**Reason for revision**

\*\*\* Indicates changes since the last revision. This version replaces all previous versions

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