



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

- 1.1 Product identifier:** Manganaze  
08343
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
Relevant uses: Fertilizer. 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:** RIGBY TAYLOR LTD  
1 – 3 Freeman Court Jarman Way  
Herts SW8 5HW Royston  
Phone.: 01204 677777 -  
Fax: 01204 677715  
sales@rigbytaylor.com
- 1.4 Emergency telephone number:** 01204 677777

## 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  
Eye Irrit. 2: Eye irritation, Category 2, H319  
Skin Irrit. 2: Skin irritation, Category 2, H315
- 2.2 Label elements:**  
**CLP Regulation (EC) n° 1272/2008:**  
**Warning**  

- Hazard statements:**  
Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects  
Eye Irrit. 2: H319 - Causes serious eye irritation  
Skin Irrit. 2: H315 - Causes skin irritation
- Precautionary statements:**  
P264: Wash thoroughly after use  
P273: Avoid release to the environment  
P280: Wear protective gloves/protective clothing/eye protection/face protection  
P302+P352: IF ON SKIN: Wash with plenty of water  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P332+P313: If skin irritation occurs: Get medical advice/attention  
P337+P313: If eye irritation persists: Get medical advice/attention  
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

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

#### 3.2 Mixture:

**Chemical description:** Miscellaneous products

**Components:**

In accordance with Annex II of Regulation (EC) n°1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 7782-63-0 EC: 231-753-5 Index: Non-applicable REACH: 01-2119513203-57-XXXX	<b>Ferrous sulfate heptahydrate</b> Self-classified	10 - <20 %
	Directive 67/548/EC Xi: R36/38; Xn: R22	
	Regulation 1272/2008 Acute Tox. 4: H302; Eye Irrit. 2: H319; Skin Irrit. 2: H315 - Warning	
CAS: 7785-87-7 EC: 232-089-9 Index: 025-003-00-4 REACH: 01-2119456624-35-XXXX	<b>manganese sulphate</b> ATP CLP00	5 - <10 %
	Directive 67/548/EC N: R51/53; Xn: R48/20/22	
	Regulation 1272/2008 Aquatic Chronic 2: H411; STOT RE 2: H373 - Warning	
CAS: 119345-04-9 EC: 601-601-6 Index: Non-applicable REACH: 01-2119492361-39-XXXX	<b>Sodium dodecyl diphenyl ether disulfonate</b> Self-classified	<1 %
	Directive 67/548/EC N: R51/53; Xi: R41	
	Regulation 1272/2008 Aquatic Chronic 2: H411; Eye Dam. 1: H318 - Danger	
CAS: 7664-93-9 EC: 231-639-5 Index: 016-020-00-8 REACH: 01-2119458838-20-XXXX	<b>Sulphuric acid</b> ATP CLP00	<1 %
	Directive 67/548/EC C: R35	
	Regulation 1272/2008 Skin Corr. 1A: H314 - Danger	

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:**

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

**By eye contact:**

Rinse eyes thoroughly with lukewarm 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 SDS of the product.

**By ingestion/aspiration:**

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

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

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

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

Non-applicable

### SECTION 5: FIREFIGHTING MEASURES

#### 5.1 Extinguishing media:

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:

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## SECTION 5: FIREFIGHTING MEASURES (continued)

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:

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

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## SECTION 7: HANDLING AND STORAGE (continued)

### 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		
	WEL (8h)	WEL (15 min)	Year
Sulphuric acid CAS: 7664-93-9 EC: 231-639-5			2015

### DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
manganese sulphate CAS: 7785-87-7 EC: 232-089-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	0.00414 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0.2 mg/m <sup>3</sup>	Non-applicable
Sulphuric acid CAS: 7664-93-9 EC: 231-639-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	0.1 mg/m <sup>3</sup>	Non-applicable	0.05 mg/m <sup>3</sup>

### DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
manganese sulphate CAS: 7785-87-7 EC: 232-089-9	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	0.0021 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0.043 mg/m <sup>3</sup>	Non-applicable

### PNEC:

Identification		Environmental limits	
		Systemic	Local
manganese sulphate CAS: 7785-87-7 EC: 232-089-9	STP	56 mg/L	Fresh water
	Soil	25.1 mg/kg	Marine water
	Intermittent	0.03 mg/L	Sediment (Fresh water)
	Oral	Non-applicable	Sediment (Marine water)
Sulphuric acid CAS: 7664-93-9 EC: 231-639-5	STP	8.8 mg/L	Fresh water
	Soil	Non-applicable	Marine water
	Intermittent	Non-applicable	Sediment (Fresh water)
	Oral	Non-applicable	Sediment (Marine water)

### 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	 CAT III	EN 149:2001+A1:2009	Replace when an increase in resistance to breathing is observed.

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

### 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			For professional use only.
	Anti-slip work shoes		EN ISO 20347:2012	None

### F.- Additional emergency measures

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

### Environmental exposure controls:

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

### Volatile organic compounds:

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

V.O.C. (Supply):	0 % weight
V.O.C. density at 20 °C:	0 kg/m <sup>3</sup> (0 g/L)
Average carbon number:	Non-applicable
Average molecular weight:	Non-applicable

## 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:	 Emerald
Odour:	Characteristic

\*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)

### 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:	1170 - 1190 kg/m <sup>3</sup>
Relative density at 20 °C:	1.17 - 1.19
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:	2 - 3
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 properties:	Miscible
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *

### Flammability:

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

### 9.2 Other information:

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

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

## 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
Not applicable	Not applicable	Precaution	Not applicable	Avoid alkalis or strong bases

### 10.6 Hazardous decomposition products:

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## SECTION 10: STABILITY AND REACTIVITY (continued)

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

#### 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 toxicity: 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.
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

#### B- Inhalation:

- Acute toxicity: 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.
- Corrosivity/Irritability: 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.

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

- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Produces eye damage after contact.

#### 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)-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:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, however, it does contain substances which are classified as dangerous due to repetitive exposure. 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:

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### SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
manganese sulphate CAS: 7785-87-7 EC: 232-089-9	2150 mg/kg	>2000 mg/kg	Rat
Ferrous sulfate heptahydrate CAS: 7782-63-0 EC: 231-753-5	1520 mg/kg	>2000 mg/kg	Rat
	>2000 mg/kg	>2000 mg/kg	
	Non-applicable	Non-applicable	
Sodium dodecyl diphenyl ether disulfonate CAS: 119345-04-9 EC: 601-601-6	5500 mg/kg	>2000 mg/kg	Rat
	>2000 mg/kg	>2000 mg/kg	
	Non-applicable	Non-applicable	
Sulphuric acid CAS: 7664-93-9 EC: 231-639-5	2140 mg/kg	>2000 mg/kg	Rat
	>2000 mg/kg	>2000 mg/kg	
	Non-applicable	Non-applicable	

### SECTION 12: ECOLOGICAL INFORMATION

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

#### 12.1 Toxicity:

Identification	Acute toxicity		Species	Genus
	LC50	EC50		
manganese sulphate CAS: 7785-87-7 EC: 232-089-9	1 - 10 mg/L (96 h)			Fish
	1 - 10 mg/L			Crustacean
	1 - 10 mg/L			Algae
Sodium dodecyl diphenyl ether disulfonate CAS: 119345-04-9 EC: 601-601-6	6.2 mg/L (96 h)		N/A	Fish
	3.6 mg/L (48 h)		Daphnia magna	Crustacean
	Non-applicable			

#### 12.2 Persistence and degradability:

Identification	Degradability		Biodegradability	
	BOD5	COD	Concentration	Period
Sodium dodecyl diphenyl ether disulfonate CAS: 119345-04-9 EC: 601-601-6	Non-applicable	Non-applicable	20 mg/L	28 days
	Non-applicable	Non-applicable	58 %	
	Non-applicable	Non-applicable		

#### 12.3 Bioaccumulative potential:

Not available

#### 12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
	Koc	Conclusion	Henry	Moist soil
Sodium dodecyl diphenyl ether disulfonate CAS: 119345-04-9 EC: 601-601-6	50000	Immobile	Dry soil	Non-applicable
	Non-applicable	Non-applicable	Moist soil	Non-applicable
	Non-applicable	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 (Regulation (EU) No 1357/2014)
06 10 02*	Wastes containing hazardous substances	Dangerous

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

HP14 Ecotoxic

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### SECTION 13: DISPOSAL CONSIDERATIONS (continued)

**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:

- |   |                |
|---|----------------|
| <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:

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**Manganaze**  
**08343**

**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>	
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

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):**

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 security card which concerns the ways of managing risks. :**

Non-applicable

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

H412: Harmful to aquatic life with long lasting effects

H315: Causes skin irritation

H319: Causes serious eye irritation

**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:**

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## SECTION 16: OTHER INFORMATION (continued)

R22: Harmful if swallowed  
R35: Causes severe burns  
R36/38: Irritating to eyes and skin  
R41: Risk of serious damage to eyes  
R48/20/22: Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed  
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: H302 - Harmful if swallowed  
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects  
Eye Dam. 1: H318 - Causes serious eye damage  
Eye Irrit. 2: H319 - Causes serious eye irritation  
Skin Corr. 1A: H314 - Causes severe skin burns and eye damage  
Skin Irrit. 2: H315 - Causes skin irritation  
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure

### **Classification procedure:**

Aquatic Chronic 3: Calculation method  
Skin Irrit. 2: Calculation method  
Eye Irrit. 2: 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:**

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 -