




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

- 1.1 Product identifier:** TT Infill + R Facor
08503
- 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:** E.Marker A/S
Okslundvej 8
DK-6330 Padborg - Denmark
Phone.: +45 7467 0808
carsten@emarker.dk
- 1.4 Emergency telephone number:** +45 4059 74 67

SECTION 2: HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture:**
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 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411
Eye Dam. 1: Serious eye damage, Category 1, H318
Skin Corr. 1A: Skin corrosion, Category 1A, H314
- 2.2 Label elements:**
CLP Regulation (EC) n° 1272/2008:
Danger
- 
- Hazard statements:**
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects
Skin Corr. 1A: H314 - Causes severe skin burns and eye damage
- Precautionary statements:**
P264: Wash thoroughly after use
P280: Wear protective gloves/protective clothing/eye protection/face protection
P301+P330+P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310: Immediately call a POISON CENTER or doctor/physician
P501: Dispose of contents and / or containers in accordance with regulations on hazardous waste or packaging and packaging waste respectively
- Supplementary information:**
EUH208: Contains Clove, ext., Tea tree oil. May produce an allergic reaction
- Substances that contribute to the classification**
zinc sulphate: 7 H₂O (CAS: 7446-20-0); D-Glucopyranose, oligomers, decyl octyl glycosides (CAS: 68515-73-1)
- 2.3 Other hazards:**
Non-applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1 Substance:**
Non-applicable
- 3.2 Mixture:**

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

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	Ferrous sulfate heptahydrate Regulation 1272/2008 Acute Tox. 4: H302; Eye Irrit. 2: H319; Skin Irrit. 2: H315 - Warning	Self-classified 10 - <20 %
CAS: 37971-36-1 EC: 253-733-5 Index: Non-applicable REACH: 01-2119436643-39-XXXX	2-phosphonobutane-1,2,4-tricarboxylic acid Regulation 1272/2008 Eye Irrit. 2: H319; Met. Corr. 1: H290 - Warning	Self-classified 3 - <5 %
CAS: 7446-20-0 EC: 231-793-3 Index: 030-006-00-9 REACH: 01-2119474684-27-XXXX	zinc sulphate · 7 H₂O Regulation 1272/2008 Acute Tox. 4: H302; Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Eye Dam. 1: H318 - Danger	ATP CLP00 3 - <5 %
CAS: 7785-87-7 EC: 232-089-9 Index: 025-003-00-4 REACH: 01-2119456624-35-XXXX	manganese sulphate Regulation 1272/2008 Aquatic Chronic 2: H411; STOT RE 2: H373 - Warning	ATP CLP00 3 - <5 %
CAS: 68515-73-1 EC: 500-220-1 Index: Non-applicable REACH: 01-2119488530-36-XXXX	D-Glucopyranose, oligomers, decyl octyl glycosides Regulation 1272/2008 Eye Dam. 1: H318 - Danger	Self-classified 3 - <5 %
CAS: 84961-50-2 EC: 284-638-7 Index: Non-applicable REACH: Non-applicable	Clove, ext. Regulation 1272/2008 Asp. Tox. 1: H304; Eye Irrit. 2: H319; Skin Sens. 1: H317 - Danger	Self-classified <1 %
CAS: 68647-73-4 EC: Non-applicable Index: Non-applicable REACH: Non-applicable	Tea tree oil Regulation 1272/2008 Acute Tox. 4: H302; Aquatic Chronic 2: H411; Asp. Tox. 1: H304; Eye Irrit. 2: H319; Flam. Liq. 3: H226; Skin Irrit. 2: H315; Skin Sens. 1: H317 - Danger	Self-classified <1 %

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:

Request medical assistance immediately, 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:

Request immediate medical assistance, showing the SDS of this product. Do not induce vomiting, because its expulsion from the stomach can be hazardous to the mucus of the main digestive tract, and its inhalation, to the respiratory system. Rinse out the mouth and throat, as they may have been affected during ingestion. In the case of loss of consciousness do not administrate anything orally unless supervised by a doctor. Keep the person affected at rest.

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:

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SECTION 4: FIRST AID MEASURES (continued)

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

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

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive 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. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inertization agent. Destroy any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

6.2 Environmental precautions:

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

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

C.- Technical recommendations to prevent ergonomic and toxicological risks

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SECTION 7: HANDLING AND STORAGE (continued)

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):

There are no environmental limits for the substances contained in the product

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
2-phosphonobutane-1,2,4-tricarboxylic acid CAS: 37971-36-1 EC: 253-733-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	80 mg/kg	Non-applicable	4.2 mg/kg	Non-applicable
	Inhalation	158 mg/m ³	Non-applicable	15 mg/m ³	Non-applicable
zinc sulphate· 7 H2O CAS: 7446-20-0 EC: 231-793-3	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	8.3 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	1 mg/m ³	Non-applicable
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 ³	Non-applicable
D-Glucopyranose, oligomers, decyl octyl glycosides CAS: 68515-73-1 EC: 500-220-1	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	595000 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	420 mg/m ³	Non-applicable

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
2-phosphonobutane-1,2,4-tricarboxylic acid CAS: 37971-36-1 EC: 253-733-5	Oral	65 mg/kg	Non-applicable	2.1 mg/kg	Non-applicable
	Dermal	40 mg/kg	Non-applicable	2.1 mg/kg	Non-applicable
	Inhalation	79 mg/m ³	Non-applicable	3.7 mg/m ³	Non-applicable
zinc sulphate· 7 H2O CAS: 7446-20-0 EC: 231-793-3	Oral	Non-applicable	Non-applicable	0.83 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	8.3 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	1.3 mg/m ³	Non-applicable
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 ³	Non-applicable

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
D-Glucopyranose, oligomers, decyl octyl glycosides CAS: 68515-73-1 EC: 500-220-1	Oral	Non-applicable	Non-applicable	35.7 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	357000 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	124 mg/m ³	Non-applicable

PNEC:

Identification				
2-phosphonobutane-1,2,4-tricarboxylic acid CAS: 37971-36-1 EC: 253-733-5	STP	50.4 mg/L	Fresh water	3.33 mg/L
	Soil	0.491 mg/kg	Marine water	0.33 mg/L
	Intermittent	10.42 mg/L	Sediment (Fresh water)	1.47 mg/kg
	Oral	90 g/kg	Sediment (Marine water)	Non-applicable
zinc sulphate· 7 H ₂ O CAS: 7446-20-0 EC: 231-793-3	STP	0.052 mg/L	Fresh water	0.0206 mg/L
	Soil	35.6 mg/kg	Marine water	0.0061 mg/L
	Intermittent	Non-applicable	Sediment (Fresh water)	117.8 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	56.5 mg/kg
manganese sulphate CAS: 7785-87-7 EC: 232-089-9	STP	56 mg/L	Fresh water	0.0128 mg/L
	Soil	25.1 mg/kg	Marine water	0.0004 mg/L
	Intermittent	0.03 mg/L	Sediment (Fresh water)	0.0114 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0.00114 mg/kg
D-Glucopyranose, oligomers, decyl octyl glycosides CAS: 68515-73-1 EC: 500-220-1	STP	560 mg/L	Fresh water	0.176 mg/L
	Soil	0.654 mg/kg	Marine water	0.0176 mg/L
	Intermittent	0.27 mg/L	Sediment (Fresh water)	1.516 mg/kg
	Oral	111.11 g/kg	Sediment (Marine water)	0.152 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	 CAT III	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	NON-disposable chemical protective gloves	 CAT III	EN 374-1:2003 EN 374-3:2003/AC:2006 EN 420:2003+A1:2009	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin.

D.- Ocular and facial protection





Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Face mask	 CAT II	EN 166:2001 EN 167:2001 EN 168:2001 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



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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks		EN 13034:2005+A1:2009 EN 168:2001 EN ISO 13982-1:2004/A1:2010 EN ISO 6529:2001 EN ISO 6530:2005 EN 464:1994	For professional use only. Clean periodically according to the manufacturer's instructions.
 Mandatory foot protection	Safety footwear for protection against chemical risk		EN ISO 20345:2011 EN 13832-1:2006	Replace boots at any sign of deterioration.

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):	0.06 % weight
V.O.C. density at 20 °C:	0.72 kg/m ³ (0.72 g/L)
Average carbon number:	10
Average molecular weight:	152.53 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:	Not available
Odour:	Characteristic

Volatility:

Boiling point at atmospheric pressure:	100 °C
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:	1284 - 1304 kg/m ³
Relative density at 20 °C:	1.284 - 1.304
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 40 °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)

Concentration:	Non-applicable *
pH:	0.3 - 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:	202 °C
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	Precaution	Precaution	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:

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 (CO₂), 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:

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- 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: Corrosive product, its consumption causes burns destroying the full thickness of fabrics. For more information on the secondary effects of contact with the skin see section 2.

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: Prolonged inhalation of the product is corrosive to mucous membranes and the upper respiratory tract

C- Contact with the skin and the eyes:

- Contact with the skin: Above all, skin contact may occur as fabrics of all thicknesses can be destroyed, resulting in burns. For more information on the secondary effects see section 2.
- Contact with the eyes: Produces serious 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, however, it contains substances classified as dangerous with sensitising 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:

- 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, however it does 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	
Ferrous sulfate heptahydrate CAS: 7782-63-0 EC: 231-753-5	LD50 oral	1520 mg/kg	Rat
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	Non-applicable	
manganese sulphate CAS: 7785-87-7 EC: 232-089-9	LD50 oral	2150 mg/kg	Rat
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	Non-applicable	
zinc sulphate· 7 H2O CAS: 7446-20-0 EC: 231-793-3	LD50 oral	1710 mg/kg	Rat
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	Non-applicable	
2-phosphonobutane-1,2,4-tricarboxylic acid CAS: 37971-36-1 EC: 253-733-5	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	Non-applicable	
D-Glucopyranose, oligomers, decyl octyl glycosides CAS: 68515-73-1	LD50 oral	5001 mg/kg	Rat
	LD50 dermal	>2000 mg/kg	

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Identification	Acute toxicity		Genus
EC: 500-220-1	LC50 inhalation	Non-applicable	
Clove, ext. CAS: 84961-50-2 EC: 284-638-7	LD50 oral	>2000 mg/kg	
	LD50 dermal	>2000 mg/kg	
Tea tree oil CAS: 68647-73-4 EC: Non-applicable	LC50 inhalation	Non-applicable	
	LD50 oral	1100 mg/kg	Rat
	LD50 dermal	>2000 mg/kg	
	LC50 inhalation	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
zinc sulphate· 7 H ₂ O CAS: 7446-20-0 EC: 231-793-3	LC50	0.1 - 1 mg/L (96 h)		Fish
	EC50	0.1 - 1 mg/L		Crustacean
	EC50	0.1 - 1 mg/L		Algae
manganese sulphate CAS: 7785-87-7 EC: 232-089-9	LC50	1 - 10 mg/L (96 h)		Fish
	EC50	1 - 10 mg/L		Crustacean
	EC50	1 - 10 mg/L		Algae
D-Glucopyranose, oligomers, decyl octyl glycosides CAS: 68515-73-1 EC: 500-220-1	LC50	126 mg/L (96 h)	Brachydanio rerio	Fish
	EC50	151 mg/L (48 h)	Acartia tonsa	Crustacean
	EC50	27 mg/L (72 h)	Scenedesmus subspicatus	Algae
Tea tree oil CAS: 68647-73-4 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	
D-Glucopyranose, oligomers, decyl octyl glycosides CAS: 68515-73-1 EC: 500-220-1	BOD ₅	Non-applicable	Concentration	Non-applicable
	COD	Non-applicable	Period	28 days
	BOD ₅ /COD	Non-applicable	% Biodegradable	100 %

12.3 Bioaccumulative potential:

Not available

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
D-Glucopyranose, oligomers, decyl octyl glycosides CAS: 68515-73-1 EC: 500-220-1	Koc	50	Henry	1.2E-8 Pa·m ³ /mol
	Conclusion	Very High	Dry soil	No
	Surface tension	Non-applicable	Moist soil	No

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):

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SECTION 13: DISPOSAL CONSIDERATIONS (continued)

HP14 Ecotoxic, HP4 Irritant — skin irritation and eye damage

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:



- | | |
|---|---|
| 14.1 UN number: | UN1760 |
| 14.2 UN proper shipping name: | CORROSIVE LIQUID, N.O.S. (2-phosphonobutane-1,2,4-tricarboxylic acid) |
| 14.3 Transport hazard class(es): | 8 |
| Labels: | 8 |
| 14.4 Packing group: | III |
| 14.5 Dangerous for the environment: | Yes |
| 14.6 Special precautions for user | |
| Special regulations: | 274 |
| Tunnel restriction code: | E |
| Physico-Chemical properties: | see section 9 |
| Limited quantities: | 5 L |
| 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: | Non-applicable |

Transport of dangerous goods by sea:

With regard to IMDG 37-14:



- | | |
|---|---|
| 14.1 UN number: | UN1760 |
| 14.2 UN proper shipping name: | CORROSIVE LIQUID, N.O.S. (2-phosphonobutane-1,2,4-tricarboxylic acid) |
| 14.3 Transport hazard class(es): | 8 |
| Labels: | 8 |
| 14.4 Packing group: | III |
| 14.5 Dangerous for the environment: | Yes |
| 14.6 Special precautions for user | |
| Special regulations: | 223, 274, 944 |
| EmS Codes: | F-A, S-B |
| Physico-Chemical properties: | see section 9 |
| Limited quantities: | 5 L |
| 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: | Non-applicable |

Transport of dangerous goods by air:

With regard to IATA/ICAO 2015:

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SECTION 14: TRANSPORT INFORMATION (continued)



14.1 UN number:	UN1760
14.2 UN proper shipping name:	CORROSIVE LIQUID, N.O.S. (2-phosphonobutane-1,2,4-tricarboxylic acid)
14.3 Transport hazard class(es):	8
Labels:	8
14.4 Packing group:	III
14.5 Dangerous for the environment:	Yes
14.6 Special precautions for user	
Physico-Chemical properties:	see section 9
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:	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:

H314: Causes severe skin burns and eye damage

H318: Causes serious eye damage

H411: Toxic 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

CLP Regulation (EC) n° 1272/2008:

- CONTINUED ON NEXT PAGE -



SECTION 16: OTHER INFORMATION (continued)

Acute Tox. 4: H302 - Harmful if swallowed
Aquatic Acute 1: H400 - Very toxic to aquatic life
Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects
Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways
Eye Dam. 1: H318 - Causes serious eye damage
Eye Irrit. 2: H319 - Causes serious eye irritation
Flam. Liq. 3: H226 - Flammable liquid and vapour
Met. Corr. 1: H290 - May be corrosive to metals
Skin Irrit. 2: H315 - Causes skin irritation
Skin Sens. 1: H317 - May cause an allergic skin reaction
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure

Classification procedure:

Skin Corr. 1A: Calculation method
Eye Dam. 1: Calculation method
Aquatic Chronic 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 -