



Printing: 31/03/2026 Date of compilation: 07/02/2025 Revised: 09/03/2026 Version: 3 (Replaced 2)

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

- 1.1 Product identifier:** AHULUQ-15
Other means of identification:
Not relevant
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
Relevant uses (Consumer use): Fertilizer
Relevant uses (Professional users): Fertilizer
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:**
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SECTION 2: HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture:**
CLP Regulation (EC) No 1272/2008:
Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.
Eye Dam. 1: Serious eye damage, Category 1, H318
Skin Corr. 1: Skin corrosion, Category 1, H314
- 2.2 Label elements:**
CLP Regulation (EC) No 1272/2008:
Danger
- Hazard statements:**
H314 - Causes severe skin burns and eye damage.
- Precautionary statements:**
P101: If medical advice is needed, have product container or label at hand.
P102: Keep out of reach of children.
P264: Wash thoroughly after handling.
P280: Wear protective gloves/face protection/protective clothing/protective footwear.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501: Dispose of contents/container according to the separated collection system used in your municipality.
- Substances that contribute to the classification**
potassium hydroxide; Trisodium 2-(carboxylatomethyl(2-hydroxyethyl)amino)ethyliminodi(acetate)
- 2.3 Other hazards:**
Product does not meet PBT/vPvB criteria
Endocrine-disrupting properties: The product does not meet the criteria.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1 Substance:**
Not relevant

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

3.2 Mixture:

Chemical description: Mixture composed of inorganic substances

Components:

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 1310-58-3 EC: 215-181-3 Index: 019-002-00-8 REACH: 01-2119487136-33-XXXX	potassium hydroxide⁽¹⁾ Regulation 1272/2008 Acute Tox. 4: H302; Met. Corr. 1: H290; Skin Corr. 1A: H314 - Danger	Self-classified 2.5 - <10%
CAS: 10034-96-5 EC: 232-089-9 Index: Not relevant REACH: 01-2119456624-35-XXXX	manganese sulphate · (H2O)⁽²⁾ Regulation 1272/2008 Aquatic Chronic 2: H411; Eye Dam. 1: H318; STOT RE 2: H373 - Danger	Self-classified <1%
CAS: 7664-41-7 EC: 231-635-3 Index: 007-001-00-5 REACH: 01-2119488876-14-XXXX	ammonia, anhydrous⁽¹⁾ Regulation 1272/2008 Acute Tox. 3: H331; Aquatic Acute 1: H400; Flam. Gas 2: H221; Press. Gas: H280; Skin Corr. 1B: H314 - Danger	ATP CLP00 <1%
CAS: 10043-35-3 EC: 233-139-2 Index: 005-007-00-2 REACH: 01-2119486683-25-XXXX	Boric acid⁽¹⁾ Regulation 1272/2008 Repr. 1B: H360FD - Danger	ATP ATP17 <1%
CAS: 7758-99-8 EC: 231-847-6 Index: 029-023-00-4 REACH: 01-2119520566-40-XXXX	Copper sulfate pentahydrate⁽¹⁾ Regulation 1272/2008 Acute Tox. 4: H302; Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Eye Dam. 1: H318 - Danger	ATP ATP17 <1%

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

⁽²⁾ Substance with a Union workplace exposure limit

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

Other information:

Identification	M-factor	
	Copper sulfate pentahydrate CAS: 7758-99-8 EC: 231-847-6	Acute
	Chronic	1

Identification	Specific concentration limit
potassium hydroxide CAS: 1310-58-3 EC: 215-181-3	% (w/w) >=5: Skin Corr. 1A - H314 2<= % (w/w) <5: Skin Corr. 1B - H314 0,5<= % (w/w) <2: Skin Irrit. 2 - H315 % (w/w) >=2: Eye Dam. 1 - H318 0,5<= % (w/w) <2: Eye Irrit. 2 - H319
ammonia, anhydrous CAS: 7664-41-7 EC: 231-635-3	% (w/w) >=100: Press. Gas - H280

Acute toxicity estimate for the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or as determined in accordance with Annex I to that Regulation:

Identification	Acute toxicity		Genus
	potassium hydroxide CAS: 1310-58-3 EC: 215-181-3	LD50 oral	
	LD50 dermal	Not relevant	
	LC50 inhalation vapour	Not relevant	
ammonia, anhydrous CAS: 7664-41-7 EC: 231-635-3	LD50 oral	Not relevant	
	LD50 dermal	Not relevant	
	LC50 inhalation vapour	3 mg/L *	
Copper sulfate pentahydrate CAS: 7758-99-8 EC: 231-847-6	LD50 oral	481 mg/kg	
	LD50 dermal	Not relevant	
	LC50 inhalation vapour	Not relevant	

*Equivalent ATE value of the substance applicable to the exposure route of the product. For the ATE value associated with the exposure route of the substance, see section 11.

SECTION 4: FIRST AID MEASURES

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SECTION 4: FIRST AID MEASURES (continued)

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, in case of intoxication symptoms it is recommended 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, in which case 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 also risk damage to the respiratory system through inhalation. Rinse out the mouth and throat, as they may have been affected during ingestion. In the case of loss of consciousness do not administer 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:

Not relevant

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

Product is non-flammable under normal conditions of storage, handling and use. In the case of combustion as a result of improper handling, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

Unsuitable extinguishing media:

Non-applicable

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 self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EEC.

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, 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:

For non-emergency personnel:

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 spill product (See section 8). Evacuate the area and keep out those who do not have protection.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.



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SECTION 6: ACCIDENTAL RELEASE MEASURES (continued)

6.2 Environmental precautions:

It is recommended to avoid environmental spillage of both the product and its container.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Prevent the entrance of product in drains, sewers or watercourses. Absorb the spill using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. Collect the product in appropriate containers and manage it according to current legislation.

Spillages in water or sea:

Small spillages:

Contain spillage using barriers or similar equipment. Use suitable absorbents for collection and treat the waste in accordance with current regulations.

Large spillages:

If possible, contain spillage in open water using barriers or similar equipment. If this is not possible, try to control its spread and collect the product with suitable mechanical means. Always consult experts before using dispersants and make sure you have the necessary approvals if they are to be used. Treat the waste according to current regulations.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks with regards manually handling weights. Maintain order, cleanliness and dispose of using safe methods (section 6).

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

Keep away from sources of ignition, heat, open flame, or hot surfaces. No smoking. Close the valve after each use and when it has been emptied. Replace all valve protections as soon as the container has been disconnected from the equipment. Use appropriate means to move bottles: do not drag them, roll them, make them fall, etc. Avoid back-suction of water into the container. Avoid feedback into the container. Purge air from the system before introducing the gas. Use only equipment with the appropriate specifications, which are suitable for this product, as well as its supply temperature and pressure. In case of doubt, contact your gas supplier. Ensure adequate ventilation. Use the necessary personal protective equipment. Ensure the existence and implementation of safe work procedures and comply with the safe handling procedures for chemicals. Comply with the essential safety requirements for equipment and systems defined in Directive 2014/34/EC (ATEX 100) and with the minimum provisions for the protection of the safety and health of workers under the criteria of choice of Directive 1999/92/EC (ATEX 137). See section 10 for conditions and materials to be avoided.

C.- Technical recommendations on general occupational hygiene

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

D.- Technical recommendations to prevent environmental risks

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

7.2 Conditions for safe storage, including any incompatibilities:

A.- Specific storage requirements

Minimum Temp.: 5 °C

Maximum Temp.: 30 °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:

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

Directive (EU) 2000/39, Directive 2004/37/EC, Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

Identification	Occupational exposure limits		
	IOELV (8h)		
manganese sulphate · (H ₂ O) CAS: 10034-96-5 EC: 232-089-9	IOELV (STEL)		0,05 mg/m ³
ammonia, anhydrous CAS: 7664-41-7 EC: 231-635-3	IOELV (8h)	20 ppm	14 mg/m ³
	IOELV (STEL)	50 ppm	36 mg/m ³

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
potassium hydroxide CAS: 1310-58-3 EC: 215-181-3	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	Not relevant	Not relevant	1 mg/m ³
manganese sulphate · (H ₂ O) CAS: 10034-96-5 EC: 232-089-9	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	0,004 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	Not relevant	Not relevant
ammonia, anhydrous CAS: 7664-41-7 EC: 231-635-3	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	6,8 mg/kg	Not relevant	6,8 mg/kg	Not relevant
	Inhalation	47,6 mg/m ³	36 mg/m ³	47,6 mg/m ³	14 mg/m ³
Boric acid CAS: 10043-35-3 EC: 233-139-2	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	392 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	8,3 mg/m ³	Not relevant
Copper sulfate pentahydrate CAS: 7758-99-8 EC: 231-847-6	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	137 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	1 mg/m ³	1 mg/m ³

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
potassium hydroxide CAS: 1310-58-3 EC: 215-181-3	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	Not relevant	Not relevant	1 mg/m ³
manganese sulphate · (H ₂ O) CAS: 10034-96-5 EC: 232-089-9	Oral	Not relevant	Not relevant	Not relevant	Not relevant
	Dermal	Not relevant	Not relevant	0,002 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	0,043 mg/m ³	Not relevant
ammonia, anhydrous CAS: 7664-41-7 EC: 231-635-3	Oral	6,8 mg/kg	Not relevant	6,8 mg/kg	Not relevant
	Dermal	68 mg/kg	Not relevant	68 mg/kg	Not relevant
	Inhalation	23,8 mg/m ³	7,2 mg/m ³	23,8 mg/m ³	2,8 mg/m ³
Boric acid CAS: 10043-35-3 EC: 233-139-2	Oral	0,98 mg/kg	Not relevant	0,98 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	196 mg/kg	Not relevant
	Inhalation	Not relevant	Not relevant	4,15 mg/m ³	Not relevant
Copper sulfate pentahydrate CAS: 7758-99-8 EC: 231-847-6	Oral	0,082 mg/kg	Not relevant	0,041 mg/kg	Not relevant
	Dermal	Not relevant	Not relevant	Not relevant	Not relevant
	Inhalation	Not relevant	Not relevant	Not relevant	Not relevant

PNEC:

Identification				
manganese sulphate · (H ₂ O) CAS: 10034-96-5 EC: 232-089-9	STP	56 mg/L	Fresh water	0,03 mg/L
	Soil	25,1 mg/kg	Marine water	0 mg/L
	Intermittent	0,088 mg/L	Sediment (Fresh water)	0,011 mg/kg
	Oral	Not relevant	Sediment (Marine water)	0,001 mg/kg

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification				
ammonia, anhydrous CAS: 7664-41-7 EC: 231-635-3	STP	Not relevant	Fresh water	0,001 mg/L
	Soil	Not relevant	Marine water	0,001 mg/L
	Intermittent	0,007 mg/L	Sediment (Fresh water)	Not relevant
	Oral	Not relevant	Sediment (Marine water)	Not relevant
Boric acid CAS: 10043-35-3 EC: 233-139-2	STP	10 mg/L	Fresh water	2,9 mg/L
	Soil	5,7 mg/kg	Marine water	2,9 mg/L
	Intermittent	13,7 mg/L	Sediment (Fresh water)	Not relevant
	Oral	Not relevant	Sediment (Marine water)	Not relevant
Copper sulfate pentahydrate CAS: 7758-99-8 EC: 231-847-6	STP	0,23 mg/L	Fresh water	0,0078 mg/L
	Soil	65 mg/kg	Marine water	0,0052 mg/L
	Intermittent	Not relevant	Sediment (Fresh water)	87 mg/kg
	Oral	Not relevant	Sediment (Marine water)	676 mg/kg

8.2 Exposure controls:



A.- Individual protection measures, such as personal protective equipment

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425. For more information on Personal Protective 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



If the working conditions and/or safety measures adopted do not allow keeping the airborne concentration of the product below the exposure limits (if any) or at acceptable levels (if no exposure limits exist), suitable respiratory protection equipment chosen by a qualified professional should be used.

C.- Specific protection for the hands





Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Chemical protective gloves (Material: Linear low-density polyethylene (LLDPE), Breakthrough time: > 480 min, Thickness: 0.062 mm)		EN ISO 21420:2020	Replace the gloves at any sign of deterioration.

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

D.- Eye and face protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Face shield		EN ISO 16321-1:2022 + EN ISO 16321-3:2022 EN ISO 18526-(1,2,3,4):2020 EN ISO 18526-(1,2,3,4):2020 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Body protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory complete body protection	Disposable clothing for protection against chemical risks		EN 13034:2005+A1:2009 EN ISO 18526-(1,2,3,4):2020 EN ISO 13982-1:2004/A1:2010 ISO 6529:2013 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 20345:2022 EN 13832-1:2018	Replace boots at any sign of deterioration.

F.- Additional emergency measures



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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

It is advised to implement additional emergency equipments in workplaces that are particularly exposed to the product or in situations where risk assessments highlight the necessity of such equipments.

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

To comply with environmental protection regulations, it is recommended to prevent any spillage of the product and its container. For more detailed information, please refer to 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 ³ (0 g/L)
Average carbon number:	4
Average molecular weight:	115,15 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:	Fluid
Colour:	 Black
Odour:	Characteristic
Odour threshold:	Not relevant *

Volatility:

Boiling point at atmospheric pressure:	100 °C
Vapour pressure at 20 °C:	2350 Pa
Vapour pressure at 50 °C:	12381,01 Pa (12,38 kPa)
Evaporation rate at 20 °C:	Not relevant *

Product description:

Density at 20 °C:	1089,7 kg/m ³
Relative density at 20 °C:	1,09
Dynamic viscosity at 20 °C:	Not relevant *
Kinematic viscosity at 20 °C:	Not relevant *
Kinematic viscosity at 40 °C:	Not relevant *
Concentration:	Not relevant *
pH:	13 - 14 (at 100 %)
Vapour density at 20 °C:	Not relevant *
Partition coefficient n-octanol/water 20 °C:	Not relevant *
Solubility in water at 20 °C:	Not relevant *
Solubility properties:	Not relevant *
Decomposition temperature:	Not relevant *

*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)

Melting point/freezing point:	Not relevant *
Flammability:	
Flash Point:	Non Flammable (>60 °C)
Flammability (solid, gas):	Not relevant *
Autoignition temperature:	250 °C
Lower flammability limit:	Not relevant *
Upper flammability limit:	Not relevant *
Particle characteristics:	
Median equivalent diameter:	Not relevant *
9.2 Other information:	
Information with regard to physical hazard classes:	
Explosive properties:	Not relevant *
Oxidising properties:	Not relevant *
Corrosive to metals:	Not relevant *
Heat of combustion:	Not relevant *
Aerosols-total percentage (by mass) of flammable components:	Not relevant *
Other safety characteristics:	
Surface tension at 20 °C:	Not relevant *
Refraction index:	Not relevant *

*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 from Safety Data Sheet.

10.2 Chemical stability:
Chemically stable under the indicated 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
Precaution	Precaution	Precaution	Precaution	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Precaution	Not applicable	Not applicable

10.6 Hazardous decomposition products:
See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: Mixture based on inorganic substances.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:
The experimental information related to the toxicological properties of the product itself is not available

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Dangerous health implications:

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

A- Ingestion (acute effect):

- 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, if it is swallowed causes burns destroying the tissues. For more information about secondary effects from skin contact see section 2.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous 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 (acute effect):

- 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 hazardous for the effects mentioned. For more information see section 3.
IARC: Iron trichloride (1: Carcinogenic to humans)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous 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 hazardous with sensitising effects. 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 hazardous 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 hazardous 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 hazardous 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 hazardous for this effect. For more information see section 3.

Other information:

Not relevant

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
potassium hydroxide CAS: 1310-58-3 EC: 215-181-3	LD50 oral	388 mg/kg	Rat
	LD50 dermal		
	LC50 inhalation dust		
ammonia, anhydrous CAS: 7664-41-7 EC: 231-635-3	LD50 oral		
	LD50 dermal		
	LC50 inhalation gases	700 mg/L	

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Identification	Acute toxicity		Genus
Boric acid CAS: 10043-35-3 EC: 233-139-2	LD50 oral	4080 mg/kg	Rat
	LD50 dermal		
	LC50 inhalation dust		
Copper sulfate pentahydrate CAS: 7758-99-8 EC: 231-847-6	LD50 oral	481 mg/kg	Rat
	LD50 dermal		
	LC50 inhalation dust		

11.2 Information on other hazards:

Endocrine disrupting properties

Endocrine-disrupting properties: The product does not meet the criteria.

Other information

Not relevant

SECTION 12: ECOLOGICAL INFORMATION

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

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

12.1 Toxicity:

Acute toxicity:

Identification	Concentration		Species	Genus
manganese sulphate · (H2O) CAS: 10034-96-5 EC: 232-089-9	LC50	>1 - 10 mg/L (96 h)		Fish
	EC50	>1 - 10 mg/L (48 h)		Crustacean
	EC50	>1 - 10 mg/L (72 h)		Algae
ammonia, anhydrous CAS: 7664-41-7 EC: 231-635-3	LC50	>0.1 - 1 mg/L (96 h)		Fish
	EC50	>0.1 - 1 mg/L (48 h)		Crustacean
	EC50	>0.1 - 1 mg/L (72 h)		Algae
Boric acid CAS: 10043-35-3 EC: 233-139-2	LC50	447 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50	Not relevant		
	EC50	Not relevant		
Copper sulfate pentahydrate CAS: 7758-99-8 EC: 231-847-6	LC50	0,81 mg/L (96 h)	Cyprinus carpio	Fish
	EC50	Not relevant		
	EC50	Not relevant		

Chronic toxicity:

Identification	Concentration		Species	Genus
Boric acid CAS: 10043-35-3 EC: 233-139-2	NOEC	11,2 mg/L	Pimephales promelas	Fish
	NOEC	25,9 mg/L	Hyalella azteca	Crustacean
Copper sulfate pentahydrate CAS: 7758-99-8 EC: 231-847-6	NOEC	>0.1 - 1 mg/L		Fish
	NOEC	>0.1 - 1 mg/L		Crustacean

12.2 Persistence and degradability:

Not relevant

12.3 Bioaccumulative potential:

Substance-specific information:

Identification	Bioaccumulation potential	
Boric acid CAS: 10043-35-3 EC: 233-139-2	BCF	0
	Pow Log	-0.76
	Potential	Low

12.4 Mobility in soil:

Not relevant

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SECTION 12: ECOLOGICAL INFORMATION (continued)

12.5 Results of PBT and vPvB assessment:

Product does not meet PBT/vPvB criteria

12.6 Endocrine disrupting properties:

Endocrine-disrupting properties: The product does not meet the criteria.

12.7 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	Hazardous

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

HP8 Corrosive

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-hazardous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 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 2025 and RID 2025:



- | | |
|--|--|
| 14.1 UN number or ID number: | UN3266 |
| 14.2 UN proper shipping name: | CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (potassium hydroxide; Trisodium 2-(carboxylatomethyl(2-hydroxyethyl)amino)ethyliminodi (acetate)) |
| 14.3 Transport hazard class(es): | 8 |
| Labels: | 8 |
| 14.4 Packing group: | III |
| 14.5 Environmental hazards: | No |
| 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 Maritime transport in bulk according to IMO instruments: | Not relevant |

Transport of dangerous goods by sea:

With regard to IMDG 42-24:

** Changes with regards to the previous version



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SECTION 14: TRANSPORT INFORMATION ** (continued)



14.1 UN number or ID number:	UN3266
14.2 UN proper shipping name:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (potassium hydroxide; Trisodium 2-(carboxylatomethyl(2-hydroxyethyl)amino)ethyliminodi (acetate))
14.3 Transport hazard class(es):	8
Labels:	8
14.4 Packing group:	III
14.5 Marine pollutant:	No
14.6 Special precautions for user	
Special regulations:	274, 223
EmS Codes:	F-A, S-B
Physico-Chemical properties:	see section 9
Limited quantities:	5 L
Segregation group:	SGG18
14.7 Maritime transport in bulk according to IMO instruments:	Not relevant

Transport of dangerous goods by air:

With regard to IATA/ICAO 2026:



14.1 UN number or ID number:	UN3266
14.2 UN proper shipping name:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (potassium hydroxide; Trisodium 2-(carboxylatomethyl(2-hydroxyethyl)amino)ethyliminodi (acetate))
14.3 Transport hazard class(es):	8
Labels:	8
14.4 Packing group:	III
14.5 Environmental hazards:	No
14.6 Special precautions for user	
Physico-Chemical properties:	see section 9
14.7 Maritime transport in bulk according to IMO instruments:	Not relevant

** Changes with regards to the previous version

SECTION 15: REGULATORY INFORMATION

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

- Regulation (EC) No 528/2012: contains a preservative to protect the initial properties of the treated article. Contains bronopol (INN), Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1), 2-Methylisothiazol-3(2H)-One.
- Article 95, REGULATION (EU) No 528/2012: *Boric acid (10043-35-3) - PT: (8) ; Copper sulfate pentahydrate (7758-99-8) - PT: (2) ; bronopol (INN) (52-51-7) - PT: (2, 6, 11, 12, 22) ; Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (55965-84-9) - PT: (2, 4, 6, 11, 12, 13) ; 2-Methylisothiazol-3(2H)-One (2682-20-4) - PT: (6, 11, 12, 13)*
- Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): *Boric acid (10043-35-3)*
- Regulation (EU) 2019/1021 on persistent organic pollutants: Not relevant
- Regulation (EU) No 2024/590, about substances that deplete the ozone layer: Not relevant
- REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Not relevant
- Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Not relevant

Seveso III:

Not relevant

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

Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Specific provisions in terms of protecting people or the environment:

- CONTINUED ON NEXT PAGE -



SECTION 15: REGULATORY INFORMATION (continued)

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

The product could be affected by sectorial legislation

Regulation (EU) 2019/1009 of the European Parliament and of the Council of 5 June 2019 laying down rules on the making available on the market of EU fertilising products.

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:

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878).

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

TRANSPORT INFORMATION (SECTION 14):

- Packing group

Texts of the legislative phrases mentioned in section 2:

H318: Causes serious eye damage.

H314: Causes severe skin burns and eye damage.

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) No 1272/2008:

Acute Tox. 3: H331 - Toxic if inhaled.

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.

Eye Dam. 1: H318 - Causes serious eye damage.

Flam. Gas 2: H221 - Flammable gas.

Met. Corr. 1: H290 - May be corrosive to metals.

Press. Gas: H280 - Contains gas under pressure, may explode if heated.

Repr. 1B: H360FD - May damage fertility. May damage the unborn child.

Skin Corr. 1A: H314 - Causes severe skin burns and eye damage.

Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.

STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.

Classification procedure:

Eye Dam. 1: Calculation method

Skin Corr. 1: Calculation method

Advice related to training:

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

Principal bibliographical sources:

<http://echa.europa.eu>

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

Abbreviations and acronyms:



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SECTION 16: OTHER INFORMATION (continued)

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: 5day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
LogPOW: Octanolwater partition coefficient
Koc: Partition coefficient of organic carbon
UFI: unique formula identifier
IARC: International Agency for Research on Cancer

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 -