Safety Data Sheet

In accordance with Annex II of REACH - Regulation (EU) 2020/878

SECTION 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Code:	**0030142**
Name	**METAL STRIP**
Chemical name and synonyms	**METAL STRIP**

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

Sector of use	**SU22 – Professional uses**
Product Category	**PC35 – Washing and cleaning products (including solvent-based products)**
Description/Use	**Alkaline / solvent wax remover cleaner**

1.3. Details of the supplier of the safety data sheet

Company Name	**MARBEC SRL**
Address	**CROCE ROSSA STREET 5/i**
Location and State	**51037 MONTALE (PISTOIA)** **ITALY**
	tel. +039 0573/959848
e-mail of the competent person, responsible for the safety data sheet	**info@marbec.it**

1.4. Emergency telephone number

For urgent information please contact
MARBEC srl
0573959848 8.30am-1pm 2pm-6pm or +39 3348578502
Telephone number of Poison Control Centers active 24/7
National Poisons Information Service (Birmingham Unit) +44 844 892 0111

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as dangerous according to the provisions of Regulation (EC) 1272/2008 (CLP) (and subsequent amendments and adjustments).
The product therefore requires a safety data sheet compliant with the provisions of Regulation (EU) 2020/878.
Any additional information regarding health and/or environmental risks is given in sections 11 and 12 of this sheet.

Classification and hazard statements:

Skin corrosion, category 1B	H314	Causes severe skin burns and serious eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.
Specific target organ toxicity - single exposure, category 3	H335	May irritate respiratory tract.
Skin sensitization, category 1B	H317	May cause an allergic skin reaction.

2.2. Label elements

Hazard labelling pursuant to Regulation (EC) 1272/2008 (CLP) and subsequent amendments and adjustments.

Hazard pictograms:

Warnings: Danger

Hazard statements:

H314	Causes severe skin burns and serious eye damage.
H335	May irritate respiratory tract.
H317	May cause an allergic skin reaction.

Precautionary advice:

P260	Do not breathe dust / fume / gas / mist / vapours / spray.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P280	Wear protective gloves/clothing and eye/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.

Contains: Sodium Metasilicate Pentahydrate, Ethanolamine, Benzyl Alcohol

Product not intended for uses envisaged by Directive 2004/42/EC.

2.3. Other dangers

Based on available data, the product does not contain PBT or vPvB substances in percentage ≥ 0.1%.

The product does not contain substances with endocrine-disrupting properties in concentrations ≥ 0.1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	Conc. %	Classification 1272/2008 (CLP)
ETHANOLAMINE		
INDEX 603-030-00-8	9 ≤ x < 15	Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Skin Corr. 1B H314, Eye Dam. 1 H318, STOT SE 3 H335, Aquatic Chronic 3 H412
EC 205-483-3		STOT SE 3 H335: ≥ 5%
CAS 141-43-5		LD50 Oral: 1089 mg/kg, STA Dermal: 1100 mg/kg, STA Inhalation vapours: 11 mg/l
REACH Reg. 01-2119486455-28		
BENZYL ALCOHOL		
INDEX 603-057-00-5	3 ≤ x < 9	Acute Tox. 4 H302, Eye Irrit. 2 H319, Skin Sens. 1B H317
EC 202-859-9		LD50 Oral: 1200 mg/kg
CAS 100-51-6		
REACH Reg. 01-2119492630-38-xxxx		
SODIUM METASILICATE PENTAHYDRATE		
INDEX -	3 ≤ x < 9	Met. Corr. 1 H290, Skin Corr. 1B H314, Eye Dam. 1 H318, STOT SE 3 H335
EC 600-279-4		
CAS 10213-79-3		
REACH Reg. 012119449811-37		
sodium cumene sulfonate		
INDEX -	3 ≤ x < 9	Eye Irrit. 2 H319
EC 248-983-7		
CAS 28348-53-0		
REACH Reg. 01-2119489411-37-0001		
2-BUTOXYETHANOL		
INDEX 603-014-00-0	3 ≤ x < 9	Acute Tox. 3 H331, Acute Tox. 4 H302, Eye Irrit. 2 H319, Skin Irrit. 2 H315
EC 203-905-0		LD50 Oral: >1200 mg/kg, LC50 Inhalation vapours: 3 mg/l/4h
CAS 111-76-2		
REACH Reg. 01-2119475108-36-0005		
1-METHOXY-2-PROPANOL		
INDEX 603-064-00-3	1 ≤ x < 3	Flam. Liq. 3 H226, STOT SE 3 H336
EC 203-539-1		
CAS 107-98-2		
REACH Reg. 01-2119457435-35		
Alcohols, branched C12-15 and linear, ethoxylated propoxylated		
INDEX	1 ≤ x < 3	Eye Irrit. 2 H319, Skin Irrit. 2 H315
THERE IS -		
CAS 120313-48-6		
REACH Reg. (REF.:N° 02-2119548508-30-0000		

The full text of the hazard statements (H) is given in section 16 of the sheet.

SECTION 4. First aid measures

4.1. Description of first aid measures

If in doubt or if you experience symptoms, contact a doctor and show this document.
In case of more serious symptoms, call 118 for immediate medical assistance.

EYES: Remove any contact lenses. Wash immediately with plenty of water for at least 30/60 minutes, holding the eyelids wide open. Consult a doctor immediately.

SKIN: Remove contaminated clothing. Shower immediately. Seek medical attention immediately.

INGESTION: Drink as much water as possible. Seek medical attention immediately. Do not induce vomiting unless directed by a physician.

INHALATION: Call a doctor immediately. Move the person to fresh air, away from the accident site. If breathing stops, perform artificial respiration. Take appropriate precautions for the rescuer.

4.2. Main symptoms and effects, both acute and delayed

There is no specific information available on symptoms and effects caused by the product.

DELAYED EFFECTS: Based on the information currently available, there are no known cases of delayed effects following exposure to this product.

4.3. Indication of any need to immediately consult a doctor and require special treatment

Running water for washing skin and eyes.

SECTION 5. Fire-fighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING MEANS
The extinguishing means are the traditional ones: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING MEANS
No one in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS DUE TO EXPOSURE IN CASE OF FIRE
Avoid breathing combustion products.

5.3. Recommendations for firefighters

GENERAL INFORMATION
Cool containers with water jets to prevent product decomposition and the development of substances potentially hazardous to health. Always wear complete fire protection equipment. Collect extinguishing water that must not be discharged into drains. Dispose of contaminated fire extinguishing water and fire residue according to current regulations.

EQUIPMENT
Normal firefighting clothing, such as open-circuit compressed air breathing apparatus (EN 137), flame-retardant overalls (EN469), flame-retardant gloves (EN 659) and firefighter's boots (HO A29 or A30).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Stop the leak if it is safe to do so.
Wear appropriate protective equipment (including personal protective equipment as per section 8 of the safety data sheet) to prevent contamination of skin, eyes and personal clothing. These instructions apply to both workers and emergency responders.

6.2. Environmental precautions

Prevent the product from entering sewers, surface water or groundwater.

6.3. Methods and materials for containment and remediation

Suck up the spilled product into a suitable container. Assess the compatibility of the container to be used with the product, checking section 10. Absorb the remainder with inert absorbent material.
Ensure adequate ventilation of the area affected by the spill. Disposal of contaminated material must be carried out in accordance with the provisions of point 13.

6.4. Reference to other sections

Any information regarding personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames, do not smoke or use matches or lighters. Without adequate ventilation, vapors can accumulate on the floor and ignite even at a distance, if triggered, with the risk of backfire. Avoid accumulation of electrostatic charges. Do not eat, drink or smoke during use. Remove contaminated clothing and protective devices before entering eating areas. Avoid dispersion of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a cool, well-ventilated place away from heat, open flames, sparks and other sources of ignition. Store containers away from any incompatible materials, see section 10.

Storage class TRGS 510 (Germany):
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7.3. Specific end uses

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory references:

DEU	Germany	Forschungsgemeinschaft MAK- und BAT-Werte-Liste 2022 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe Mitteilung 58
ESP	Spain	Professional exposure limits for chemical agents in Spain 2023
BETWEEN	France	Limits on professional exposure to chemical agents in France Decree n° 2021-1849 of 28 December 2021
ITA	Italy	Legislative Decree 9 April 2008, n.81
PRT	Portugal	Decree-Lei n.º 1/2021 of 6 January, indicative professional exposure limit values for chemical agents. Legislative Decree no. 35/2020 of 13 July, protection of workers against risks linked to exposure during work with cancerous or mutagenic agents
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
EU	OEL EU	Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983;

TLV-ACGIH	Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC. ACGIH 2023

ETHANOLAMINE

Threshold limit value

Type	State	TWA/8h		STEL/15min		Notes / Observations	
		mg/m3	ppm	mg/m3	ppm		
AGW	DEU	0.5	0.2	0.5	0.2	SKIN	11
MAKE	DEU	0.51	0.2	0.51	0.2		
VLA	ESP	2.5	1	7.5	3	SKIN	
VLEP	BETWEEN	2.5	1	7.6	3	SKIN	
VLEP	ITA	2.5	1	7.6	3	SKIN	
VLE	PRT	2.5	1	7.6	3	SKIN	
WELL	GBR	2.5	1	7.6	3	SKIN	
OEL	EU	2.5	1	7.6	3	SKIN	
TLV-ACGIH		7.5	3	15	6		

Predicted no-effect concentration - PNEC		
Reference value in fresh water	0.085	mg/l
Reference value in sea water	0.0085	mg/l
Reference value for sediments in fresh water	0.425	mg/kg
Reference value for sediments in seawater	0.0425	mg/kg
Reference value for water, intermittent release	0.025	mg/l
Reference value for STP microorganisms	100	mg/l
Reference value for the terrestrial compartment	0.035	mg/kg

Health - Derived No-Effect Level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exposure Way	Sharp locals	Acute systemic	Chronic premises	Chronic systemic	Sharp locals	Acute systemic	Chronic premises	Chronic systemic
Oral				3.75 mg/kg/d				
Inhalation			2 mg/m3				3.3 mg/m3	
Dermal				0.24 mg/kg/d				1 mg/kg/day

BENZYL ALCOHOL

Threshold limit value

Type	State	TWA/8h		STEL/15min		Notes / Observations	
		mg/m3	ppm	mg/m3	ppm		
AGW	DEU	22	5	44	10	SKIN	11
MAKE	DEU	22	5	44	10	SKIN	

Predicted no-effect concentration - PNEC		
Reference value in fresh water	1	mg/l
Reference value in sea water	0.1	mg/l
Reference value for sediments in fresh water	5.27	mg/kg
Reference value for sediments in seawater	0.527	mg/kg
Reference value for water, intermittent release	2.3	mg/l
Reference value for STP microorganisms	39	mg/l

Reference value for the terrestrial compartment	0.45	mg/kg/day

Health - Derived No-Effect Level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exposure Way	Sharp locals	Acute systemic	Chronic premises	Chronic systemic	Sharp locals	Acute systemic	Chronic premises	Chronic systemic
Oral		20 mg/kg bw/d		4 mg/kg bw/d				
Inhalation		27 mg/m3		5.4 mg/m3		110 mg/m3		22 mg/m3
Dermal		20 mg/kg bw/d		4 mg/kg bw/d		40 mg/kg bw/d		8 mg/kg bw/d

SODIUM METASILICATE PENTAHYDRATE

Predicted no-effect concentration - PNEC

Reference value in fresh water	7.5	mg/l
Reference value in sea water	1	mg/l
Reference value for sediments in fresh water	VND	
Reference value for sediments in seawater	VND	
Reference value for water, intermittent release	7.5	mg/l
Reference value for STP microorganisms	1000	mg/l
Reference value for the terrestrial compartment	VND	

Health - Derived No-Effect Level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exposure Way	Sharp locals	Acute systemic	Chronic premises	Chronic systemic	Sharp locals	Acute systemic	Chronic premises	Chronic systemic
Oral				0.74 mg/kg bw/d				
Inhalation				1.55 mg/m3				6.22 mg/m3
Dermal				0.74 mg/kg bw/d				1.49 mg/kg bw/d

sodium cumene sulfonate

Predicted no-effect concentration - PNEC

Reference value in fresh water	0.23	mg/l
Reference value for water, intermittent release	2.3	mg/l
Reference value for STP microorganisms	100	mg/l

Health - Derived No-Effect Level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exposure Way	Sharp locals	Acute systemic	Chronic premises	Chronic systemic	Sharp locals	Acute systemic	Chronic premises	Chronic systemic
Oral				3.8 mg/kg bw/d				
Inhalation				13.2 mg/m3				53.6 mg/m3
Dermal				3.8 mg/kg bw/d				7.6 mg/kg bw/d

2-BUTOXYETHANOL

Threshold limit value

Type	State	TWA/8h		STEL/15min		Notes / Observations	
		mg/m3	ppm	mg/m3	ppm		
AGW	DEU	49	10	98	20	SKIN	
MAKE	DEU	49	10	98	20	SKIN	Note
VLA	ESP	98	20	245	50	SKIN	
VLEP	BETWEEN	49	10	246	50	SKIN	

VLEP	ITA	98	20	246	50	SKIN
VLE	PRT	98	20	246	50	SKIN
WELL	GBR	123	25	246	50	SKIN
OEL	EU	98	20	246	50	SKIN
TLV-ACGIH		97	20			

Predicted no-effect concentration - PNEC		
Reference value in fresh water	8.8	mg/l
Reference value in sea water	0.88	mg/l
Reference value for sediments in fresh water	34.6	mg/kg
Reference value for sediments in seawater	3.46	mg/kg
Reference value for water, intermittent release	9.1	mg/l
Reference value for STP microorganisms	463	mg/l
Reference value for the food chain (secondary poisoning)	20	mg/kg
Reference value for the terrestrial compartment	2.33	mg/kg

Health - Derived No-Effect Level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exposure Way	Sharp locals	Acute systemic	Chronic premises	Chronic systemic	Sharp locals	Acute systemic	Chronic premises	Chronic systemic
Oral		26.7 mg/kg bw/d		6.3 mg/kg bw/d				
Inhalation	147 mg/m3	426 mg/m3		59 mg/m3	246 mg/m3	1091 mg/m3		98 mg/m3
Dermal				38 mg/kg bw/d				

1-METHOXY-2-PROPANOL

Threshold limit value

Type	State	TWA/8h		STEL/15min		Notes / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	370	100	740	200	
MAKE	DEU	370	100	740	200	
VLA	ESP	375	100	568	150	SKIN
VLEP	BETWEEN	188	50	375	100	SKIN
VLEP	ITA	375	100	568	150	SKIN
VLE	PRT	375	100	568	150	
WELL	GBR	375	100	560	150	SKIN
OEL	EU	375	100	568	150	SKIN
TLV-ACGIH		184	50	368	100	

Health - Derived No-Effect Level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exposure Way	Sharp locals	Acute systemic	Chronic premises	Chronic systemic	Sharp locals	Acute systemic	Chronic premises	Chronic systemic
Oral			VND	3.3 mg/kg bw/d				
Inhalation			VND	43.9 mg/m3	553.5 mg/m3	VND		369 mg/m3
Dermal			VND	18.1 mg/kg bw/d		VND		50.6 mg/kg bw/d

Legend:

(C) = CEILING ; INALAB = Inhalable Fraction ; RESPIR = Respirable Fraction ; TORAC = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available; NEA = no exposure expected; NPI = no hazard identified; LOW = low hazard; MED = medium hazard; HIGH = high hazard.

8.2. Exposure controls

Considering that the use of appropriate technical measures should always take priority over personal protective equipment, ensure good ventilation in the workplace through effective local extraction.
When choosing personal protective equipment, seek advice from your chemical suppliers.
Personal protective equipment must bear the CE marking which certifies their compliance with current regulations.

Provide emergency shower with eye basin.

HAND PROTECTION
Protect hands with category III work gloves (ref. Directive 89/686/EEC and standard EN 374) such as PVA, butyl, fluoroelastomer or equivalent.
- Material: Butyl rubber, PVC , polychloroprene with natural latex coating, material thickness: 0.5 mm, penetration time: > 480 min.
- Material: rubber nitrile, rubber fluorinated, thickness of the material: 0.35-0.4 mm, time Of penetration: > 480 min.
Remarks: For the final choice of work glove material, the following must be considered: compatibility, degradation, break-through time and permeation.

SKIN PROTECTION
Wear long-sleeved work clothes and category II professional safety footwear (ref. Regulation 2016/425 and standard EN ISO 20344). Wash with soap and water after removing protective clothing.

EYE PROTECTION
It is recommended to wear airtight protective glasses (ref. standard EN ISO 16321).

RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) of the substance or one or more of the substances present in the product is exceeded (e.g. use in unventilated environments, formation of dust or aerosols), use respiratory protection equipped with a combined filter of the ABEK-P1 type, the class of which (1, 2 or 3) must be chosen in relation to the limit concentration of use. (ref. standard EN 14387). If gases or vapours of a different nature and/or gases or vapours with particles (aerosols, fumes, mists, etc.) are present, combined type filters must be provided.
The use of respiratory protection devices is necessary if the technical measures adopted are not sufficient to limit the worker's exposure to the threshold values taken into consideration. The protection offered by masks is however limited.
In case the substance in question is odorless or its olfactory threshold is higher than the relevant TLV-TWA and in case of emergency, wear an open-circuit compressed air breathing apparatus (ref. standard EN 137) or an external air-supplied respirator (ref. standard EN 138). For the correct choice of respiratory protection device, refer to standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS
Emissions from manufacturing processes, including those from ventilation equipment, should be monitored to comply with environmental protection legislation.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Property	Value	Information
Physical State	liquid	
Color	straw yellow	
Odor	characteristic	

Melting or freezing point	not available
Initial boiling point	not available
Flammability	not available
Lower explosive limit	not applicable
Upper explosive limit	not applicable
Flash point	> 60 °C
	Combustion is not sustained.
Auto-ignition temperature	not available
Decomposition temperature	not available
pH	13-14
Kinematic viscosity	not available
Solubility	soluble in water
Partition coefficient: n-octanol/water	not available
Vapor pressure	not available
Density and/or Relative Density	1.062 kg/l
Relative vapor density	not available
Particle Characteristics	not applicable

9.2. Other information

9.2.1. Information relating to physical hazard classes

Flammable liquids

Maintaining combustion	does not maintain combustion

9.2.2. Other security features

VOC (Directive 2010/75/EU)	15.35% - 163.02	g/liter

Explosive properties	non-explosive
Oxidizing properties	non-oxidizing

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular dangers of reaction with other substances under normal conditions of use.

BENZYL ALCOHOL

Decomposes above 870°C/1598°F.Possible explosion.

SODIUM METASILICATE PENTAHYDRATE

Aqueous solutions behave as: strong bases. Corrodes: aluminum, zinc, tin, aluminum alloys, zinc alloys, tin alloys.

2-BUTOXYETHANOL

It decomposes under the effect of heat.

1-METHOXY-2-PROPANOL

Dissolves various plastics. Stable under normal conditions of use and storage.

It absorbs and dissolves in water and organic solvents. In air it can slowly give explosive peroxides.

10.2. Chemical stability

The product is stable under normal conditions of use and storage.

10.3. Possibility of hazardous reactions

Vapours may form explosive mixtures with air.

ETHANOLAMINE

May react dangerously with: acrylonitrile, chloroepoxypropane, chlorosulfuric acid, hydrogen chloride, iron-sulfur compounds, acetic acid, acetic anhydride, mesityl oxide, nitric acid, sulfuric acid, strong acids, vinyl acetate, cellulose nitrate.

BENZYL ALCOHOL

May react dangerously with: hydrobromic acid, iron, oxidizing agents, sulfuric acid. Risk of explosion on contact with: phosphorus trichloride.

SODIUM METASILICATE PENTAHYDRATE

Reacts violently with: acids.

2-BUTOXYETHANOL

May react dangerously with: aluminium, oxidising agents. Forms peroxides with: air.

1-METHOXY-2-PROPANOL

May react dangerously with: strong oxidizing agents, strong acids.

10.4. Conditions to avoid

Avoid overheating. Avoid static electricity. Avoid any source of ignition.

ETHANOLAMINE

Avoid exposure to: air, heat sources.

BENZYL ALCOHOL

Avoid exposure to: air, heat sources, open flames.

2-BUTOXYETHANOL

Avoid exposure to: heat sources, open flames.

1-METHOXY-2-PROPANOL

Avoid exposure to: air.

10.5. Incompatible materials

ETHANOLAMINE

Incompatible with: iron, strong acids, strong oxidants.

BENZYL ALCOHOL

Incompatible with: sulfuric acid, oxidizing substances, aluminum.

1-METHOXY-2-PROPANOL

Incompatible with: oxidizing substances, strong acids, alkali metals.

10.6. Hazardous decomposition products

Thermal decomposition or fire may release gases and vapours that are potentially harmful to health.

ETHANOLAMINE

May produce: nitrogen oxides, carbon oxides.

2-BUTOXYETHANOL

May develop: hydrogen.

SECTION 11. Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Metabolism, kinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

1-METHOXY-2-PROPANOL
WORKERS: inhalation; skin contact.
POPULATION: ingestion of contaminated food or water; inhalation of ambient air; skin contact with products containing the substance.

Immediate, delayed and chronic effects resulting from short and long-term exposure

1-METHOXY-2-PROPANOL
The main route of entry is the skin, while the respiratory route is less important, given the low vapor pressure of the product. Above 100 ppm there is irritation of the ocular, nasal and oropharyngeal mucous membranes. At 1000 ppm there are disturbances in the balance and severe irritation to the eyes. Clinical and biological tests performed on exposed volunteers have not revealed anomalies. Acetate produces greater skin and eye irritation by direct contact. No chronic effects on humans are reported.

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation - vapors) of the mixture:	> 20 mg/l
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Cutaneous) of the mixture:	>2000 mg/kg

ETHANOLAMINE

LD50 (Dermal):	2504 mg/kg
STA (Cutaneous):	1100 mg/kg estimate from Table 3.1.2 of Annex I of CLP (data used for the calculation of the estimate of the acute toxicity of the mixture)
LD50 (Oral):	1089 mg/kg Rat
LC50 (Inhalation of vapours):	> 1.3 mg/l/6h Rat
STA (Inhalation of vapors):	11 mg/l estimate from Table 3.1.2 of Annex I of CLP (data used for the calculation of the estimate of the acute toxicity of the mixture)

BENZYL ALCOHOL

LD50 (Dermal):	2000 mg/kg Rabbit
LD50 (Oral):	1200 mg/kg Rat
LC50 (Inhalation of vapours):	> 4.1 mg/l/4h Rat

SODIUM METASILICATE PENTAHYDRATE

LD50 (Dermal):	> 5000 mg/kg rat
LD50 (Oral):	> 1152 mg/kg rat
LC50 (Inhalation of mists/dusts):	> 2.06 g/m3 rat

sodium cumene sulfonate

LD50 (Dermal):	> 2000 mg/kg
LD50 (Oral):	> 7000 mg/kg

2-BUTOXYETHANOL

LD50 (Dermal):	> 2000 mg/kg Guinea pig (OECD - guideline 402)
LD50 (Oral):	> 1200 mg/kg Guinea pig
LC50 (Inhalation of vapours):	3 mg/l/4h Rat

Alcohols, branched C12-15 and linear, ethoxylated propoxylated

LD50 (Oral):	> 2000 mg/kg rat

1-METHOXY-2-PROPANOL

LD50 (Dermal):	> 2000 mg/kg Rabbit
LD50 (Oral):	4016 mg/kg Rat
LC50 (Inhalation of vapours):	> 7000 mg/l/4h Rat

SKIN CORROSION / SKIN IRRITATION

Corrosive to the skin

Classification based on the experimental value of the pH

SERIOUS EYE DAMAGE / EYE IRRITATION

Causes serious eye damage

RESPIRATORY OR SKIN SENSITIZATION

Skin Sensitizer

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE

May irritate respiratory tract

SPECIFIC TARGET ORGAN TOXICITY (STOT) - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

DANGER IN CASE OF ASPIRATION

Does not meet the classification criteria for this hazard class

11.2. Information on other hazards

Based on available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with effects on human health under evaluation.

SECTION 12. Ecological information

Use according to good working practices, avoiding dispersal of the product into the environment. Notify the competent authorities if the product has reached water courses or if it has contaminated the soil or vegetation.

12.1. Toxicity

2-BUTOXYETHANOL
Aquatic toxicity assessment (supplier): The product is most likely not harmful to aquatic organisms. There is a high probability that the product is not chronically harmful to aquatic organisms. Correct introduction of low concentrations into a biological wastewater treatment plant should not compromise the degradation activity of the activated sludge. Terrestrial toxicity assessment (supplier): Study not scientifically justified.

1-METHOXY-2-PROPANOL
The product is most likely not harmful to aquatic organisms. Correct introduction of low concentrations into a biological purification plant should not compromise the degradation activity of the activated sludge.

SODIUM METASILICATE PENTAHYDRATE

LC50 - Fish	210 mg/l/96h brachydanio rerio
EC50 - Crustaceans	1700 mg/l/48h daphnia magna

2-BUTOXYETHANOL

LC50 - Fish	1474 mg/l/96h oncorhynchus mykiss
EC50 - Crustaceans	1550 mg/l/48h daphnia magna
EC50 - Algae / Aquatic Plants	1840 mg/l/72h pseudokirchneriella subcapitata
NOEC Chronic Fish	> 100 mg/l Brachydanio rerio

NOEC Chronic Crustaceans	100 mg/l daphnia magna

ETHANOLAMINE

NOEC Chronic Fish	1.2 mg/l Oryzias latipes
NOEC Chronic Crustaceans	0.85 mg/l Daphnia magna

BENZYL ALCOHOL

LC50 - Fish	460 mg/l/96h Pimephales promelas
EC50 - Crustaceans	230 mg/l/48h daphnia magna
EC50 - Algae / Aquatic Plants	770 mg/l/72h Pseudokircheneriella subcapitata

1-METHOXY-2-PROPANOL

LC50 - Fish	> 6800 mg/l/96h leuciscus idus
EC50 - Crustaceans	23300 mg/l/48h daphnia magna

sodium cumene sulfonate

LC50 - Fish	> 1000 mg/l/96h
EC50 - Crustaceans	> 1000 mg/l/48h
EC50 - Algae / Aquatic Plants	310 mg/l/72h

Alcohols, branched C12-15 and linear, ethoxylated propoxylated

LC50 - Fish	5 mg/l/96h

12.2. Persistence and degradability

SODIUM METASILICATE PENTAHYDRATE
Inorganic. Soluble silicates when diluted rapidly depolymerize producing molecular species that are indistinguishable from natural silica.
1-METHOXY-2-PROPANOL
Biodegradability and elimination assessment (H2O): Readily biodegradable (according to OECD criteria). Disposal considerations: 90-100% (28 days) (OECD 301E/92/96/EEC, C 4-B) (aerobic, municipal wastewater treatment plant effluent). In water, hydrolytic stability has not been determined but rapid biodegradability was found (96% degraded in 28 days). OECD 301E test. Atmospheric vapour photodegraded rapidly (half-life <1 day)

2-BUTOXYETHANOL

Solubility in water	1000 - 10000 mg/l

Rapidly degradable

ETHANOLAMINE

Solubility in water	1000 - 10000 mg/l

Rapidly degradable

BENZYL ALCOHOL
Rapidly degradable

1-METHOXY-2-PROPANOL

Solubility in water	1000 - 10000 mg/l

Rapidly degradable

sodium cumene sulfonate
Rapidly degradable

Alcohols, branched C12-15 and linear, ethoxylated propoxylated

Rapidly degradable

12.3. Bioaccumulative potential

SODIUM METASILICATE PENTAHYDRATE
Inorganic. The substance has no bioaccumulation potential.

2-BUTOXYETHANOL

Partition coefficient: n-octanol/water	0.81
BCF	3.16 (calculated QSAR value). This substance is not expected to bioaccumulate.

ETHANOLAMINE

Partition coefficient: n-octanol/water	-2.3

BENZYL ALCOHOL

Partition coefficient: n-octanol/water	1.1

1-METHOXY-2-PROPANOL

Partition coefficient: n-octanol/water	< 1

sodium cumene sulfonate

Partition coefficient: n-octanol/water	1.1 Log Kow

12.4. Mobility in soil

2-BUTOXYETHANOL
Assessment of transport between environmental compartments (supplier): The substance does not evaporate into the atmosphere from the water surface. Adsorption to the solid phase of soil is not expected. Study not scientifically justified. Stability in water: Not expected to be immediately hydrolyzed; does not contain functional groups that are considered to be hydrolyzed in water. Stability in soil: Low adsorption to soil particles is expected.

12.5. Results of PBT and vPvB assessment

Based on available data, the product does not contain PBT or vPvB substances in percentage ≥ 0.1%.

12.6. Endocrine disrupting properties

Based on available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with effects on the environment under evaluation.

12.7. Other adverse effects

Information not available

SECTION 13. Disposal Considerations

13.1. Waste treatment methods

Reuse, if possible. Product residues are to be considered hazardous special waste. The hazardousness of wastes containing part of this product must be assessed according to the current legislative provisions.
Disposal must be entrusted to a company authorised to manage waste, in compliance with national and, where applicable, local legislation.
The transport of waste may be subject to ADR.

CONTAMINATED PACKAGING
Contaminated packaging must be sent for recovery or disposal in compliance with national waste management regulations.

SECTION 14. Transport information

14.1. UN number or ID number

ADR / RID, IMDG, IATA: UN 1760

14.2. UN official shipping name

ADR / RID: CORROSIVE LIQUID, NOS (ETHANOLAMINE; SODIUM METASILICATE PENTAHYDRATE)
IMDG: CORROSIVE LIQUID, NOS (ETHANOLAMINE; SODIUM METASILICATE)
IATA: CORROSIVE LIQUID, NOS (ETHANOLAMINE; SODIUM METASILICATE)

14.3. Transport hazard classes

ADR / RID: Class: 8 Label: 8
IMDG: Class: 8 Label: 8
IATA: Class: 8 Label: 8

14.4. Packing group

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards

ADR / RID: NO
IMDG: non-marine pollutant
IATA: NO

14.6. Special precautions for users

ADR / RID:	HIN - Kemler: 80	Limited Quantities: 5 L	Tunnel restriction code: (E)
	Special provision: 274		
IMDG:	EMS: FA, SB	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 60 L	Packaging Instructions: 856
	Passengers:	Maximum quantity: 5 L	Packaging Instructions: 852

Special provision: A3, A803

14.7. Bulk maritime transport in accordance with IMO acts

Irrelevant information

SECTION 15. Regulatory Information

15.1. Legislative and regulatory provisions on health, safety and environment specific for the substance or mixture

Seveso Category - Directive 2012/18/EU: None

Restrictions relating to the product or the substances contained in accordance with Annex XVII of Regulation (EC) 1907/2006

Product
Point 3 - 40

Substances contained

Point 75

Regulation (EU) 2019/1148 - on the placing on the market and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)

Based on available data, the product does not contain SVHC substances in percentage ≥ 0.1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to export notification requirement Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Health Checks

Workers exposed to this chemical agent which is hazardous to health must be subjected to health surveillance carried out in accordance with the provisions of art. 41 of Legislative Decree 81 of 9 April 2008 unless the risk to the safety and health of the worker has been assessed as irrelevant, in accordance with the provisions of art. 224 paragraph 2.

15.2. Chemical safety assessment

A chemical safety assessment has been developed for the following substances in the mixture:
Ethanolamine, Benzyl alcohol, Sodium metasilicate pentahydrate, Sodium cumenesulfonate, 2-butoxyethanol.

SECTION 16. Other information

Text of the hazard statements (H) cited in sections 2-3 of the sheet:

Flam. Liq. 3	Flammable liquid, category 3
Met. Corr. 1	Substance or mixture corrosive to metals, category 1
Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
Skin Corr. 1B	Skin corrosion, category 1B
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Skin Sens. 1B	Skin sensitization, category 1B
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H226	Flammable liquid and vapour.
H290	May be corrosive to metals.
H331	Toxic if inhaled.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H314	Causes severe skin burns and serious eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May irritate respiratory tract.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.

LEGEND:
- ADR: European Agreement concerning the carriage of dangerous goods by road
- ATE / STA: Acute Toxicity Estimation
- CAS: Chemical Abstract Service Number
- CE: Identification number in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EC50: Concentration that produces an effect in 50% of the test population
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulations
- IC50: Immobilization concentration of 50% of the test population
- IMDG: International Maritime Dangerous Goods Code
- IMO: International Maritime Organization
- INDEX: Identification number in Annex VI of CLP

- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent, bioaccumulative and toxic
- PEC: Predicted environmental concentration
- PEL: Predicted exposure level
- PMT: Persistent, mobile and toxic
- PNEC: Predicted No Effect Concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulations for the international carriage of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time Weighted Average Exposure Limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic compound
- vPvB: Very Persistent and Very Bioaccumulative
- vPvM: Very persistent and very mobile
- WGK: Water hazard class (Germany).

GENERAL BIBLIOGRAPHY:

1. Regulation (EC) 1907/2006 of the European Parliament (REACH)
2. Regulation (EC) 1272/2008 of the European Parliament and of the Council (CLP)
3. Regulation (EU) 2020/878 (Annex II REACH Regulation)
4. Regulation (EC) 790/2009 of the European Parliament (I Atp. CLP)
5. Regulation (EU) 286/2011 of the European Parliament (II Atp. CLP)
6. Regulation (EU) 618/2012 of the European Parliament (III Atp. CLP)
7. Regulation (EU) 487/2013 of the European Parliament (IV Atp. CLP)
8. Regulation (EU) 944/2013 of the European Parliament (V Atp. CLP)
9. Regulation (EU) 605/2014 of the European Parliament (VI Atp. CLP)
10. Regulation (EU) 2015/1221 of the European Parliament (VII Atp. CLP)
11. Regulation (EU) 2016/918 of the European Parliament (VIII Atp. CLP)
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (EU) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (EU) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (EU) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (EU) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (EU) 2021/849 (XVII Atp. CLP)
22. Delegated Regulation (EU) 2022/692 (XVIII Atp. CLP)
23. Delegated Regulation (EU) 2023/707
24. Delegated Regulation (EU) 2023/1434 (XIX Atp. CLP)
25. Delegated Regulation (EU) 2023/1435 (XX Atp. CLP)
- The Merck Index. - 10th Edition
- Chemical Safety Handling
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- NI Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS Website
- ECHA Agency Website
- Database of SDS models of chemical substances - Ministry of Health and Istituto Superiore di Sanità

Note for user:
The information contained in this sheet is based on the knowledge available to us at the date of the last version. The user must ensure the suitability and completeness of the information in relation to the specific use of the product.
This document should not be construed as a guarantee of any specific property of the product.
Since the use of the product is not under our direct control, it is the user's obligation to observe under his own responsibility the laws and provisions in force regarding hygiene and safety. We assume no responsibility for improper use.
Provide adequate training to personnel involved in the use of chemicals.
CLASSIFICATION CALCULATION METHODS
Chemical-physical hazards: The classification of the product was derived from the criteria established by the CLP Regulation Annex I Part 2. The methods

for evaluating the chemical-physical properties are reported in section 9.
Health hazards: The classification of the product is based on the calculation methods in Annex I of CLP Part 3, unless otherwise indicated in section 11.
Environmental hazards: The classification of the product is based on the calculation methods in Annex I of CLP Part 4, unless otherwise indicated in section 12.

Changes from the previous revision
Changes have been made to the following sections:
02 / 03 / 04 / 08 / 09 / 10 / 11 / 12 / 14 / 16.