

Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH



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

1.1. Product identifier

Code: 22/015
Product name: SACHE AST 01

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

Intended use: Alkaline detergent.
Uses advised against: Different uses than those intended.

1.3. Details of the supplier of the safety data sheet

Name: CHEMTEC S.R.L.
Full address: Via Alberto da Giussano 36/O
District and Country: 20011 CORBETTA (MI)
ITALY
tel. +39 02 92867461

e-mail address of the competent person

responsible for the Safety Data Sheet: laboratorio@chemtec.it
Supplier: CHEMTEC S.R.L.

1.4. Emergency telephone number

For urgent inquiries refer to: +39 02 92867461 during office hour 8.30-12.30 - 13.30-17.30
Local emergency services

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Acute toxicity, category 4	H302	Harmful if swallowed.
Skin corrosion, category 1A	H314	Causes severe skin burns and eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.

2.2. Label elements

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

Hazard pictograms:



Signal words:

DANGER

Hazard statements:

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

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Precautionary statements:

P260	Do not breathe 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/ protective clothing / eye protection / face protection.
P310	Immediately call a POISON CENTER / doctor if you feel unwell.
P264	Wash the skin thoroughly after handling.

Contains:	POTASSIUM HYDROXIDE; DISODIUM METASILICATE; ETIDRONIC ACID.
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2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage $\geq$ than 0,1%.

The product does not contain substances with endocrine disrupting properties in concentration $\geq$ 0.1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	X = Conc. %	Classification (EC) 1272/2008 (CLP)
POTASSIUM HYDROXIDE		
CAS 1310-58-3	$15 \leq X \leq 25$	Met. Corr. 1 H290, Acute Tox. 4 H302, Skin Corr. 1A H314, Eye Dam. 1 H318
EC 215-181-3		Skin Corr. 1B H314: $\geq 2\%$, Skin Irrit. 2 H315: $\geq 0,5\%$, Eye Dam. 1 H318: $\geq 2\%$, Eye Irrit. 2 H319: $\geq 0,5\%$
INDEX 019-002-00-8		LD50 Oral: 333 mg/kg
REACH Reg. 01-2119487136-33		
DISODIUM METASILICATE		
CAS 6834-92-0	$4 \leq X \leq 5$	Met. Corr. 1 H290, Skin Corr. 1B H314, Eye Dam. 1 H318, STOT SE 3 H335
EC 229-912-9		
INDEX 014-010-00-8		
REACH Reg. 01-2119449811-37		
2,2',2"-NITRILOTRIETHANOL		
CAS 102-71-6	$1,50 \leq X \leq 2,25$	--
EC 203-049-8		
INDEX -		
REACH Reg. 01-2119486482-31		
ETIDRONIC ACID		
CAS 2809-21-4	$0,55 \leq X \leq 1,55$	Met. Corr. 1 H290, Acute Tox. 4 H302, Eye Dam. 1 H318
EC 220-552-8		LD50 Oral: 1100 mg/kg bw
INDEX		
REACH Reg. 01-2119510391-53		
2,2'-IMINODIETHANOL		
CAS 111-42-2	$0,35 \leq X \leq 0,45$	Repr. 2 H361fd, Acute Tox. 4 H302, STOT RE 2 H373, Eye Dam. 1 H318,
EC 203-868-0		Skin Irrit. 2 H315
INDEX 603-071-00-1		LD50 Oral: 1600 mg/kg bw/d
REACH Reg. 01-2119488930-28		

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures

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4.1. Description of first aid measures

EYES: remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information for the doctor: symptomatically treatment.

SECTION 5. Firefighting measures**5.1. Extinguishing media**

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

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

SECTION 7. Handling and storage**7.1. Precautions for safe handling**

Ensure that there is an adequate earthing system for the equipment and personnel. Avoid contact with eyes and skin. Do not breathe powders, vapours or

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mists. Do not eat, drink or smoke during use. Wash hands after use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a ventilated and dry place, far away from sources of ignition. Keep containers well sealed. Keep the product in clearly labelled containers. Avoid overheating. Avoid violent blows. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany): 8A

7.3. Specific end use(s)

Alkaline detergent.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

AUS	Österreich	Gesamte Rechtsvorschrift für Grenzwerteverordnung 2021, Fassung vom 17.06.2021
BEL	Belgique	Liste de valeurs limites d'exposition aux agents chimiques, livre VI du code du bien-être au travail
BGR	България	НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. ЗА ЗАЩИТА НА РАБОТЕЩИТЕ ОТ РИСКОВЕ, СВЪРЗАНИ С ЕКСПОЗИЦИЯ НА ХИМИЧНИ АГЕНТИ ПРИ РАБОТА (изм. ДВ. бр.5 от 17 Януари 2020г.)
CHE	Suisse / Schweiz	Valeurs limites d'exposition aux postes de travail: VME/VLE (SUVA). Grenzwerte am Arbeitsplatz: MAK (SUVA)
CZE	Česká Republika	Nařízení vlády č. 41/2020 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů
DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
DNK	Danmark	Bekendtgørelse om grænseværdier for stoffer og materialer - BEK nr 1458 af 13/12/2019
ESP	España	Límites de exposición profesional para agentes químicos en España 2021
EST	Eesti	Ohtlike kemikaalide ja neid sisaldavate materjalide kasutamise töötavishoiu ja tööohutuse nõuded ning töökeskkonna keemiliste ohutegurite piirnormid [RT I, 17.10.2019, 1 - jõust. 17.01.2020]
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
FIN	Suomi	HTP-VÄRDEN 2020. Koncentrationer som befunns skadliga. SOCIAL - OCH HÄLSOVÄRDSDMINISTERIETS PUBLIKATIONER 2020:25
GRC	Ελλάδα	Π.Δ. 26/2020 (ΦΕΚ 50/Α` 6.3.2020) Εναρμόνιση της ελληνικής νομοθεσίας προς τις διατάξεις των οδηγιών 2017/2398/ΕΕ, 2019/130/ΕΕ και 2019/983/ΕΕ «για την τροποποίηση της οδηγίας 2004/37/ΕΚ ``σχετικά με την προστασία των εργαζομένων από τους κινδύνους που συνδέονται με την έκθεση σε καρκινογόνους ή μεταλλαξιογόνους παράγοντες κατά την εργασία``»
HUN	Magyarország	Az innovációért és technológiáért felelős miniszter 5/2020. (II. 6.) ITM rendelethe a kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
HRV	Hrvatska	Pravilnik o izmjenama i dopunama Pravilnika o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021)
IRL	Éire	2020 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations (2001-2015) and the Safety, Health and Welfare at Work (Carcinogens) Regulations (2001-2019)
LTU	Lietuva	Jsakymas dėl lietuvis higienos normos hn 23:2011 „cheminių medžiagų profesinio poveikio ribiniai dydžiai. Matavimo ir poveikio vertinimo bendrieji reikalavimai“ patvirtinimo
LVA	Latvija	Grozījumi Ministru kabineta 2007. gada 15. maija noteikumos Nr. 325 "Darba aizsardzības prasības saskaņā ar ķīmiskajām vielām darba vietās" (prot. Nr. 32 18. §; prot. Nr. 1 22. §)
NOR	Norge	Forskrift om endring i forskrift om tiltaksverdier og grenseverdier for fysiske og kjemiske faktorer i arbeidsmiljøet samt smitterisikogrupper for biologiske faktorer (forskrift om tiltaks- og grenseverdier), 21. august 2018 nr. 1255
NLD	Nederland	Arbeidsomstandighedenregeling. Lijst van wettelijke grenswaarden op grond van de artikelen 4.3, eerste lid, en 4.16, eerste lid, van het Arbeidsomstandighedenbesluit
POL	Polska	Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
SWE	Sverige	Hygieniska gränsvärden, Arbetsmiljöverkets föreskrifter och allmänna råd om hygieniska gränsvärden (AFS 2018:1)
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)

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TLV-ACGIH

ACGIH 2020

POTASSIUM HYDROXIDE

Threshold Limit Value							
Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
MAK	AUS	2				INHAL	
VLEP	BEL			2			
TLV	BGR	2					
MAK	CHE	2					
VME/VLE	CHE	2					
TLV	CZE	1		2			
TLV	DNK	2		2 (C)		SKIN	
VLA	ESP	2				RESP	
TLV	EST	2					
VLEP	FRA			2			
HTP	FIN			2 (C)			
AK	HUN	2		2			
GVI/KGVI	HRV			2			
OELV	IRL			2			
TLV	NOR			2 (C)			
NDS/NDSch	POL	0,5		1			
NGV/KGV	SWE	1		2		INHAL	
WEL	GBR			2			
TLV-ACGIH				2 (C)			

Health - Derived no-effect level - DNEL / DMEL

Effects on consumers

Effects on workers

Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation			1 mg/m3				1 mg/m3	

DISODIUM METASILICATE

Predicted no-effect concentration - PNEC							
Normal value in fresh water				7,5	mg/l		
Normal value in marine water				1	mg/l		
Normal value for water, intermittent release				7,5	mg/l		
Normal value of STP microorganisms				1000	mg/l		

Health - Derived no-effect level - DNEL / DMEL

Effects on consumers

Effects on workers

Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0,74 mg/kg bw/d				
Inhalation				1,55 mg/m3				6,22 mg/m3
Skin				0,74 mg/kg bw/d				1,49 mg/kg bw/d

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2,2',2''-NITRILOTRIETHANOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
MAK	AUS	5	0,8	10	0,16	INHAL	aerosol
TRK	AUS	5	0,8	10	0,16	INHAL	aerosol
VLEP	BEL	5					
MAK	CHE	5		5		INHAL	fraction
VME/VLE	CHE	5		5		INHAL	fraction
AGW	DEU	1		1		INHAL	aerosol
MAK	DEU	1		1		INHAL	fraction
TLV	DNK	3,1	0,5	6,2	1		
VLA	ESP	5					
TLV	EST	5		10			
HTP	FIN	5					
OELV	IRL	5					
RD	LTU	5		10			
RV	LVA	5		10			
TLV	NOR	5					
TGG	NLD	5					
NGV/KGV	SWE	5	0,8	10	1,6		
TLV-ACGIH		5					

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,32	mg/l
Normal value in marine water	0,03	mg/l
Normal value for fresh water sediment	1,7	mg/kg
Normal value for marine water sediment	0,17	mg/kg
Normal value for water, intermittent release	5,12	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,15	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Effects on consumers

Effects on workers

Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				13 mg/kg				
Inhalation				1,25 mg/m3				5 mg/m3
Skin				3,1 mg/kg				6,3 mg/kg

ETIDRONIC ACID

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,068	mg/l
Normal value in marine water	0,007	mg/l
Normal value for fresh water sediment	136	mg/kg/d
Normal value for marine water sediment	13,6	mg/kg/d

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Normal value of STP microorganisms	40	mg/l
Normal value for the food chain (secondary poisoning)	3,7	mg/kg
Normal value for the terrestrial compartment	10	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL								
Effects on consumers					Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			1,7 mg/kg bw/d	1,7 mg/kg bw/d				
Inhalation				2,95 mg/m3				12 mg/m3
Skin				17 mg/kg bw/d				34 mg/kg bw/d

2,2'-IMINODIETHANOL

Threshold Limit Value						
Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
MAK	AUS	2	0,46	4	0,92	
TRK	AUS	2	0,46	4	0,92	
VLEP	BEL	1	0,2			INHAL fraction and vapour - Skin
TLV	BGR	10				SKIN
MAK	CHE	1		1		INHAL aerosol
VME/VLE	CHE	1		1		INHAL aerosol
TLV	CZE	5		10		
MAK	DEU	1		1		INHAL fraction and vapour - Skin
MAK	DEU	1				SKIN
TLV	DNK	2	0,46	4	0,92	
VLA	ESP	2	0,46			SKIN
TLV	EST	15	3	30	6	SKIN
VLEP	FRA	15	3			
HTP	FIN	2	0,46			SKIN
TLV	GRC	15	3			
GVI/KGVI	HRV	15	3			
OELV	IRL	1				INHAL fraction and vapour
RD	LTU	15	3	30	6	SKIN
RV	LVA	15	3	30	6	
TLV	NOR	15	3			
TGG	NLD	0,5				SKIN
NDS/NDSch	POL	9				
NGV/KGV	SWE	5	3	30	6	SKIN
TLV-ACGIH		1				SKIN

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,02	mg/l
Normal value in marine water	0,002	mg/l
Normal value for fresh water sediment	0,092	mg/kg dw
Normal value for marine water sediment	0,009	mg/kg dw

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Normal value of STP microorganisms	100	mg/l
Normal value for the food chain (secondary poisoning)	1,04	mg/kg
Normal value for the terrestrial compartment	0,007	mg/kg dw
Health - Derived no-effect level - DNEL / DMEL		
Effects on consumers		
Effects on workers		
Route of exposure	Acute local	Acute systemic
Oral	Chronic local	Chronic systemic
Inhalation	0,06 mg/kg bw/d	0,06 mg/kg bw/d
Skin	0,125 mg/m3	0,5 mg/m3
	0,07 mg/kg bw/d	0,75 mg/m3
		0,13 mg/kg bw/d

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category III professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear a hood visor or protective visor combined with airtight goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	liquid	
Colour	colourless	
Odour	characteristic	
Melting point / freezing point	Not available	
Initial boiling point	100 °C	

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Flammability	Not flammable
Lower explosive limit	Not applicable
Upper explosive limit	Not applicable
Flash point	Not available
Auto-ignition temperature	Not available
pH	> 13
Kinematic viscosity	Not available
Solubility	in water: soluble
Partition coefficient: n-octanol/water	Not available
Vapour pressure	Not available
Density and/or relative density	1,20 - 1,30 kg/l
Relative vapour density	Not available
Particle characteristics	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes
Information not available.

9.2.2. Other safety characteristics

VOC (Directive 2010/75/EU) 1,55 % - 18,75 g/litre

Explosive properties Not applicable

SECTION 10. Stability and reactivity**10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

POTASSIUM HYDROXIDE

May corrode: zinc, aluminium, tin, lead, light metal alloys.

2,2',2''-NITRILOTRIETHANOL

May react with: acids, oxidising substances.

ETIDRONIC ACID

Corrodes: metals.

10.2. Chemical stability

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

2,2',2''-NITRILOTRIETHANOL

Avoid exposure to: light.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

POTASSIUM HYDROXIDE

Develops hydrogen on contact with: metals. Reacts violently developing heat on contact with: acids, water, alcohols.

DISODIUM METASILICATE

Develops hydrogen on contact with: aluminium, zinc, tin, copper. May react dangerously with: acids.

2,2',2''-NITRILOTRIETHANOL

Reacts violently with: strong oxidising agents. Develops heat on contact with: acids. Reacts with: metals.

10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

POTASSIUM HYDROXIDE

Unstable when exposed to air. Freezing.

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2,2',2''-NITRILOTRIETHANOL

Avoid exposure to: naked flames, ignition sources. Avoid exposure to: moisture.

ETIDRONIC ACID

Avoid exposure to: naked flames, sparks, sources of ignition.

10.5. Incompatible materials

POTASSIUM HYDROXIDE

Incompatible with: acids, alcohols, halogenated hydrocarbons.

2,2',2''-NITRILOTRIETHANOL

Incompatible with: oxidising agents, strong acids, metals.

ETIDRONIC ACID

Incompatible with: strong oxidising agents, strong bases, metals.

10.6. Hazardous decomposition products

DISODIUM METASILICATE

May develop: carbon oxides.

2,2',2''-NITRILOTRIETHANOL

May develop: carbon oxides, nitric oxide.

ETIDRONIC ACID

In decomposition develops: phosphoryl oxides, carbon oxides, phosphine, phosphoric acid.

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008Metabolism, toxicokinetics, mechanism of action and other information

Information not available.

Information on likely routes of exposure

Information not available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available.

Interactive effects

Information not available.

ACUTE TOXICITY

ATE (Inhalation) of the mixture: not classified (no significant component)

ATE (Oral) of the mixture: 1281,72 mg/kg

ATE (Dermal) of the mixture: not classified (no significant component)

POTASSIUM HYDROXIDE

LD50 (Oral): 333 mg/kg Mouse

DISODIUM METASILICATE

LD50 (Oral): > 1152 mg/kg dw Rat

LD50 (Dermal): > 5000 mg/kg Rat

LC50 (Inhalation mists/powders): > 2,06 mg/l/4h Rat

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LD50 (Oral): 6400 mg/kg Rat

LD50 (Dermal): > 2000 mg/kg Rabbit

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ETIDRONIC ACID

LD50 (Oral):

1100 mg/kg bw Rabbit

LD50 (Dermal):

> 7940 mg/kg bw Rabbit (OECD 402)

2,2'-IMINODIETHANOL

LD50 (Oral):

1600 mg/kg bw/d Rat

LC50 (Inhalation vapours):

0,2 mg/l/8h Rat

SKIN CORROSION / IRRITATION

Corrosive for the skin. Classification according to the experimental pH value.

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage.

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class.

Respiratory sensitization

Information not available.

Skin sensitization

Information not available.

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.

Adverse effects on sexual function and fertility

Information not available.

Adverse effects on development of the offspring

Information not available.

Effects on or via lactation

Information not available.

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class.

Target organ

Information not available.

Route of exposure

Information not available.

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class.

Target organ

Information not available.

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Route of exposure

Information not available.

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class.

11.2. Information on other hazards

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

SECTION 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1. Toxicity

DISODIUM METASILICATE

LC50 - for Fish	210 mg/l/96h Brachydanio rerio
EC50 - for Crustacea	1700 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	207 mg/l/72h Scenedesmus subspicatus

2,2',2''-NITRILOTRIETHANOL

LC50 - for Fish	11800 mg/l/96h Pimephales promelas
EC50 - for Crustacea	609,88 mg/l/48h Ceriodaphnia dubia
EC50 - for Algae / Aquatic Plants	512 mg/l/72h Scenedesmus subspicatus

ETIDRONIC ACID

LC50 - for Fish	368 mg/l/96h Oncorhynchus mykiss
EC50 - for Crustacea	527 mg/l/48h Daphnia
EC50 - for Algae / Aquatic Plants	7,2 mg/l/72h Pseudokirchneriella subcapitata

2,2'-IMINODIETHANOL

LC50 - for Fish	1460 mg/l/96h Pimephales promelas
EC50 - for Crustacea	55 mg/l/48h Daphnia magna
Chronic NOEC for Crustacea	0,78 mg/l 21d - Daphnia magna

12.2. Persistence and degradability

POTASSIUM HYDROXIDE

Solubility in water	> 10000 mg/l
Degradability: information not available	

DISODIUM METASILICATE

Solubility in water	Soluble
Degradability: information not available	

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2,2',2''-NITRILOTRIETHANOL

Solubility in water Soluble

Rapidly degradable

ETIDRONIC ACID

Solubility in water > 10000 mg/l

Entirely degradable

2,2'-IMINODIETHANOL

Solubility in water 1000 - 10000 mg/l

Rapidly degradable

12.3. Bioaccumulative potential

2,2'-IMINODIETHANOL

Partition coefficient: n-octanol/water -2,18

12.4. Mobility in soil

Information not available.

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage $\geq$ than 0,1%.

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

Information not available.

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

14.1. UN number or ID number

ADR / RID, IMDG, IATA: 1719

14.2. UN proper shipping name

ADR / RID: CAUSTIC ALKALI LIQUID, N.O.S. (POTASSIUM HYDROXIDE; DISODIUM METASILICATE)

IMDG: CAUSTIC ALKALI LIQUID, N.O.S. (POTASSIUM HYDROXIDE; DISODIUM METASILICATE)

IATA: CAUSTIC ALKALI LIQUID, N.O.S. (POTASSIUM HYDROXIDE; DISODIUM METASILICATE)

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14.3. Transport hazard class(es)

ADR / RID: Class: 8 Label: 8

IMDG: Class: 8 Label: 8

IATA: Class: 8 Label: 8



14.4. Packing group

ADR / RID, IMDG, IATA: II

14.5. Environmental hazards

ADR / RID: NO

IMDG: NO

IATA: NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 80	Limited Quantities: 1 L	Tunnel restriction code: (E)
	Special provision: -		
IMDG:	EMS: F-A, S-B	Limited Quantities: 1 L	
IATA:	Cargo:	Maximum quantity: 30 L	Packaging instructions: 855
	Pass.:	Maximum quantity: 1 L	Packaging instructions: 851
	Special provision:	A3, A803	

14.7. Maritime transport in bulk according to IMO instruments

Information not relevant.

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EU: None.Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006Product

Point 3

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

Not applicable.

Substances in Candidate List (Art. 59 REACH)On the basis of available data, the product does not contain any SVHC in percentage $\geq$ than 0,1%.Substances subject to authorisation (Annex XIV REACH)

None.

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Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)

WGK 1: low hazard to waters.

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the mixture.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Met. Corr. 1	Substance or mixture corrosive to metals, category 1
Repr. 2	Reproductive toxicity, category 2
Acute Tox. 4	Acute toxicity, category 4
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Skin Corr. 1A	Skin corrosion, category 1A
Eye Dam. 1	Serious eye damage, category 1
STOT SE 3	Specific target organ toxicity - single exposure, category 3
H290	May be corrosive to metals.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H302	Harmful if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation

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- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport 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 Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

Classification and procedure used to derive it according to Regulation (EC) 1272/2008 (CLP) in relation to mixtures:

Classification according to Regulation (EC) No. 1272/2008	Classification procedure
Acute Tox. 4 H302	Calculation method
Skin Corr. 1A H314	Calculation method
Eye Dam. 1 H318	Calculation method

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
 3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
 4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
 6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
 7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
 8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
 9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
 10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
 11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
 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 (UE) 2018/1480 (XIII Atp. CLP)
 17. Regulation (EU) 2019/1148
 18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
 19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
 20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
 21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - INRS - Fiche Toxicologique (toxicological sheet)
 - Patty - Industrial Hygiene and Toxicology
 - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
 - IFA GESTIS website
 - ECHA website
 - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

CALCULATION METHODS FOR CLASSIFICATION

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:

The following sections were modified:

01 / 03 / 08 / 09 / 10 / 11 / 12 / 15.