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	DET&RINSE CASA		

### 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

Product name

DET&RINSE CASA  
DB1020A0

UFI: 0000-X0QA-X00S-NT92.

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

Intended use

Oven cleaner.

Identified Uses	Industrial	Professional	Consumer
Automatic oven washing detergent.	-	-	ERC: 9a. PC: 35. LCS: C.
Automatic oven washing detergent	-	ERC: 9a. PROC: 9. PC: 35. LCS: PW.	-

##### Uses Advised Against

Any use other than those identified.

##### 1.3. Details of the supplier of the safety data sheet

Name

Full address

District and Country

Unox S.p.A.  
Via Majorana, 22  
35010 Cadoneghe (Padova)  
Italia  
Tel. +39 049 86 57 511  
Fax +39 049 86 57 555

e-mail address of the competent person responsible for the Safety Data Sheet

Det.Rinse@unox.com

##### 1.4. Emergency telephone number

For urgent inquiries refer to

Verisk-3E  
Tel. (+)1-760-476-3961  
Tel. (+)0-800-680-0425 (UK)  
Access code: 334577

#### 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:  
Skin corrosion, category 1A

H314

Causes severe skin burns and eye damage.

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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:

H314

Causes severe skin burns and eye damage.

Precautionary statements:

P310  
P102  
P260  
P280  
P301+P330+P331  
P303+P361+P353  
P305+P351+P338

Immediately call a POISON CENTER.  
Keep out of reach of children.  
Do not breathe mist/vapours/spray.  
Wear protective gloves / face protection.  
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Dispose of contents / container in accordance with local regulations.

Contains:

SODIUM HYDROXIDE  
2-AMINOETHANOL  
REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE

Ingredients according to Regulation (EC) No. 648/2004

Less than 5%  
5% or over but less than 15%

anionic surfactants  
non-ionic surfactants

#### 2.3. Other hazards

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


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


#### SECTION 3. Composition/information on ingredients

##### 3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
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<b>DIPROPYLENE GLYCOL MONOMETHYL ETHER</b>			
CAS 34590-94-8	5 ≤ x < 15	Substance with a community workplace exposure limit.	
EC 252-104-2			
INDEX -			
REACH Reg. 01-2119450011-60-XXXX			
<b>SODIUM HYDROXIDE</b>			
CAS 1310-73-2	1 ≤ x < 5	Met. Corr. 1 H290, Skin Corr. 1A H314, Eye Dam. 1 H318	
EC 215-185-5		Skin Corr. 1B H314: ≥ 2%, Skin Irrit. 2 H315: ≥ 0,5%, Eye Dam. 1 H318: ≥ 2%, Eye Irrit. 2	
H319: ≥ 0,5%			
INDEX 011-002-00-6			
REACH Reg. 01-2119457892-27-XXXX			
<b>REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE</b>			
CAS 174955-61-4	1 ≤ x < 5	Acute Tox. 4 H302, Eye Dam. 1 H318	
EC		LD50 Oral: >300 mg/kg	
INDEX -			
REACH Reg. *			
<b>2-AMINOETHANOL</b>			
CAS 141-43-5	1 ≤ x < 5	Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Skin Corr. 1B H314, Eye Dam.	
1 H318, Aquatic Chronic 3 H412			
EC 205-483-3		LD50 Oral: >1510 mg/kg, LD50 Dermal: >1025 mg/kg, STA Inhalation vapours: 11 mg/l,	
STA Inhalation mists/powders: 1,5 mg/l			
INDEX 603-030-00-8			
REACH Reg. 01-2119486455-28-XXXX			
<b>3-METHOXY-3-METHYL-1-BUTANOL</b>			
CAS 56539-66-3	1 ≤ x < 5	Eye Irrit. 2 H319	
EC 260-252-4			
INDEX -			
REACH Reg. 01-2119976333-33-0000			
<b>TETRASODIUM N,N-BIS(CARBOXYMETHYL)-L-GLUTAMATE</b>			
CAS 51981-21-6	1 ≤ x < 5	Met. Corr. 1 H290	
EC 257-573-7			
INDEX -			
REACH Reg. 01-2119493604-38-XXXX			
<b>N,N-DIMETHYL 9-DECENAMIDE</b>			
CAS 1356964-77-6	1 ≤ x < 3	Acute Tox. 4 H302, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Aquatic Chronic 3	
H412			
EC 806-919-0		LD50 Oral: 550 mg/kg	
INDEX -			
REACH Reg. 01-2120058432-61-0000			
The full wording of hazard (H) phrases is given in section 16 of the sheet.			
<b>REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE</b>			
* Exempted: polymer. See Article 2 (9) of Regulation (EC) no. 1907/2006.			
<b>SECTION 4. First aid measures</b>			
<b>4.1. Description of first aid measures</b>			
EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.			
SKIN: Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.			

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INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.  
INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

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

See section 11.

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

Keep the safety data sheet of the preparation or, failing that, the label available for the medical personnel.

**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**

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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

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use.

Frequency of use: up to 104 days / year.  
Duration of use: up to 0.75 minutes.  
Internal use.

7.2. Conditions for safe storage, including any incompatibilities

Keep the product in clearly labelled containers. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany):  
10

7.3. Specific end use(s)

Follow the instructions on the product labeled or on the information sheet.


Do not use the product for purposes other than those intended. In particular, do not use the product for manual washing.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

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.)
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
ESP	España	Límites de exposición profesional para agentes químicos en España 2021
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
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 μεταλλαζόνους παράγοντες κατά την εργασία``»
HRV	Hrvatska	Pravilnik o izmjenama i dopunama Pravilnika o zaštiti radnika od izloženosti opasnimkemiikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021)
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
PRT	Portugal	Decreto-Lei n.º 1/2021 de 6 de janeiro, valores-limite de exposição profissional indicativos para os agentes químicos. Decreto-Lei n.º 35/2020 de 13 de julho, proteção dos trabalhadores contra os riscos ligados à exposição durante o trabalho a agentes cancerígenos ou mutagénicos
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
ROU	România	Hotărârea nr. 53/2021 pentru modificarea hotărârii guvernului nr. 1.218/2006, precum și pentru modificarea și completarea hotărârii guvernului nr. 1.093/2006
SVN	Slovenija	Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu (Uradni list RS, št. 10/01, 39/05, 53/07, 102/10, 43/11 – ZVZD-1, 38/15, 78/18 in 78/19)
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; 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.

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TLV-ACGIH ACGIH 2021


DIPROPYLENE GLYCOL MONOMETHYL ETHER


Threshold Limit Value						
Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	308	50			SKIN
AGW	DEU	310	50	310	50	
MAK	DEU	310	50	310	50	
VLA	ESP	308	50			SKIN
VLEP	FRA	308	50			SKIN
TLV	GRC	600	100	900	150	
GVI/KGVI	HRV	308	50			
VLEP	ITA	308	50			SKIN
VLE	PRT	308	50			SKIN
NDS/NDSch	POL	240		480		
TLV	ROU	308	50			SKIN
MV	SVN	308	50			SKIN
WEL	GBR	308	50			SKIN
OEL	EU	308	50			SKIN
TLV-ACGIH		606	100	909 (C)	150 (C)	
Predicted no-effect concentration - PNEC						
Normal value in fresh water				19	mg/l	
Normal value in marine water				1,9	mg/l	
Normal value for fresh water sediment				70,2	mg/kg	
Normal value for marine water sediment				7,02	mg/kg	
Normal value for water, intermittent release				190	mg/l	
Normal value of STP microorganisms				4168	mg/l	
Normal value for the terrestrial compartment				2,74	mg/kg	


Health - Derived no-effect level - DNEL / DMEL							
Route of exposure	Effects on consumers			Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local
Inhalation			VND	37,2 mg/m3			VND
Skin			VND	15 mg/kg/d			VND

SODIUM HYDROXIDE

Threshold Limit Value							
Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
TLV	BGR	2					
VLA	ESP	2					
VLEP	FRA	2					
TLV	GRC	2		2			

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GVI/KGVI		HRV		2					
WEL		GBR		2					
TLV-ACGIH		2 (C)							
Health - Derived no-effect level - DNEL / DMEL									
Route of exposure		Effects on consumers Acute local		Acute systemic		Chronic local		Chronic systemic	
Inhalation				1 mg/m3		VND		1 mg/m3 VND	
2-AMINOETHANOL									
Threshold Limit Value									
Type	Country	TWA/8h		STEL/15min		Remarks / Observations			
		mg/m3		ppm					
TLV	BGR	8		15					
MAK	DEU	0,51		0,2		0,51 0,2			
VLA	ESP	2,5		1		7,5 3 SKIN			
VLEP	FRA	2,5		1		7,6 3 SKIN			
TLV	GRC	2,5		1		7,6 3			
GVI/KGVI	HRV	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			
NDS/NDSch	POL	2,5				7,5 SKIN			
TLV	ROU	2,5		1		7,6 3 SKIN			
MV	SVN	2,5		1		7,5 3 SKIN			
WEL	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									
Normal value in fresh water				0,085		mg/l			
Normal value in marine water				0,0085		mg/l			
Normal value for fresh water sediment				0,425		mg/kg ss			
Normal value for marine water sediment				0,0425		mg/kg ss			
Normal value of STP microorganisms				100		mg/l			
Normal value for the terrestrial compartment				0,035		mg/kg ss			
Health - Derived no-effect level - DNEL / DMEL									
Route of exposure		Effects on consumers Acute local		Acute systemic		Chronic local		Chronic systemic	
Oral				VND		3,75 mg/kg/d			
Inhalation				2 mg/m3		VND		3,3 mg/m3 VND	
Skin				VND		0,24 mg/kg/d		VND 1 mg/kg/d	
3-METHOXY-3-METHYL-1-BUTANOL									
Predicted no-effect concentration - PNEC									
Normal value in fresh water				NPI					

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Normal value in marine water										NPI	
Normal value for fresh water sediment										NPI	
Normal value for marine water sediment										NPI	
Normal value for water, intermittent release										NPI	
Normal value of STP microorganisms										NPI	
Normal value for the food chain (secondary poisoning)										NPI	
Normal value for the terrestrial compartment										NPI	
Normal value for the atmosphere										NPI	
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		NPI		2,5 mg/kg bw/d							
Inhalation	NPI	NPI	NPI	4,4 mg/m3	NPI	NPI	NPI		18 mg/m3		
Skin	NPI	NPI	NPI	3,1 mg/kg bw/d	NPI	NPI	NPI		6,25 mg/kg bw/d		
TETRASODIUM N,N-BIS(CARBOXYMETHYL)-L-GLUTAMATE											
Predicted no-effect concentration - PNEC											
Normal value in fresh water				2		mg/l					
Normal value in marine water				0,2		mg/l					
Normal value for water, intermittent release				1		mg/l					
Normal value of STP microorganisms				41,2		mg/l					
Normal value for the food chain (secondary poisoning)				67		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				1,5 mg/kg bw/d							
Inhalation				1,8 mg/m3	55 mg/m3	55 mg/m3			7,3 mg/m3		
Skin				7500 mg/kg bw/d					15000 mg/kg bw/d		
N,N-DIMETHYL 9-DECENAMIDE											
Predicted no-effect concentration - PNEC											
Normal value in fresh water				0,028		mg/l					
Normal value in marine water				0,0028		mg/l					
Normal value for fresh water sediment				1,541		mg/kg					
Normal value for marine water sediment				0,1541		mg/kg					
Normal value for water, intermittent release				0,028		mg/l					
Normal value of STP microorganisms				2,12		mg/l					
Normal value for the terrestrial compartment				5,3		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				2,857 mg/kg bw/d							
Inhalation				10 mg/m3					40 mg/m3		



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Skin

2,857 mg/kg  
bw/d

5,71 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 ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

8.2. Exposure controls

The use of appropriate technical measures should always take priority over personal protection equipment. Provide a good level of general ventilation in the workplace (3 to 5 air changes per hour). The individual protection devices must bear the CE marking that certifies their compliance with the regulations in force.

Provide good general ventilation (ventilation obtained by opening doors and windows): 3-5 air / hour changes (dilution efficiency: 30%).

HAND PROTECTION

Protect your hands with category III work gloves (ref. Standard EN 374). For the final choice of material for work gloves, the following must be considered: compatibility, degradation, breakage time and permeation. Gloves have a wear time that depends on the duration and mode of use. Suitable gloves (protection factor 6, permeation time> 480 minutes): material (thickness, mm): polyvinyl chloride (PVC) (0.35 mm).

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).

RESPIRATORY PROTECTION

If the threshold value (eg TLV-TWA) of the substance or one or more of the substances present in the product is exceeded, it is advisable to wear a mask with type A filter combined with type P2 filter (ref. EN standard 14387).  
The use of respiratory protection means is necessary if the technical measures adopted are not sufficient to limit the worker exposure to the threshold values taken into consideration. The protection offered by the masks is however limited.


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	blue	Method:at sight
Odour	characteristic	Method:organoleptic
Odour threshold	not determined	
Melting point / freezing point	not determined	Reason for missing data:no test available
Initial boiling point	not determined	Reason for missing data:no test available
Flammability	not applicable	
Lower explosive limit	not determined	Reason for missing data:no test available
Upper explosive limit	not determined	Reason for missing data:no test available
Flash point	> 60 °C	
Auto-ignition temperature	not determined	Reason for missing data:no test available
Decomposition temperature	not determined	Reason for missing data:no test available

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pH	13-14	
Kinematic viscosity	not determined	Reason for missing data:no test available
Solubility	soluble in water	
Partition coefficient: n-octanol/water	not applicable	
Vapour pressure	0,037 kPa	Temperature: 1002 °C
Density and/or relative density	1,05 - 1,1	Temperature: 1002 °C
Relative vapour density	not determined	Reason for missing data:no test available
Particle characteristics	not applicable	
9.2. Other information		
No other information is available.		
9.2.1. Information with regard to physical hazard classes		
Information not available		
9.2.2. Other safety characteristics		
Evaporation rate	not determined	
VOC (Directive 2010/75/EU)	18,50 %	
VOC (volatile carbon)	9,88 %	
Explosive properties	not applicable	
Oxidising properties	Not applicable	
SECTION 10. Stability and reactivity		
10.1. Reactivity		
In contact with strong oxidizing agents, reducing agents, strong acids, exothermic reactions are possible.		
TETRASODIUM N,N-BIS(CARBOXYMETHYL)-L-GLUTAMATE		
Avoid contact with: strong oxidising agents.		
10.2. Chemical stability		
The product is stable under normal conditions of use and storage.		
TETRASODIUM N,N-BIS(CARBOXYMETHYL)-L-GLUTAMATE		
Stable in normal conditions of use and storage.		
10.3. Possibility of hazardous reactions		
See paragraph 10.1.		
SODIUM HYDROXIDE		
Reacts violently with: strong acids.Develops hydrogen on contact with: aluminium alloys,copper alloys,zinc alloys,light metals.		
2-AMINOETHANOL		

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Avoid contact with: acids,oxidising agents.		
<b>10.4. Conditions to avoid</b>		
See paragraph 10.1.		
SODIUM HYDROXIDE		
Avoid contact with: acids,aluminium,aluminium alloys,copper,copper alloys,zinc,zinc alloys.		
2-AMINOETHANOL		
Avoid contact with: acids,oxidising agents.		
<b>10.5. Incompatible materials</b>		
See paragraph 10.1.		
SODIUM HYDROXIDE		
Corrodes: aluminium,aluminium alloys,copper,copper alloys,zinc,zinc alloys.		
Compatible materials: polyethylene.polypropylene.PVC.		
Incompatible materials: aluminium.aluminium alloys.copper.copper alloys.zinc.zinc alloys.		
Avoid contact with: acids.		
2-AMINOETHANOL		
Incompatible materials: mild steel,copper,copper alloys.		
REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE		
Incompatible with: strong oxidising agents,strong reducing agents.		
3-METHOXY-3-METHYL-1-BUTANOL		
Incompatible with: oxidising agents.		
TETRASODIUM N,N-BIS(CARBOXYMETHYL)-L-GLUTAMATE		
Compatible materials: polyethylene.polypropylene,PVC.		
Incompatible materials: aluminium,aluminium alloys,copper alloys,zinc alloys,brass,zinc.		
Avoid contact with: strong oxidising agents.		
<b>10.6. Hazardous decomposition products</b>		
2-AMINOETHANOL		
In decomposition develops: carbon oxides,nitric oxide,nitrous gases.		

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REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE

When heated to decomposition releases: carbon oxides.

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 1272/2008

Metabolism, toxicokinetics, mechanism of action and other information

SODIUM HYDROXIDE  
In case of skin exposure at low concentrations of NaOH (non-irritating), the intake of the substance should be relatively limited due to the low absorption of ions. For this reason it is believed that the absorption of NaOH is limited in the case of normal handling and use. Under these conditions it is not expected that the absorption of hydroxyl ion, through exposure to NaOH, changes the pH of the blood. For this reason sodium hydroxide should not be available in the body systemically under conditions of normal handling and use (source: EU RAR, 2007, section 4.1.2.1, page 63).

Information on likely routes of exposure

Dermal, inhalation.

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


See the rest of this section.

SODIUM HYDROXIDE  
Acute effects: ingestion of this product is harmful. Even small amounts of product may cause serious health problems (stomach pain, nausea, sickness, diarrhoea).  
This product is corrosive and causes serious burns and vesicles on the skin, which can arise even after exposure. Burns are very stinging and painful. Upon contact with eyes, it may cause serious harm, such as cornea opacity, iris lesions, irreversible eye coloration. The vapors and/or powders are caustic for the respiratory system and may cause pulmonary edema, whose symptoms sometimes arise only after some hours. Exposure symptoms may include: sting, cough, asthma, laryngitis, respiratory disorders, headache, nausea and sickness. If swallowed, it may cause mouth, throat and oesophagus burns, sickness, diarrhoea, edema, larynx swelling and, consequently, asphyxia. Perforation of the gastro-intestinal tract is also possible.

Interactive effects

Information not available

ACUTE TOXICITY

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ATE (Inhalation - mists / powders) of the mixture: > 5 mg/l  
ATE (Inhalation - vapours) of the mixture: > 20 mg/l  
ATE (Inhalation - gas) of the mixture: 0,0 mg/l  
ATE (Oral) of the mixture: >2000 mg/kg  
ATE (Dermal) of the mixture: >2000 mg/kg

DIPROPYLENE GLYCOL MONOMETHYL ETHER

LD50 (Dermal): 9500 mg/kg rabbit  
LD50 (Oral): 5660 mg/kg rat

2-AMINOETHANOL

LD50 (Dermal): > 1025 mg/kg rabbit  
LD50 (Oral): > 1510 mg/kg rat

REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE

LD50 (Oral): > 300 mg/kg rat (OECD TG 423).

3-METHOXY-3-METHYL-1-BUTANOL

LD50 (Dermal): > 2000 mg/kg ratto  
LD50 (Oral): 4300 mg/kg ratto

TETRASODIUM N,N-BIS(CARBOXYMETHYL)-L-GLUTAMATE

LD50 (Dermal): > 2000 mg/kg rat, (OECD 402).  
LD50 (Oral): > 2000 mg/kg rat (EC B. 1).  
LC50 (Inhalation vapours): > 4,2 mg/l/4h rat (OECD 403).

N,N-DIMETHYL 9-DECENAMIDE

LD50 (Oral): 550 mg/kg rat

SODIUM HYDROXIDE

There are no reliable studies and no new studies have been generated according to the REACH Regulation as the substance is classified as corrosive. Furthermore, the substance should not be available at the systemic level and the effects are attributable to changes in pH.

2-AMINOETHANOL

LC50 (inhalation):> 1.3 mg / l / 6h (rat).


SKIN CORROSION / IRRITATION

Corrosive for the skin

Classification according to the experimental Ph value

DIPROPYLENE GLYCOL MONOMETHYL ETHER

Not irritating (rabbit, OECD method 404).

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SODIUM HYDROXIDE  
Corrosive (in vitro study, OECD method 435).

2-AMINOETHANOL  
Causes severe skin burns.

REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE  
Not classified as skin irritant (by analogy with similar substances, unpublished supplier internal reports).

3-METHOXY-3-METHYL-1-BUTANOL  
Slight skin irritation, rabbit.

N,N-DIMETHYL 9-DECENAMIDE  
Irritating to skin and mucous membranes (supplier data).

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

DIPROPYLENE GLYCOL MONOMETHYL ETHER  
Not irritating (J. Toxicol. Cutan. Ocul. Toxicol.2:229-242, 1984).


SODIUM HYDROXIDE  
Corrosive (Morgan et al., 1987; Reer et al., 1976, Wenworth et al., 1993).

2-AMINOETHANOL  
Causes serious eye damage.

REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE  
Risk of serious damage to eyes (by analogy with similar substances, internal reports of unpublished supplier).

3-METHOXY-3-METHYL-1-BUTANOL  
Eye irritation, rabbit.

N,N-DIMETHYL 9-DECENAMIDE  
Irritating to eyes (supplier data).

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RESPIRATORY OR SKIN SENSITISATION  
Does not meet the classification criteria for this hazard class

DIPROPYLENE GLYCOL MONOMETHYL ETHER  
No sensitizing effects.

REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE  
Skin sensitization (Guinea Pig Maximization Test, OECD method 406): non-sensitizing (by analogy with similar substances, unpublished supplier internal reports).

3-METHOXY-3-METHYL-1-BUTANOL  
No known sensitizing effects.

N,N-DIMETHYL 9-DECENAMIDE  
Not sensitizing to skin (supplier data).

Respiratory sensitization

Information not available

Skin sensitization


SODIUM HYDROXIDE  
Not sensitizing (species: human, Patch test. Exposure time: 24 hours, visual evaluation).

GERM CELL MUTAGENICITY  
Does not meet the classification criteria for this hazard class

DIPROPYLENE GLYCOL MONOMETHYL ETHER  
Gene mutation: negative (OECD method 476).

SODIUM HYDROXIDE  
The substance should not be available systemically in the body under normal conditions of use and handling for this reason the carrying out of further tests is considered useless (EU RAR, 22007, section 4.1.2.6, page 72).

2-AMINOETHANOL  
The classification criteria are not met (supplier data).

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REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE  
No data available.

3-METHOXY-3-METHYL-1-BUTANOL  
In vitro genetic toxicity (Bacterial Reverse Mutation Test, Ames test, OECD method 471): negative (on Salmonella typhimurium) with and without metabolic activation.

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

DIPROPYLENE GLYCOL MONOMETHYL ETHER  
No carcinogenic effect revealed (OECD method 453).

SODIUM HYDROXIDE  
No carcinogenic effects are expected for exposure to sodium hydroxide as the substance did not induce mutagenic effects in either in vitro or in vivo tests. Furthermore the substance should not be available systemically in the body under normal conditions of use and handling.

2-AMINOETHANOL  
The classification criteria are not met (supplier data).

REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE  
No data available.

N,N-DIMETHYL 9-DECENAMIDE  
Not classified as carcinogenic (supplier data).

REPRODUCTIVE TOXICITY


Does not meet the classification criteria for this hazard class

DIPROPYLENE GLYCOL MONOMETHYL ETHER  
Two-generation reproductivity test (OECD method 416):  
NOAEL F1 = 300 ppm (inhalation)  
NOAEL F2 = 1000 ppm (inhalation)

SODIUM HYDROXIDE  
It is not expected that the substance is present systematically in the body under normal conditions of manipulation and use.

2-AMINOETHANOL  
The substance did not cause malformations in animal experiments (supplier data).



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REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE

No data available.

3-METHOXY-3-METHYL-1-BUTANOL

Not toxic for reproduction.

Adverse effects on sexual function and fertility

SODIUM HYDROXIDE

Since sodium hydroxide should not be available systemically in the body under normal conditions of use and manipulation, it can be said that the substance can not reach the fetus nor the male and female reproductive organs. Specific studies to determine any toxic effects for development or reproduction are, therefore, deemed unnecessary (EU RAR, 2007, section 4.1.2.8, page 73).

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

DIPROPYLENE GLYCOL MONOMETHYL ETHER

On the basis of available data classification criteria are not met.

SODIUM HYDROXIDE

The substance is not classified as an intoxicant of a target organ, for single exposure.

2-AMINOETHANOL

It can irritate the respiratory tract.

REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE

The substance is not classified as toxic for target organs after single exposure.

Target organs

SODIUM HYDROXIDE


The substance is not classified as an intoxicant of a target organ, for repeated exposure.

2-AMINOETHANOL

Respiratory tract.

Route of exposure

2-AMINOETHANOL

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Inhalation.

**STOT - REPEATED EXPOSURE**  
Does not meet the classification criteria for this hazard class

**DIPROPYLENE GLYCOL MONOMETHYL ETHER**  
On the basis of avialable data classification criteria are not met.

**REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE**  
The substance is not classified as toxic for target organs after repeated exposure.

**3-METHOXY-3-METHYL-1-BUTANOL**  
NOAEL, rat, male: 60 mg / kg, oral, 28 days.  
NOAEL, rat, female: 250 mg / kg, oral, 28 days.

Target organs  
Information not available

Route of exposure  
Information not available

**ASPIRATION HAZARD**  
Does not meet the classification criteria for this hazard class

**DIPROPYLENE GLYCOL MONOMETHYL ETHER**  
On the basis of avialable data classification criteria are not met.

**REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE**  
No data available.

**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**


**SODIUM HYDROXIDE**  
The danger of the product in the environment is given by the hydroxyl ion (pH effect). For this reason, the effect on organisms depends on the buffer capacity of the aquatic or terrestrial ecosystem. The high water solubility and the low vapor pressure indicate that the product will mainly end up in an aquatic environment. The toxic effects on aquatic organisms are basically due to the pH variation of the medium (LC50 values between 33 and 189 mg / l).

**2-AMINOETHANOL**  
LC50 - for Fish > 349 mg/l/96h

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<div>EC50 - for Crustacea &gt; 27,04 mg/l/48h Daphnia magna (OECD 201, part 1 static).</div> <div>EC50 - for Algae / Aquatic Plants 2,8 mg/l/72h Selenastrum capricornutum (OECD 201).</div> <div>Chronic NOEC for Fish 1,2 mg/l Oryzias latipes (OECD 210).</div> <div>Chronic NOEC for Crustacea 0,85 mg/l Daphnia magna (OECD 211).</div> <div>Chronic NOEC for Algae / Aquatic Plants &gt; 2,5 mg/l</div> <div>SODIUM HYDROXIDE</div> <div>LC50 - for Fish 35 mg/l/96h Pesce</div> <div>EC50 - for Crustacea 40,4 mg/l/48h Ceriodaphnia dubia</div> <div>DIPROPYLENE GLYCOL MONOMETHYL ETHER</div> <div>LC50 - for Fish &gt; 10000 mg/l/96h Pesce</div> <div>EC50 - for Crustacea 1919 mg/l/48h Daphnia magna</div> <div>EC50 - for Algae / Aquatic Plants &gt; 969 mg/l/72h Alga</div> <div>REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE</div> <div>EC50 - for Crustacea &gt; 100 mg/l/48h Daphnia magna (Directive 67/548/EEC, Annex V, C.2).</div> <div>TETRASODIUM N,N-BIS(CARBOXYMETHYL)-L-GLUTAMATE</div> <div>LC50 - for Fish &gt; 100 mg/l/96h Rainbow trout</div> <div>EC50 - for Crustacea &gt; 100 mg/l/48h Daphnia magna</div> <div>EC50 - for Algae / Aquatic Plants &gt; 100 mg/l/72h</div> <div>3-METHOXY-3-METHYL-1-BUTANOL</div> <div>LC50 - for Fish &gt; 100 mg/l/96h Oryzias latipes</div> <div>EC50 - for Algae / Aquatic Plants &gt; 1000 mg/l/72h</div> <div>EC10 for Crustacea &gt; 1000 mg/l/48h</div> <div>Chronic NOEC for Crustacea 100 mg/l (OECD TG 209).</div> <div>N,N-DIMETHYL 9-DECENAMIDE</div> <div>LC50 - for Fish &gt; 7,5 mg/l/96h</div> <div>EC50 - for Crustacea 2,8 mg/l/48h Daphnia</div> <div>Chronic NOEC for Crustacea 0,28 mg/l Daphnia</div> <div>Chronic NOEC for Algae / Aquatic Plants 1,1 mg/l</div> <div>12.2. Persistence and degradability</div> <div>SODIUM HYDROXIDE Sodium hydroxide dissociates and dissolves completely in water and is therefore not persistent (EU RAR 2007, section 3.3.1.2, page 34). The methods for determining biodegradability do not apply to inorganic substances.</div> <div>REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE Aerobic biodegradability: completely biodegradable 64% - 28 days (OECD TG 301 B).</div> <div>2-AMINOETHANOL Rapidly degradable</div>		

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<div>DIPROPYLENE GLYCOL MONOMETHYL ETHER Rapidly degradable</div> <div>REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE Rapidly degradable</div> <div>TETRASODIUM N,N-BIS(CARBOXYMETHYL)-L-GLUTAMATE Rapidly degradable</div> <div>3-METHOXY-3-METHYL-1-BUTANOL Rapidly degradable</div> <div>N,N-DIMETHYL 9-DECENAMIDE Rapidly degradable</div> <div>12.3. Bioaccumulative potential</div> <div>SODIUM HYDROXIDE Sodium hydroxide does not show bioaccumulation (EU RAR 2007, section 3.3.1.2, page 34). REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE Partition coefficient n-octanol / water not applicable (surfactant). TETRASODIUM N,N-BIS(CARBOXYMETHYL)-L-GLUTAMATE No data available indicating a potential for bioaccumulation (logKow&lt;0).</div> <div>2-AMINOETHANOL Partition coefficient: n-octanol/water -2,3</div> <div>TETRASODIUM N,N-BIS(CARBOXYMETHYL)-L-GLUTAMATE Partition coefficient: n-octanol/water &lt; 0</div> <div>3-METHOXY-3-METHYL-1-BUTANOL Partition coefficient: n-octanol/water 0,18 @ 25 °C BCF 0,5</div> <div>N,N-DIMETHYL 9-DECENAMIDE Partition coefficient: n-octanol/water 3,17</div> <div>12.4. Mobility in soil</div> <div>REACTION PRODUCT OF TERPENE, OXIRANE AND METHYLOXIRANE Final destination of the product: water. TETRASODIUM N,N-BIS(CARBOXYMETHYL)-L-GLUTAMATE Very high.</div> <div>TETRASODIUM N,N-BIS(CARBOXYMETHYL)-L-GLUTAMATE Partition coefficient: soil/water &lt; 0</div> <div>12.5. Results of PBT and vPvB assessment</div> <div>On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.</div> <div>12.6. Endocrine disrupting properties</div> <div>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.</div> <div>12.7. Other adverse effects</div>		

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No other adverse effects are known.		
SECTION 13. Disposal considerations		
13.1. Waste treatment methods		
<p>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.</p> <p>Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.</p> <p>Waste transportation may be subject to ADR restrictions.</p> <p>CONTAMINATED PACKAGING</p> <p>Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.</p>		
<p>The EWC codes suggested below refer to the product intact and not subjected to manipulation and for its packaging when disposed of empty.</p> <p>20 01 29 * - detergents containing dangerous substances</p> <p>15 01 10 * - packaging containing residues of dangerous substances or contaminated by such substances</p> <p>HAZARDOUS CHARACTERISTICS FOR WASTE. With reference to Regulation (EU) no. 1357/2014, the characteristics of danger for the intact product are:</p> <p>HP8 Corrosive</p>		
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. (SODIUM HYDROXIDE; 2-AMINOETHANOL)		
IMDG: CAUSTIC ALKALI LIQUID, N.O.S. (SODIUM HYDROXIDE; 2-AMINOETHANOL)		
IATA: CAUSTIC ALKALI LIQUID, N.O.S. (SODIUM HYDROXIDE; 2-AMINOETHANOL)		
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: III		
14.5. Environmental hazards		
ADR / RID: NO		
IMDG: NO		
IATA: NO		

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14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 80	Limited Quantities: 5 L	Tunnel restriction code: (E)
	Special provision: -		
IMDG:	EMS: F-A, S-B	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 60 L	Packaging instructions: 856
	Pass.:	Maximum quantity: 5 L	Packaging instructions: 852
	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 1907/2006

Product Point	3
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Contained substance

Point	75
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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 ≥ than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

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

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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.

Regulation (EC) No. 648/2004

Ingredients according to Regulation (EC) No. 648/2004

The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

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 been performed for the following contained substances

SODIUM HYDROXIDE

2-AMINOETHANOL

3-METHOXY-3-METHYL-1-BUTANOL


N,N-DIMETHYL 9-DECENAMIDE

This safety data sheet contains one or more Exposure Scenarios in an integrated form. Contents have been included in sections 1.2, 8, 9, 12, 15 and 16 of this safety data sheet.

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
Acute Tox. 4	Acute toxicity, category 4
Skin Corr. 1A	Skin corrosion, category 1A
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
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

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H315

Causes skin irritation.

H335

May cause respiratory irritation.

H412

Harmful to aquatic life with long lasting effects.

Use descriptor system:

ERC	9a	Widespread use of functional fluid (indoor)
LCS	C	Consumer use
LCS	PW	Widespread use by professional workers
PC	35	Washing and cleaning products
PROC	9	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

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

- 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).

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)



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**DET&RINSE CASA**

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 / 02 / 03 / 09 / 10 / 11 / 12 / 15 / 16.