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Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 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:	PL4194
Product name	PERMING STEP 1

1.2. Relevant identified uses of the substance or mixture and uses advised against	
Intended use	Cosmetic preparation - Lotion for perm

Identified Uses	Industrial	Professional	Consumer
use only the product as a permanent waving hair lotion	-		-
Uses Advised Against			
Do not use anything other than the one indicated			

1.3. Details of the supplier of the safety data sheet	
Name	
Full address	
District and Country	
e-mail address of the competent person responsible for the Safety Data Sheet	

1.4. Emergency telephone number	
For urgent inquiries refer to	Matteo Zanotti Russo c/o Angel Consulting sas Piazza Duca degli Abruzzi 5/4 16167 Genova tel.3405180274 email: info@angelconsulting.it Centro antiveleni di Roma (CAV “ Osp. Pediatrico Bambino Gesù” Dip. Emergenza e Accettazione DEA, Piazza Sant’Onofrio 4, CAP 00165, resp Marco Marano, tel 06 68593726) Centro antiveleni di Foggia (Az. Osp. Univ. Foggia, V.le Luigi Pinto 1, CAP 71122, resp Anna Lepore, tel 800183459) Centro antiveleni di Napoli (Az. Osp. “A. Cardarelli”, Via A. Cardarelli 9, CAP 80131, resp Romolo Villani, tel 081-5453333) Centro antiveleni di Roma (CAV Policlinico “Umberto I”, V.le del Policlinico 155, CAP 00161, resp M. Caterina Grassi, tel 06-49978000)

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	Centro antiveleni di Roma (CAV Policlinico "A. Gemelli", Largo Agostino Gemelli 8, CAP 00168, resp Alessandro Barelli, tel 06-3054343) Centro antiveleni di Firenze (Az. Osp. "Careggi" U.O. Tossicologia Medica, Largo Brambilla 3, CAP 50134, resp Francesco Gambassi, tel 055-7947819) Centro antiveleni di Pavia (CAV Centro Nazionale di Informazione Tossicologica, Via Salvatore Maugeri 10, CAP 27100, tel 0382-24444) Centro antiveleni di Milano (Osp. Niguarda Ca' Granda, Piazza Ospedale Maggiore 3, CAP 20162, tel 02-66101029) Centro antiveleni di Bergamo (Azienda Ospedaliera Papa Giovanni XXII, Piazza OMS 1, CAP 24127, tel 800883300) Centro antiveleni di Verona (Azienda Ospedaliera Integrata Verona, Piazzale Aristide Stefani 1, CAP 37126, resp Giorgio Ricci, tel 800011858)
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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:

Serious eye damage, category 1	H318	Causes serious eye damage.
Skin irritation, category 2	H315	Causes skin irritation.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.

2.2. Label elements

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

Hazard pictograms:						
						

Signal words:	Danger
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Hazard statements:	
H318	Causes serious eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.

Precautionary statements:	
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P280	Wear protective gloves / eye protection / face protection.

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P310	Immediately call a POISON CENTER / doctor / . . .
P321	Specific treatment (see . . . on this label).
P362+P364	Take off contaminated clothing and wash it before reuse.
P272	Contaminated work clothing should not be allowed out of the workplace.
P261	Avoid breathing dust / fume / gas / mist / vapours / spray.
P264	Wash . . . thoroughly after handling.
Contains:	SODIUM HYDROXIDE
	CYSTEAMINE HCL
	PARFUM/FRAGRANCE

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

3.1. Substances

Information not relevant

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)	
CYSTEAMINE HCL			
INDEX -	$10 \leq x < 25$	Acute Tox. 4 H302, Eye Irrit. 2 H319, STOT SE 3 H335, Skin Sens. 1 H317	
EC 205-858-1		LD50 Oral: 1352 mg/kg	
CAS 156-57-0			
REACH Reg. 01-2120771568-40-0000			
CETEARYL ALCOHOL			
INDEX -	$5 \leq x < 10$	Aquatic Chronic 3 H412	
EC 204-017-6			
CAS 112-92-5			
REACH Reg. 01-2119485907-20-0000			
SODIUM HYDROXIDE			
INDEX 011-002-00-6	$1 \leq x < 5$	Met. Corr. 1 H290, Skin Corr. 1A H314, Eye Dam. 1 H318	
EC 215-185-5			
CAS 1310-73-2			
PARFUM/FRAGRANCE			
INDEX	$0,1 \leq x < 1$	Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 2 H411	

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EC			
CAS -			

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

SECTION 4. First aid measures

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 not available

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

If there are no contraindications, spray powder with water to prevent the formation of dust.

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

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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 and place it in containers for recovery or disposal. If there are no contraindications, use jets of water to eliminate product residues.

Make sure the leakage site is well aired. Evaluate the compatibility of the container to be used, by checking section 10. 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 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.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

	TLV-ACGIH	ACGIH 2022
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CETEARYL ALCOHOL

Predicted no-effect concentration - PNEC								
Normal value in fresh water		0,00156		mg/l				
Normal value in marine water		0,000156		mg/l				
Normal value for fresh water sediment		16		mg/kg				
Normal value for marine water sediment		1,6		mg/kg				
Normal value for the terrestrial compartment		13		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				75 mg/kg		75 mg/kg		
Inhalation		65 mg/m3		65 mg/m3		220 mg/m3		220 mg/m3
Skin		75 mg/kg		75 mg/kg		125 mg/kg		125 mg/kg

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SODIUM HYDROXIDE							
Threshold Limit Value							
Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
TLV-ACGIH				2			

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

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.

The following should be considered when choosing work glove material (see standard EN 374): 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 II 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 airtight protective goggles (see standard EN 166).

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	crema/ pasta	
Colour	bianco white	

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Odour	characteristic	
Melting point / freezing point	not available	
Initial boiling point	not available	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	not available	
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	9,58	
Kinematic viscosity	not available	
Dynamic viscosity	62 500 mPa.s SPINDLE# T-F 12rpm	
Solubility	not available	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	1,000 - 1,050 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

Information not available

SECTION 10. Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

The powders are potentially explosive when mixed with air.

10.4. Conditions to avoid

Avoid environmental dust build-up.

10.5. Incompatible materials

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Information not available

10.6. Hazardous decomposition products

Information not available

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

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:	>2000 mg/kg
ATE (Dermal) of the mixture:	Not classified (no significant component)

CYSTEAMINE HCL

LD50 (Oral):	1352 mg/kg TOPO
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CETEARYL ALCOHOL

LD50 (Dermal):	> 5000 mg/kg CONIGLIO
LD50 (Oral):	> 2000 mg/kg RATTO

PARAFFINUM LIQUIDUM

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LD50 (Dermal):	> 2000 mg/m3 CONIGLIO
LD50 (Oral):	> 5000 mg/m3 RATTO
LC50 (Inhalation vapours):	> 5000 mg/m3 RATTO - AEROSOL

SODIUM HYDROXIDE

LD50 (Dermal):	1350 mg/kg ratto
LD50 (Oral):	1350 mg/kg ratto

PROPYLENE GLYCOL

LD50 (Dermal):	> 2000 mg/kg RATTO
LD50 (Oral):	22000 mg/kg RATTO

GLYCERIN

LD50 (Oral):	18300 mg/kg ratto
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SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

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

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

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STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

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

CYSTEAMINE HCL		
EC50 - for Crustacea		2,75 mg/l/48h DAPHNIA MAGNA
EC50 - for Algae / Aquatic Plants		19,7 mg/l/72h PSEUDOKIRCHNERIELLA SUBCAPITATA

GLYCERIN		
LC50 - for Fish		54 g/l oncorhynchus mykiss

SODIUM HYDROXIDE		
LC50 - for Fish		> 72 mg/l gambusia affinis

PROPYLENE GLYCOL		
LC50 - for Fish		40163 mg/l/96h ONCORHYNCHUS MYKISS
EC50 - for Crustacea		18340 mg/l/48h CERIODAPHNIA DUBIA

PARAFFINUM LIQUIDUM		
EC50 - for Crustacea		100 mg/l/48h DAPHNIA MAGNA
EC50 - for Algae / Aquatic Plants		100 mg/l/72h PSEUDOKIRCHNERIELLA SUBCAPITATA

12.2. Persistence and degradability

CYSTEAMINE HCL		
Rapidly degradable		
PROPYLENE GLYCOL		
Rapidly degradable		
PARAFFINUM LIQUIDUM		
Rapidly degradable		
CETEARYL ALCOHOL		
Rapidly degradable		

12.3. Bioaccumulative potential

Information not available

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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.

CONTAMINATED PACKAGING

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

SECTION 14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1. UN number or ID number

not applicable

14.2. UN proper shipping name

not applicable

14.3. Transport hazard class(es)

not applicable

14.4. Packing group

not applicable

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14.5. Environmental hazards

not applicable

14.6. Special precautions for user

not applicable

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 $\geq$ 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

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.

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15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

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	
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. 1	Skin sensitization, category 1	
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2	
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3	
H290	May be corrosive to metals.	
H302	Harmful if swallowed.	
H314	Causes severe skin burns and eye damage.	
H318	Causes serious eye damage.	
H319	Causes serious eye irritation.	
H315	Causes skin irritation.	
H335	May cause respiratory irritation.	
H317	May cause an allergic skin reaction.	
H411	Toxic to aquatic life with long lasting effects.	
H412	Harmful to aquatic life with long lasting effects.	

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

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- 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)
 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)
 22. Delegated Regulation (UE) 2022/692 (XVIII 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.