

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: 0007708
Product name: PULI FORNO
Chemical name and synonym: PULI FORNO

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

Sector of use: SU22 – Professional use SU21 – Consumer uses

Category of product: PC35 - Washing and cleaning products (including solvent based products)

Description/Use: Strong alkaline gel cleaner

1.3. Details of the supplier of the safety data sheet

Name: MARBEC S.R.L.
Full address: VIA CROCE ROSSA 5/i
District and Country: 51037 MONTALE (PISTOIA)
ITALIA
Tel. +039 0573/959848
Fax:

e-mail address of the competent person

responsible for the Safety Data Sheet

Supplier: info@marbec.it

1.4. Emergency telephone number

For urgent inquiries refer to

MARBEC srl
+390573959848 h8.30-13 h14-18 o +393348578502
Numero Telephone number of Poison Control Centers active 24 hours a day

IRCSS Fondazione Maugeri –
Pavia 0039-0382-24444
CAV Ospedali Riuniti –
Bergamo 0039-800-883300
CAV Ospedale Niguarda Ca` Granda –
Milano 0039-02-66101029
CAV Ospedale Careggi- Firenze 0039-055-7947819
CAV Policlinico Gemelli –
Roma 0039-06-3054343
CAV Policlinico Umberto I –
Roma 0039-06 49978000
CAV Ospedale Cardarelli –
Napoli 0039-081 5453333
CAV Azienda Ospedaliera Integrata Verona - Verona 800011858

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.

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:

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.

P301+P310

IF SWALLOWED: Immediately call a POISON CENTER / doctor / . . .

Contains:

SODIUM HYDROXIDE

Ingredients compliant with Regulation (EC) No. 648/2004

Sodium hydroxide, non-ionic surfactants <5%

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)
SODIUM HYDROXIDE		
CAS 1310-73-2	$9 \leq x < 12$	Met. Corr. 1 H290, Skin Corr. 1A H314, Eye Dam. 1 H318
EC 215-185-5		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 011-002-00-6		
REACH Reg. 01-2119457892-27-xxxx		
decyl glucoside		
CAS 68515-73-1	$1 \leq x < 3$	Eye Dam. 1 H318
EC		
INDEX -		
REACH Reg. 01-2119488530-36		

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

Choose the most appropriate extinguishing equipment for the specific case.

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

The product is neither flammable nor combustible.

5.3. Advice for firefighters

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 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):

12

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

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
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
	TLV-ACGIH	ACGIH 2021

SODIUM HYDROXIDE								
Threshold Limit Value								
Type	Country	TWA/8h		STEL/15min		Remarks / Observations		
		mg/m3	ppm	mg/m3	ppm			
VLA	ESP			2				
VLEP	FRA	2						
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			1 mg/m3	1 mg/m3

decyl glucoside		
Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,1	mg/l
Normal value in marine water	0,01	mg/l
Normal value for fresh water sediment	0,487	mg/kg
Normal value for water, intermittent release	0,27	mg/l
Normal value of STP microorganisms	560	mg/l
Normal value for the terrestrial compartment	0,654	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				35,7 mg/kg/d				
Inhalation				124 mg/m3				420 mg/m3
Skin				357000 mg/kg/d				595000 mg/kg/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 Directive 89/686 / EEC and EN 374 standard) such as PVA, butyl, fluoroelastomer or equivalent.

-Material: butyl rubber, PVC, polychloroprene with natural latex coating, material thickness: 0.5 mm, penetration time:> 480 min.

- Material: nitrile rubber, fluorinated rubber, material thickness: 0.35-0.4 mm, penetration time:> 480 min.

Remarks: for the final choice of the work glove material, consideration must be given to: compatibility, degradation, breakage time and permeation.

In the case of preparations, the resistance of work gloves to chemical agents must be checked before use as unpredictable. The gloves have a wear time that depends on the duration and the mode of use.

SKIN PROTECTION

Wear category III professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

The creams / barrier are not suitable for skin protection.

EYE PROTECTION

Wear a hood visor or protective visor combined with airtight 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	gelatinous liquid	
Colour	yellowish	
Odour	characteristic	
Melting point / freezing point	Not applicable	
Initial boiling point	117 °C	
Boiling range	117-147 °C	
Flammability	incombustible	

Lower explosive limit	Not applicable
Upper explosive limit	Not applicable
Flash point	> 90 °C
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable
pH	14
Kinematic viscosity	Not available
Solubility	partially soluble in water
Partition coefficient: n-octanol/water	Not available
Vapour pressure	Not available
Density and/or relative density	1,09
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

Explosive properties	non-explosive
Oxidising properties	non-oxidizing

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

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

10.4. Conditions to avoid

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

10.5. Incompatible materials

SODIUM HYDROXIDE

Incompatible with: strong acids, ammonia, zinc, lead, aluminium, water, flammable liquids.

10.6. Hazardous decomposition products

Information not available

SECTION 11. Toxicological information**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:

Not classified (no significant component)

ATE (Dermal) of the mixture:

Not classified (no significant component)

SODIUM HYDROXIDE

LD50 (Dermal):

1350 mg/kg Rat

LD50 (Oral):

1350 mg/kg Rat

decyl glucoside

LD50 (Dermal):

> 2000 mg/kg ratto

LD50 (Oral):

> 2000 mg/kg ratto

SKIN CORROSION / IRRITATION

Corrosive for the skin

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 organs

Information not available

Route of exposure

Information not available

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

Target organs

Information not available

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**12.1. Toxicity**

Information not available

12.2. Persistence and degradability

SODIUM HYDROXIDE

Solubility in water > 10000 mg/l

Degradability: information not available

decyl glucoside

Rapidly degradable

12.3. Bioaccumulative potential

Information not available

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, UN 1824
IATA:

14.2. Official UN transport designation

ADR/RID: SODIUM HYDROXIDE IN SOLUTION
IMDG: SODIUM HYDROXIDE SOLUTION
IATA: SODIUM HYDROXIDE SOLUTION

14.3. Transport hazard classes

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

**14.4. Packaging group**

ADR / RID, IMDG, II
IATA:

14.5. Hazards to the environment

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

14.6. Special precautions for users

ADR/RID: HIN - Kemler: 80
Special Provision:-

Limited
Quantities: 1
L

Restriction
code in the
gallery: (E)

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. Bulk shipping in accordance with IMO acts

Information not applicable

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

Contained substance
Point 75

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

15.2. Chemical safety assessment

A chemical safety assessment has 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
Skin Corr. 1A	Skin corrosion, category 1A
Eye Dam. 1	Serious eye damage, category 1
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

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)
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 / 11 / 12 / 15 / 16.

MARBEC SRL	Revision no. 6
	Revision date 03/02/2022
0035115 – PULI FUMO	Printed on 03/02/2022
	Page no. 1/ 16
	Supersedes Revision:5 (Revision Date: 27/10/2020)

Safety Data Sheet

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

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

1.1. Product identifier

Code: 0035115
Name: PULI FUMO
Chemical name and synonyms: PULI FUMO

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

Sector of use: SU22 – Professional uses SU21 – Consumer uses
Product category: PC35 – Washing and cleaning products (including solvent based products)
Description/Usage: alkaline cleaner and degreaser

1.3. Details of the supplier of the safety data sheet

Business name: MARBEC SRL
Address: VIA CROCE ROSSA 5/i
Location and State: 51037 MONTALE (PISTOIA)
ITALY
tel. +039 0573/959848
fax:

e-mail of the competent person,
responsible for the safety data sheet: info@marbec.it

1.4. Emergency telephone number

For urgent inquiries please contact

MARBEC srl
0573959848 h8.30-13 h14-18 or 3357267921
Telephone number of Poison Control Centers active 24/24 hours
IRCSS Maugeri Foundation –
Pavia 0039-0382-24444
CAV Ospedali Riuniti –
Bergamo 0039-800-883300
CAV Niguarda Ca` Granda Hospital –
Milan 0039-02-66101029
CAV Careggi Hospital - Florence 0039-055-7947819
CAV Gemelli Polyclinic –
Rome 0039-06-3054343
CAV Umberto I Polyclinic –
Rome 0039-06 49978000
CAV Cardarelli Hospital –
Naples 0039-081 5453333
CAV Integrated Hospital Verona - Verona 800011858

SECTION 2. Hazards identification

2.1. Substance or mixture classification

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 indications:

Skin corrosion, category 1A
Serious eye damage, category 1

H314
H318

Causes severe skin burns and eye damage.
Causes serious eye damage.

2.2. Label elements

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

Hazard pictograms:

Warnings: Danger

Indications of danger:

H314 Causes severe skin burns and eye damage.

Precautionary statements:

P260 Do not breathe dust / fume / gas / mist / vapours / spray.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P280 Wear protective gloves/ protective clothing / eye protection / face protection.
P310 Immediately call a POISON CENTER / doctor / . . .
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Contains: Potassium hydroxide
Sodium metasilicate pentahydrate

Ingredients compliant with Regulation (EC) No. 648/2004

Anionic surfactants <5%

2.3. Other dangers

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 1272/2008 (CLP)****SODIUM METASILICATE****PENTAHYDRATE**

CAS 10213-79-3

 $3 \leq x < 5$

Met. Corr. 1 H290, Skin Corr. 1B H314, Eye Dam. 1 H318, STOT SE 3 H335

EC 229-912-9

INDEX -

REACH Reg. 012119449811-37

SODIUM CARBONATE

CAS 497-19-8

 $1 \leq x < 3$

Eye Irrit. 2H319

CE 207-838-8

INDEX 011-005-00-2

REACH Reg. 01-2119485498-19

POTASSIUM HYDROXIDE

CAS 1310-58-3

 $1 \leq x < 2$

Met. Corr. 1 H290, Acute Tox. 4 H302, Skin Corr. 1A H314, Eye Dam. 1 H318

CE 215-181-3

Skin Corr. 1B H314: $\geq 2\%$, Skin Irrit. 2 H315: $\geq 0.5\%$, Eye Dam. 1 H318: $\geq 2\%$, Eye Irrit. 2H319: $\geq 0.5\%$

INDEX 019-002-00-8

Oral LD50: 333

REACH Reg. 01-2119487136-33-

xxxx

decyl glucoside

CAS 68515-73-1

 $1 \leq x < 3$

Eye Dam. 1 H318

THERE IS

INDEX -

REACH Reg. 01-2119488530-36

The complete text of the danger indications (H) is given in section 16 of the sheet.

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove any contact lenses. Wash immediately and abundantly with water for at least 30/60 minutes, opening the eyelids wide. Consult a doctor immediately.

SKIN: Take off all contaminated clothing. Take a shower immediately. Consult a doctor immediately.

INGESTION: Drink as much water as possible. Consult a doctor immediately. Do not induce vomiting unless specifically authorized by your doctor.

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

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

No specific information on symptoms and effects caused by the product is known.

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

Information not available

SECTION 5. Fire fighting measures**5.1. Fire fighting****SUITABLE EXTINGUISHING MEANS**

Choose the most appropriate extinguishing media for the specific situation.

UNSUITABLE EXTINGUISHING MEANS

No one in particular.

5.2. Special hazards arising from the substance or mixture**HAZARDS DUE TO EXPOSURE IN THE EVENT OF FIRE**

The product is not flammable or combustible.

5.3. Recommendations for firefighters**EQUIPMENT**

Normal fire fighting clothing, such as an open circuit compressed air breathing apparatus (EN 137), flame retardant suit (EN469), flame retardant gloves (EN 659) and firefighter boots (HO A29 or A30).

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

Stop the leak if there is no danger.

Wearing of suitable protective equipment (including personal protective equipment referred to in section 8 of the safety data sheet) to prevent contamination of skin, eyes and personal clothing. These indications are valid both for those involved in the work and for emergency interventions.

6.2. Environmental precautions

Prevent the product from entering sewers, surface waters and groundwater.

6.3. Methods and materials for containment and cleaning up

Suck the spilled product into a suitable container. Assess the compatibility of the container to be used with the product, checking section 10. Absorb the remainder with inert absorbent material.

Provide sufficient ventilation of the place affected by the leak. Disposal of contaminated material must be carried out in accordance with the provisions of point 13.

6.4. Reference to other sections

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

SECTION 7. Handling and storage

MARBEC SRL	Revision no. 6
0035115 – PULI FUMO	Revision date 03/02/2022
	Printed on 03/02/2022
	Page no. 5_ 16
	Supersedes Revision:5 (Revision Date: 27/10/2020)

7.1. Precautions for Safe Handling

Ensure an adequate earthing system for plants and people. Avoid contact with eyes and skin. Do not inhale any dusts or vapors or mists. Do not eat, drink or smoke during use. Wash hands after use. Avoid dispersion of the product in the environment.

7.2. Conditions for safe storage, including any incompatibilities

Keep only in the original container. Keep in a ventilated place, away from sources of ignition. Keep containers hermetically sealed. Keep product in clearly labeled containers. Avoid overheating. Avoid violent shocks. Store containers away from any incompatible materials, checking section 10.

Storage class TRGS 510 (Germany):
12

7.3. Particular end uses

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Normative requirements:

ESP	Spain	Professional exhibition limits for chemical agents in Spain 2021
BETWEEN	France	Values limiters of professional exposure to chemical agents in France. ED 984 - INRS
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
	TLV-ACGIH	ACGIH 2021

SODIUM METASILICATE PENTAHYDRATE

Predicted no-effect concentration for the environment - PNEC

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

Health - Derived no-effect level - DNEL / DMEL

Exposure route	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0.74 mg/kg bw/d				
Inhalation				1.55mg/m3				6.22mg/m3
Dermal				0.74 mg/kg bw/d				1.49 mg/kg bw/d

SODIUM CARBONATE

Health - Derived no-effect level - DNEL / DMEL

Exposure route	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation			10mg/m3				10mg/m3	

MARBEC SRL	Revision no. 6
	Revision date 03/02/2022
0035115 – PULI FUMO	Printed on 03/02/2022
	Page no. 6_ 16
	Supersedes Revision:5 (Revision Date: 27/10/2020)

POTASSIUM HYDROXIDE

Threshold limit value

Guy	State	TWA/8h	STEL/15min	Notes / Observations
		mg/m3	ppm	
VLA extension	ESP	1	4	BREATHE
VLEP extension	BETWEEN		2	
WEL	GBR		2	
TLV-ACGIH			2 (C)	

Health - Derived no-effect level - DNEL / DMEL

Exposure route	Effects on consumers	Acute systemic	Chronic premises	Chronic systemic	Effects on workers	Sharp rooms	Acute systemic	Chronic premises	Chronic systemic
Inhalation			1mg/m3					1mg/m3	

decyl glucoside

Predicted no-effect concentration for the environment - PNEC

Reference value in fresh water	0.1	mg/l
Reference value in sea water	0.01	mg/l
Reference value for sediments in fresh water	0.487	mg/kg
Reference value for water, intermittent release	0.27	mg/l
Reference value for STP microorganisms	560	mg/l
Reference value for the terrestrial compartment	0.654	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Exposure route	Effects on consumers	Acute local	Acute systemic	Chronic local	Chronic systemic	Effects on workers	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral					35.7 mg/kg/d					
Inhalation					124 mg/m3					420 mg/m3
Dermal					357000 mg/kg/d					595000 mg/kg/d

Legend:

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

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

8.2. Exposure controls

Considering that the use of adequate technical measures should always take priority over personal protective equipment, ensure good ventilation in the workplace through effective local aspiration.

When selecting personal protective equipment, seek advice from your chemical suppliers if necessary.

Personal protective equipment must bear the CE marking which certifies their compliance with current standards.

Provide for an emergency shower with a visor basin.

HAND PROTECTION

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

For the final choice of work glove material, the following must be considered: compatibility, degradation, breakthrough time and permeation.

In the case of preparations, the resistance of work gloves to chemical agents must be checked before use as it cannot be foreseen. The gloves have a

MARBEC SRL	Revision no. 6
	Revision date 03/02/2022
0035115 – PULI FUMO	Printed on 03/02/2022
	Page no. 7_ 16
	Supersedes Revision:5 (Revision Date: 27/10/2020)

wear time that depends on the duration and method of use.

SKIN PROTECTION

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

EYE PROTECTION

It is advisable to wear a hooded visor or protective visor combined with airtight goggles (ref. standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) of the substance or one or more of the substances present in the product is exceeded, it is advisable to wear a mask with type A filter whose class (1, 2 or 3) must be chosen in relation to the limit concentration for use. (ref. standard EN 14387). If gases or vapors of a different nature and/or gases or vapors with particles (aerosols, fumes, mists, etc.) are present, it is necessary to provide combined type filters. The use of respiratory protection means is necessary if the technical measures adopted are not sufficient to limit the worker's exposure to the threshold values taken into consideration. However, the protection offered by masks is limited. In the event that the substance in question is odorless or its olfactory threshold is higher than the relevant TLV-TWA and in case of emergency, wear an open-circuit compressed air respirator (ref. standard EN 137) or a plug-in respirator external air (ref. standard EN 138). For the correct choice of respiratory protection device, refer to the EN 529 standard.

ENVIRONMENTAL EXPOSURE CONTROLS

Emissions from production processes, including those from ventilation equipment, should be controlled for compliance with environmental protection legislation.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Property	Value	Information
Physical state	liquid	
Color	straw yellow	
Odor	characteristic	
Melting or freezing point	Not available	
Initial boiling point	Not available	
Flammability	incombustible	
Lower explosive limit	Not applicable	
Upper explosive limit	Not applicable	
Flash point	> 90°C	
Self-ignition temperature	Not applicable	
pH	14	
Kinematic viscosity	Not available	
Solubility	soluble in water	
Partition coefficient: n-octanol/water	Not available	
Vapor pressure	Not available	
Density and/or Relative Density	1.06	
Relative vapor density	Not available	
Particle characteristics	Not applicable	

9.2. More info

9.2.1. Information relating to classes of physical hazards

Information not available

9.2.2. Other security features

VOC (Directive 2010/75/CE) : 0 gr/lt

Explosive properties not explosive

Oxidizing properties non-oxidant

SECTION 10. Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

Under normal conditions of use and storage, dangerous reactions are not foreseeable.

10.4. Conditions to avoid

None in particular. However, follow the usual precautions for chemical products.

10.5. Incompatible materials

Information not available

10.6. Hazardous decomposition products

Information not available

SECTION 11. Toxicological information

11.1. Information on the hazard classes defined in Regulation (EC) no. 1272/2008

Metabolism, kinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

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

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:	Not classified (no relevant component)
ATE (Oral) of the mix:	>2000mg/kg
ATE (Dermal) of the mixture:	Not classified (no relevant component)

SODIUM METASILICATE PENTAHYDRATE

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

SODIUM CARBONATE

LD50 (Dermal):	> 2000 mg/kg rabbit
LD50 (Oral):	2800 mg/kg rat
LC50 (Inhalation of mists/dust):	2300 mg/l/2h Rat

POTASSIUM HYDROXIDE

LD50 (Oral):	333 mg/kg Rat
--------------	---------------

decyl glucoside

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

SKIN CORROSION / SKIN IRRITATION

Corrosive for the skin

SERIOUS EYE DAMAGE / EYE IRRITATION

Causes serious eye damage

RESPIRATORY OR SKIN SENSITIZATION

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

Harmful effects on offspring development

Information not available

Effects on or through breastfeeding

Information not available

SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

Target organs

Information not available

Route of exposure

Information not available

SPECIFIC TARGET ORGAN TOXICITY (STOT) - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

Target organs

Information not available

Route of exposure

Information not available

DANGER IN CASE OF ASPIRATION

Does not meet the classification criteria for this hazard class

11.2. Information about 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 effects on human health under evaluation.

SECTION 12. Ecological information**12.1. Toxicity**

SODIUM CARBONATE

LC50 - Fish

300 mg/l/96h *lepomis macrochirus*

EC50 - Crustaceans

200 mg/l/48h *daphnia magna*

SODIUM METASILICATE PENTAHYDRATE

LC50 - Fish

210 mg/l/96h *brachydanio rerio*

EC50 - Crustaceans

1700 mg/l/48h *daphnia magna***12.2. Persistence and degradability**

SODIUM METASILICATE PENTAHYDRATE

Inorganic. Soluble silicates depolymerize rapidly when diluted, producing molecular species that are indistinguishable from natural silica.

SODIUM CARBONATE

Solubility in water

1000 - 10000 mg/l

Degradability: data not available

POTASSIUM HYDROXIDE

Solubility in water

> 10000 mg/l

Degradability: data not available

decyl glucoside

Quickly degradable

12.3. Bioaccumulative potential

SODIUM METASILICATE PENTAHYDRATE

Inorganic. The substance has no bioaccumulation potential.

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

Based on available data, the product does not contain PBT or vPvB substances in a percentage $\geq 0.1\%$.

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 effects on the environment being evaluated.

12.7. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse if possible. Product residues are to be considered special hazardous waste. The dangerousness of the waste which partially contains this product must be evaluated on the basis of the legislative provisions in force.

Disposal must be entrusted to an authorized waste management company, in compliance with national and possibly local legislation.

Transportation of waste may be subject to ADR.

CONTAMINATED PACKAGING

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

SECTION 14. Transportation Information

14.1. UN number or ID number

ADR / RID, IMDG, 3266
IATA:

14.2. UN proper shipping name

ADR / RID: CORROSIVE LIQUID, BASIC, INORGANIC, NOS (potassium hydroxide, sodium metasilicate)
IMDG: CORROSIVE LIQUID, BASIC, INORGANIC, NOS (potassium hydroxide, sodium metasilicate)
IATA: CORROSIVE LIQUID, BASIC, INORGANIC, NOS (potassium hydroxide, sodium metasilicate)

14.3. Transport hazard classes

ADR / RID: Class: 8 Tag: 8

IMDG: Class: 8 Tag: 8

IATA: Class: 8 Tag: 8



14.4. Packing group

ADR / RID, IMDG, III
IATA:

14.5. Dangers for the environment

ADR / RID: NO
IMDG: NO
IATA: NO

14.6. Special precautions for user

MARBEC SRL	Revision no. 6 Revision date 03/02/2022
0035115 – PULI FUMO	Printed on 03/02/2022 Page no. 14_16 Supersedes Revision:5 (Revision Date: 27/10/2020)

ADR / RID:	HIN-Kemler: 80	Limited quantities: 5 L	Tunnel restriction code: (E)
IMDG:	Special provision: 274 EMS:FA,SB	Limited quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 60 L	Packing instructions: 856
	Pass.:	Maximum quantity: 5L	Packaging instructions: 852
	Special Arrangement:	A3, A803	

14.7. Shipping in bulk in accordance with IMO acts

Information not relevant

SECTION 15. Regulatory Information

15.1. Safety, health and environmental laws and regulations specific to the substance or mixture

Seveso category - Directive 2012/18/EU: None

Restrictions relating to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006

Product
Point 3

Substances contained
Point 75

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

Not applicable

Substances in Candidate List (Art. 59 REACH)

Based on the data available, the product does not contain SVHC substances in a percentage $\geq 0.1\%$.

Substances subject to authorization (Annex XIV REACH)

None

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

None

Substances subject to the Rotterdam Convention:

None

MARBEC SRL	Revision no. 6
	Revision date 03/02/2022
0035115 – PULI FUMO	Printed on 03/02/2022
	Page no. 15_16
	Supersedes Revision:5 (Revision Date: 27/10/2020)

Substances subject to the Stockholm Convention:

None

Sanitary checks

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

15.2. Chemical safety assessment

A chemical safety assessment has been prepared for the following substances contained in the mixture:
Potassium hydroxide, Sodium metasilicate pentahydrate, Sodium carbonate.

SECTION 16. Other information

Text of the danger indications (H) mentioned in sections 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
STOT IF 3	Specific target organ toxicity - single exposure, 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.
H335	May cause respiratory irritation.

LEGEND:

- ADR: European agreement for the carriage of dangerous goods by road
- CAS: Chemical Abstract Service Number
- CE: Identification number in ESIS (European Archive of Existing Substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EC50: Concentration that affects 50% of the population tested
- EmS: Emergency Schedule
- GHS: Globally Harmonized System for the classification and labeling of chemicals
- IATA DGR: Regulations for the transport of dangerous goods of the International Air Transport Association
- IC50: Concentration of immobilisation of 50% of the test population
- IMDG: International Maritime Code for the transport of dangerous goods
- IMO: International Maritime Organization
- INDEX: Identification number in Annex VI of the CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Level of occupational exposure
- PBT: Persistent, bioaccumulating and toxic according to REACH
- PEC: Predictable environmental concentration
- PEL: Predictable level of exposure
- PNEC: Predicted No Effect Concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation for the international transport of dangerous goods by train
- STA: Acute Toxicity Estimate

MARBEC SRL	Revision no. 6
	Revision date 03/02/2022
0035115 – PULI FUMO	Printed on 03/02/2022
	Page no. 16_ 16
	Supersedes Revision:5 (Revision Date: 27/10/2020)

- TLV: Threshold Limit Value
- TLV CEILING: Concentration that must not be exceeded during any moment of occupational exposure.
- TWA: Weighted Average Exposure Limit
- TWA STEL: Short Term Exposure Limit
- VOC: Volatile organic compound
- vPvB: Very persistent and very bioaccumulating according to REACH
- WGK: Aquatic hazard class (Germany).

GENERAL BIBLIOGRAPHY:

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

Note for the user:

The information contained in this sheet is based on the knowledge available to us on the date of the last version. The user must ensure the suitability and completeness of the information in relation to the specific use of the product.

This document should not be interpreted as a guarantee of any specific property of the product.

Since the use of the product does not fall under our direct control, it is the user's obligation to observe the laws and regulations in force regarding hygiene and safety under his own responsibility. No responsibility is assumed for improper use.

Provide adequate training to personnel involved in the use of chemical products.

CLASSIFICATION CALCULATION METHODS

Physical and chemical hazards: The classification of the product has been derived from the criteria established by the CLP Regulation Annex I Part 2. The methods of evaluation of the physical and chemical properties are reported in section 9.

Health hazards: The classification of the product is based on the calculation methods in Annex I of CLP Part 3, unless otherwise indicated in section 11.

Environmental hazards: The classification of the product is based on the calculation methods in Annex I of CLP Part 4, unless otherwise indicated in section 12.

Changes from the previous revision

Changes have been made to the following sections:

01 / 02 / 03 / 09 / 11 / 12 / 14 / 15 / 16.