

# 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:  
Product name  
Chemical name and synonym

YCH0003  
POWERFUL  
POWERFUL

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

Intended use                      Alkaline cleaner

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

Name  
Full address  
District and Country

MARBEC S.R.L.  
VIA CROCE ROSSA 5/i  
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  
Telephone number for Poison Control Centres available 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:

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:

**H318**

Causes serious 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.

**P280**

Wear eye protection / face protection.

**P310**

Immediately call a POISON CENTER / doctor / . . .

**P337+P313**

If eye irritation persists: Get medical advice / attention.

**Contains:**

C6 Alkyl glycosides

2 – Propylheptanol ethoxylate ( $\geq 2.5$  EO)

**Ingredients comply with Regulation (EC) No. 648/2004**

Non-ionic surfactants  $5\% < C < 15\%$ , phosphates  $< 5\%$

## 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)
<b>WATER</b>		
CAS 7732-18-5	$50 \leq x < 100$	
EC 231-791-2		
INDEX -		
<b>SODIUM GLUCONATE</b>		
CAS 527-07-1	$3 \leq x < 9$	
EC 208-407-7		
INDEX -		
CAS 54549-24-5	$3 \leq x < 9$	Eye Dam. 1 H318
EC 259-217-6		
INDEX -		
REACH Reg. 01-2119492545-29		
<b>DIPROPYLENE GLYCOL MONOMETHYL ETHER</b>		
CAS 34590-94-8	$3 \leq x < 9$	Substance with a community workplace exposure limit.
EC 252-104-2		
INDEX -		
REACH Reg. 01-2119450011-60-xxxx		
<b>POTASSIUM PYROPHOSPHATE</b>		
CAS 7320-34-5	$3 \leq x < 9$	Eye Irrit. 2 H319
EC 230-785-7		
INDEX -		
REACH Reg. 01-2119489369-18		
CAS 160875-66-1	$1 \leq x < 3$	Eye Dam. 1 H318, Skin Irrit. 2 H315, Aquatic Chronic 3 H412
EC		
INDEX -		

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 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

### 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

Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site. Send away individuals who are not suitably equipped. Wear protective gloves / protective clothing / eye protection / face protection.

### 6.2. Environmental precautions

Do not disperse in the environment.

### 6.3. Methods and material for containment and cleaning up

Use inert absorbent material to soak up leaked product. 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

Avoid bunching of electrostatic charges. Do not spray on flames or incandescent bodies. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Do not eat, drink or smoke during use. Do not breathe spray.

**7.2. Conditions for safe storage, including any incompatibilities**

Store in a place where adequate ventilation is ensured, away from direct sunlight at a temperature below 50°C / 122°F, away from any combustion sources.

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:

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
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
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
EU	OEL EU	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.

**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	0,41	mg/kg
Normal value for marine water sediment	0,041	mg/kg
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	0,654	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	Chronic systemic
Oral	VND	35,7 mg/kg bw/d						
Inhalation			VND	124 mg/m3			VND	420 mg/m3
Skin			VND	357000 mg/kg bw/d			VND	595000 mg/kg bw/d

**POTASSIUM PYROPHOSPHATE****Predicted no-effect concentration - PNEC**

Normal value in fresh water	0,05	mg/l
Normal value in marine water	0	mg/l
Normal value for water, intermittent release	0,5	mg/l

Normal value of STP microorganisms

50

mg/l

**Health - Derived no-effect level - DNEL / DMEL**Effects on  
consumersEffects on  
workers

Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				70 mg/kg bw/d				
Inhalation				0,68 mg/m3				2,79 mg/m3

**DIPROPYLENE GLYCOL MONOMETHYL ETHER****Threshold Limit Value**

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	310	50	310	50	
MAK	DEU	310	50	310	50	
VLA	ESP	308	50			SKIN
VLEP	FRA	308	50			SKIN
VLEP	ITA	308	50			SKIN
VLE	PRT	308	50			SKIN
WEL	GBR	308	50			SKIN
OEL	EU	308	50			SKIN

**Predicted no-effect concentration - PNEC**

Normal value in fresh water	0,24	mg/l
Normal value for fresh water sediment	0,9168	mg/kg
Normal value for marine water sediment	0,0917	mg/kg
Normal value for water, intermittent release	0,07	mg/l
Normal value of STP microorganisms	10000	mg/l
Normal value for the terrestrial compartment	7,5	mg/kg

**Health - Derived no-effect level - DNEL / DMEL**Effects on  
consumersEffects on  
workers

Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	15 mg/kg/d				
Inhalation			VND	52 mg/m3			VND	175 mg/m3
Skin			0,079 mg/cm2	1650 mg/kg/d	0,132 mg/cm2	VND	VND	2750 mg/kg bw/d

Legend:

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

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

**8.2. Exposure controls**

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

When choosing personal protective equipment, ask your chemical substance supplier for advice.  
Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

#### HAND PROTECTION

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

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

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

#### SKIN PROTECTION

Wear category I 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	liquid	
Colour	yellowish	
Odour	characteristic	
Melting point / freezing point	Not applicable	
Initial boiling point	Not available	
Flammability	incombustible	
Lower explosive limit	Not applicable	
Upper explosive limit	Not applicable	
Flash point	> 90 °C	
Auto-ignition temperature	Not available	
pH	10	
Kinematic viscosity	Not available	
Solubility	soluble in water	
Partition coefficient: n-octanol/water	Not available	
Vapour pressure	Not available	
Density and/or relative density	1,065	

Relative vapour density	Not available
Particle characteristics	Not applicable

**9.2. Other information**

## 9.2.1. Information with regard to physical hazard classes

Information not available

## 9.2.2. Other safety characteristics

VOC (Directive 2010/75/EU) 2,82 % - 30,00 g/litre

Explosive properties

Oxidising properties

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

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

DIPROPYLENE GLYCOL MONOMETHYL ETHER

Forms peroxides with: air.

**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.

DIPROPYLENE GLYCOL MONOMETHYL ETHER

May react violently with: strong oxidising agents.

**10.4. Conditions to avoid**

Avoid overheating.

DIPROPYLENE GLYCOL MONOMETHYL ETHER

Avoid exposure to: sources of heat. Possibility of explosion.

**10.5. Incompatible materials**

Strong reducing or oxidising agents, strong acids or alkalis, hot material.

**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 GLUCONATE

LD50 (Oral):

&gt; 2000 mg/kg ratto

POTASSIUM PYROPHOSPHATE

LD50 (Dermal):

&gt; 2000 mg/kg Coniglio

LD50 (Oral):

&gt; 2000 mg/kg Ratto

LC50 (Inhalation mists/powders):

&gt; 1,1 mg/l/4h ratto

LD50 (Dermal):

2000 mg/kg

LD50 (Oral):

2000 mg/kg

LC50 (Inhalation vapours):

&gt; 20 mg/l/4h

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

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

#### POTASSIUM PYROPHOSPHATE

LC50 - for Fish	> 100 mg/l/96h oncorhynchus mykiss
EC50 - for Crustacea	> 100 mg/l/48h daphnia magna
EC50 - for Algae / Aquatic Plants	> 100 mg/l/72h alghe
Chronic NOEC for Fish	100 mg/l oncorhynchus mykiss
Chronic NOEC for Algae / Aquatic Plants	> 100 mg/l alghe

#### SODIUM GLUCONATE

LC50 - for Fish	> 100 mg/l/96h Oryzias latipes
EC50 - for Crustacea	> 1000 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 1000 mg/l/72h Pseudokirchneriella subcapitata

LC50 - for Fish	> 100 mg/l/96h Oncorhynchus mykiss (trout iridea)
EC50 - for Crustacea	> 100 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 100 mg/l/72h Scenedesmus quadricauda

LC50 - for Fish	> 10 mg/l/96h
EC50 - for Crustacea	> 10 mg/l/48h daphnia magna
EC50 - for Algae / Aquatic Plants	> 10 mg/l/72h

### 12.2. Persistence and degradability

#### DIPROPYLENE GLYCOL MONOMETHYL ETHER

Solubility in water	1000 - 10000 mg/l
Rapidly degradable	

## POTASSIUM PYROPHOSPHATE

Solubility in water &gt; 10000 mg/l

Degradability: information not available

## SODIUM GLUCONATE

Rapidly degradable

Rapidly degradable

Rapidly degradable

**12.3. Bioaccumulative potential**DIPROPYLENE GLYCOL MONOMETHYL  
ETHER

Partition coefficient: n-octanol/water 0,0043

**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**

## POTASSIUM PYROPHOSPHATE

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

**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 1907/2006Product

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 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.

**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:

<b>Eye Dam. 1</b>	Serious eye damage, category 1
<b>Skin Irrit. 2</b>	Skin irritation, category 2
<b>Aquatic Chronic 3</b>	Hazardous to the aquatic environment, chronic toxicity, category 3
<b>H318</b>	Causes serious eye damage.

**H315** Causes skin irritation.

**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
- 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.