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: **685665**

Product name **XYLOGUARD HYDRO LASURE SATIN**

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

Identified Uses	Industrial	Professional	Consumer
Vernice per legno.	-	PC: 9a.	PC: 9a.

Uses Advised Against

All uses other than wood coloring.

1.3. Details of the supplier of the safety data sheet

Name **VERNIS CLAESSENS SA.**

Full address **Route de Crissier 4**

District and Country **1030 Bussigny**
Swiss

tel. +41 21 702 07 02

e-mail address of the competent person responsible for the Safety Data Sheet **mail@claessens.com**

1.4. Emergency telephone number

For urgent inquiries refer to **Contact your local poison control centre.**
Swiss: +41 44 251 51 51

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 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:	Warning

Hazard statements:

H317	May cause an allergic skin reaction.

Precautionary statements:

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P280	Wear protective gloves / clothing.
P333+P313	If skin irritation or rash occurs: Get medical advice / attention.
P501	Dispose of contents/container according to local regulation.

Contains: Mixture of benzotriazoles ce # 400-830-7
2-METHYL-2H-ISOTHIAZOL-3-ONE (MIT)
Reaction mass of 5-chloro-2-methyl-1,2-thiazol-3(2H)-one and 2-methyl-1,2-thiazol-3(2H)-one (3: 1) (C(M)IT/MIT)
1,2-BENZOISOTIAZOL-3(2H)-ONE (BIT)

VOC (Directive 2004/42/EC) :

Interior / exterior trim varnishes and woodstains, including opaque woodstains.

VOC given in g/litre of product in a ready-to-use condition :	30,00
Limit value:	130,00

2.3. Other hazards

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

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

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	Conc. %	Classification (EC) 1272/2008 (CLP)
Mixture of benzotriazoles ce # 400-830-7		
INDEX 607-176-00-3	1,105	Skin Sens. 1 H317, Aquatic Chronic 2 H411
EC 400-830-7		
CAS 104810-48-2		
REACH Reg. 01-00000115075-76-XXXX		
1,2-BENZOISOTIAZOL-3(2H)-ONE (BIT)		
INDEX 613-088-00-6	0,024	Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, Skin Sens. 1A H317, Aquatic Acute 1 H400 M=1, Aquatic Chronic 2 H411
EC 220-120-9		Skin Sens. 1A H317: ≥ 0,05%
CAS 2634-33-5		LD50 Oral: 532 mg/kg
REACH Reg. 01-2120761540-60		
Reaction mass of 5-chloro-2-methyl-1,2-thiazol-3(2H)-one and 2-methyl-1,2-thiazol-3(2H)-one (3: 1) (C(M)IT/MIT)		
INDEX 613-167-00-5	0,00087	Acute Tox. 2 H310, Acute Tox. 2 H330, Acute Tox. 3 H301, Skin Corr. 1C H314, Eye Dam. 1 H318, Skin Sens. 1A H317, Aquatic Acute 1 H400 M=100, Aquatic Chronic 1 H410 M=100, EUH071, Classification note according to Annex VI to the CLP Regulation: B
EC 611-341-5		Skin Corr. 1C H314: ≥ 0,6%, Skin Irrit. 2 H315: ≥ 0,06%, Skin Sens. 1A H317: ≥ 0,0015%, Eye Dam. 1 H318: ≥ 0,6%, Eye Irrit. 2 H319: ≥ 0,06%
CAS 55965-84-9		LD50 Oral: 66 mg/kg, LD50 Dermal: >141 mg/kg, STA Inhalation mists/powders: 0,051 mg/l, STA Inhalation vapours: 0,501 mg/l
2-METHYL-2H-ISOTHIAZOL-3-ONE (MIT)		
INDEX 613-326-00-9	0,00022	Acute Tox. 2 H330, Acute Tox. 3 H301, Acute Tox. 3 H311, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1A H317, Aquatic Acute 1 H400 M=10, Aquatic Chronic 1 H410 M=1
EC 220-239-6		Skin Sens. 1A H317: ≥ 0,0015%
CAS 2682-20-4		STA Oral: 100 mg/kg, STA Dermal: 300 mg/kg, STA Inhalation mists/powders: 0,051 mg/l, STA Inhalation vapours: 0,501 mg/l

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. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.
INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.
INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

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

Information not available

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

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

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

7.2. Conditions for safe storage, including any incompatibilities

Keep the product in clearly labelled containers. Store the containers sealed, in a well ventilated place, away from direct sunlight.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Mixture of benzotriazoles ce # 400-830-7

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,0023	mg/l
Normal value in marine water	0,00023	mg/l
Normal value for fresh water sediment	3,06	mg/kg
Normal value for marine water sediment	0,306	mg/kg
Normal value for water, intermittent release	0,028	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	2	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				0,025				

	mg/kg/d	
Inhalation	0,085 mg/m3	0,35 mg/m3
Skin	0,25 mg/kg/d	0,5 mg/kg/d

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 chemical resistant gloves (EN 374).
In the case of mixtures, the resistance of work gloves to chemical agents must be checked before use as it is not always predictable.
Materials also suitable for direct and prolonged contact, it is recommended: protection factor 6,> 480 minutes of permeation time (EN 374); neoprene, nitrile rubber and others. Additional information: Information is based on our experience, bibliographic data and information from glove manufacturers, or derived from substances / mixtures of similar composition. The duration of use of a protective glove can be influenced by various factors such as temperature and therefore in practice significantly lower than the permeation time detected by the test.
Due to the great variety of types, it is advisable to observe the instructions for use of the glove manufacturers.

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	Temperature: 20 °C

Colour	transparent, various	
Odour	mild, characteristic	
Melting point / freezing point	< 5 °C	
Initial boiling point	100 °C	Method:Derived
Flammability	not flammable	Method:Derived
Lower explosive limit	not applicable	Reason for missing data:La combustione non è sostenuta.
Upper explosive limit	not applicable	
Flash point	> 60 °C	
Auto-ignition temperature	not applicable	
Decomposition temperature	not applicable	
pH	8,5	Method:ISO 19396-1 Concentration: 100 % Temperature: 20 °C
Kinematic viscosity	not available	Reason for missing data:Not significant data for classification
Dynamic viscosity	15000-25000 cP.s	Method:ISO 2884-1 Temperature: 20 °C
Solubility	die-dispersible in water, insoluble in hydrocarbons	Temperature: 20 °C
Partition coefficient: n-octanol/water	not applicable	Reason for missing data:Non applicabile a miscele
Vapour pressure	23 hPa	Substance:WATER Temperature: 20 °C
Density and/or relative density	1,03 kg/l	Method:ISO 2811-1 Temperature: 20 °C
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 2004/42/EC) : 30,00 g/litre

SECTION 10. Stability and reactivity

10.1. Reactivity

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

1,2-PROPANEDIOL

Hygroscopic.Stable in normal conditions of use and storage.

At high temperatures it tends to oxidate to form propionaldehyde and lactic and acetic acid.

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.

1,2-PROPANEDIOL

May react dangerously with: acid chlorides,acid anhydrides,oxidising agents.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Information not available

10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

1,2-PROPANEDIOL

May develop: carbon oxides.

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.
It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Metabolism, toxicokinetics, mechanism of action and other information

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)

Reaction mass of 5-chloro-2-methyl-1,2-thiazol-3(2H)-one and 2-methyl-1,2-thiazol-3(2H)-one (3: 1) (C(M)IT/MIT)

LD50 (Dermal):	> 141 mg/kg Rat OECD 402
LD50 (Oral):	66 mg/kg Rat OECD 401

1,2-BENZOISOTIAZOL-3(2H)-ONE (BIT)

LD50 (Oral):	532 mg/kg
LC50 (Inhalation mists/powders):	0,4 mg/l/4h

2-METHYL-2H-ISOTHIAZOL-3-ONE (MIT)

LD50 (Dermal):	> 2000 mg/kg Rat (OECD 402)
STA (Dermal):	300 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
LD50 (Oral):	> 2500 mg/kg Rat (OECD 423)

DIPROPILENGLIOCOLE N-BUTIL ETERE

LD50 (Oral):	3700 mg/kg rat

Mixture of benzotriazoles ce # 400-830-7

LD50 (Dermal):	> 2000 mg/kg rat, OECD 402
LD50 (Oral):	> 5000 mg/kg Rat, OECD 401
LC50 (Inhalation vapours):	> 5,8 mg/l/4h Rat, OCSE 403

1,2-PROPANEDIOL

LD50 (Dermal):	20800 mg/kg Rat
LD50 (Oral):	20800 mg/kg Rat

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

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

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

Reaction mass of 5-chloro-2-methyl-1,2-thiazol-3(2H)-one and 2-methyl-1,2-thiazol-3(2H)-one (3: 1) (C(M)IT/MIT)

LC50 - for Fish	0,22 mg/l/96h Oncorhynchus mykiss
EC50 - for Crustacea	0,0052 mg/l/48h Dafnia magna
EC50 - for Algae / Aquatic Plants	0,048 mg/l/72h Pseudokirchnereilla subcapitata
Chronic NOEC for Fish	0,098 mg/l Onchorthyncus Mykiss (OECD 210)
Chronic NOEC for Crustacea	0,004 mg/l Daphina magna (OECD 211)
Chronic NOEC for Algae / Aquatic Plants	0,00064 mg/l Skeletonema costantium (ISO 10263, RAC)

1,2-BENZOISOTIAZOL-3(2H)-ONE (BIT)

LC50 - for Fish	11 mg/l/96h Oncorhynchus mykiss (OECD 203)
EC50 - for Crustacea	16,4 mg/l/48h Daphnia magna (OECD 202)
EC50 - for Algae / Aquatic Plants	0,6 mg/l/72h Selenastrum capricornutum (OECD 201)

Mixture of benzotriazoles ce # 400-830-7

LC50 - for Fish	2,8 mg/l/96h Onchorynchus mykiss
EC50 - for Crustacea	4 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	10 mg/l/72h Pseuodokichnerella subcapitata

12.2. Persistence and degradability

Reaction mass of 5-chloro-2-methyl-1,2-thiazol-3(2H)-one and 2-methyl-1,2-thiazol-3(2H)-one (3: 1) (C(M)IT/MIT)
Rapidly degradable

1,2-PROPANEDIOL

Solubility in water	1000 - 10000 mg/l

Rapidly degradable

12.3. Bioaccumulative potential

Reaction mass of 5-chloro-2-methyl-1,2-thiazol-3(2H)-one and 2-methyl-1,2-thiazol-3(2H)-one (3: 1) (C(M)IT/MIT)

BCF	3,6 Calculated

1,2-BENZOISOTIAZOL-3(2H)-ONE (BIT)

Partition coefficient: n-octanol/water	0,7 n-Octanol/Water, OECD 117
BCF	6,95 Pesce (OECD 305)

2-METHYL-2H-ISOTHIAZOL-3-ONE (MIT)

Partition coefficient: n-octanol/water	0,32 n-octanolo/water
BCF	3,16

1,2-PROPANEDIOL

Partition coefficient: n-octanol/water	-1,07
BCF	0,09

12.4. Mobility in soil

1,2-PROPANEDIOL

Partition coefficient: soil/water	0,46

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 ≥ 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

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 - 40

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 ≥ 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.

VOC (Directive 2004/42/EC) :

Interior / exterior trim varnishes and woodstains, including opaque woodstains.

Contains biocidal products

15.2. Chemical safety assessment

A chemical safety assessment has been performed for the following contained substances

Mixture of benzotriazoles ce # 400-830-7

SECTION 16. Other information

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

Acute Tox. 2	Acute toxicity, category 2
Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
Skin Corr. 1B	Skin corrosion, category 1B
Skin Corr. 1C	Skin corrosion, category 1C
Eye Dam. 1	Serious eye damage, category 1
Skin Irrit. 2	Skin irritation, category 2
Skin Sens. 1	Skin sensitization, category 1
Skin Sens. 1A	Skin sensitization, category 1A

Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
H310	Fatal in contact with skin.
H330	Fatal if inhaled.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

Use descriptor system:

PC	**9a**	Coatings and paints, thinners, paint removers

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)
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.

Changes to previous review:
The following sections were modified:
03 / 04 / 07.