

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: REF 2203
Product name: Natural Builder

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

Intended use: UV gel

1.3. Details of the supplier of the safety data sheet

Name: PASSIONE BEAUTY S.P.A.
Full address: Viale Crispi 89-93
District and Country: 36100 Vicenza (VI)
Italia
Tel.: +39 0444-239569
e-mail address of the competent person responsible for the Safety Data Sheet: quality@pucosmetica.it

1.4. Emergency telephone number

For urgent inquiries refer to: +39 0444-239569

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:

Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.
Specific target organ toxicity - single exposure, category 3	H335	May cause respiratory irritation.
Skin sensitization, category 1A	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

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:

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.

REF 2203 - Natural Builder

SECTION 2. Hazards identification ... / >>

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P280 Wear protective gloves / eye protection / face protection.
P261 Avoid breathing dust / fume / gas / mist / vapours / spray.
P312 Call a POISON CENTRE / doctor / . . . if you feel unwell.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P264 Wash . . . thoroughly after handling.
P362+P364 Take off contaminated clothing and wash it before reuse.

Contains: Isobornyl methacrylate
 Trimethylolpropane trimethacrylate esters
 polyurethane acrylate oligomer

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)
polyurethane acrylate oligomer		
INDEX	$70 \leq x < 74$	Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1A H317
EC		
CAS		
Isobornyl methacrylate		
INDEX	$19,5 \leq x < 21$	Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335
EC		STOT SE 3 H335: $\geq 10\%$
CAS		
Trimethylolpropane trimethacrylate esters		
INDEX	$8 \leq x < 9$	Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Chronic 2 H411
EC		
CAS		
TPO		
INDEX	$0,809 \leq x < 0,909$	Repr. 2 H361f
EC		
CAS		
Titanium dioxide		
INDEX	$0,2 \leq x < 0,25$	Carc. 2 H351, Aquatic Chronic 2 H411
EC		
CAS		

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

SECTION 4. First aid measures

4.1. Description of first aid measures

Contact with eyes: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check and remove any contact lenses. Continue rinsing for at least 10 minutes. Consult a doctor.

Inhalation: Remove the victim to fresh air and keep him at rest in a position comfortable for breathing.

If he is not breathing, if breathing is irregular, or if respiratory arrest occurs, take action

artificial respiration or oxygen by qualified personnel. Mouth-to-mouth resuscitation can be dangerous for the person providing aid. Seek medical attention if adverse health effects persist or are severe. In case of loss of consciousness, place in recovery position and contact a doctor immediately. Keep the airway open. Loosen tight clothing such as a collar, tie, belt or belt.

Skin contact: Wash thoroughly with soap and water. Remove contaminated clothing and shoes.

Wash contaminated clothing thoroughly with water before removing or wearing gloves.

SECTION 4. First aid measures ... / >>

Continue rinsing for at least 10 minutes. Seek medical assistance. In case of complaints or symptoms, avoid further exposure. Wash clothing before reusing it. Clean your shoes thoroughly before using them again.

Ingestion: Rinse mouth with water. Remove any dentures. If the material has been swallowed and the exposed person is conscious, give small amounts of water to drink. Stop if the exposed person feels sick because vomiting can be dangerous. Do not induce vomiting unless directed by medical personnel. If vomiting occurs, the head should be kept low so that the vomit does not enter the lungs. Seek medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If she is unconscious, place her in the recovery position and seek medical attention immediately.

Keep the airway open. Loosen tight clothing such as collar, tie, belt or waist.

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

Eye contact: Symptoms may be as follows:

Pain or irritation
Tearing
Redness

Inhalation: No specific data.

Skin contact: Symptoms may be as follows:

Irritation
Redness

Ingestion: No specific data.

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

Notes to physician: Treat symptomatically. Contact a poison treatment specialist immediately if large quantities have been ingested or inhaled.

SECTION 5. Firefighting measures**5.1. Extinguishing media**

Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: None known.

5.2. Special hazards arising from the substance or mixture

Hazards arising from the substance or mixture: In a fire or if heated, a pressure increase will occur and the container may burst.

This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged into waterways, sewers or drains.

Hazardous Combustion Products: Decomposition products may include the following materials:

carbon dioxide
carbon monoxide
phosphorus oxides

5.3. Advice for firefighters

Special protective actions for firefighters: Promptly isolate the area by removing all people from the area of the accident in case of fire. No action shall be taken involving personal risk or without adequate training.

Special protective equipment for firefighters: Firefighters must wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a face shield operating in positive pressure mode. Firefighter clothing (including helmets, protective boots and gloves) conforming to the European standard EN 469 will provide a basic level of protection for chemical incidents.

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

For non-emergency personnel: No action shall be taken involving any personal risk or without adequate training.

Evacuate surrounding areas. Prevent access to unnecessary and unprotected personnel. Do not touch or walk on spilled material. Avoid breathing vapors or mists. Provide adequate ventilation. Wear an appropriate respirator when ventilation is inadequate. Wear appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also what is reported in "For non-emergency personnel".

6.2. Environmental precautions

Environmental precautions: Avoid dispersion and runoff of spilled material and contact with soil, waterways, drains and sewers. Inform the competent authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material.

May be harmful to the environment if released in large quantities.

SECTION 6. Accidental release measures ... / >>**6.3. Methods and material for containment and cleaning up**

Small spill: stop leak if there is no risk. Move containers from spill area. Dilute with water and dry if water soluble. Alternatively, or if insoluble in water, absorb with dry inert material and place in a suitable container for waste disposal. Dispose of through a licensed waste disposal contractor.

Large spill: stop the leak if there is no risk. Move containers from spill area. Approaching release from windward. Prevent entry into sewers, waterways, basements or confined areas.

Wash spills at an effluent treatment plant or do the following. Contain and collect spillage with non-combustible absorbent material, e.g. sand, earth, vermiculite or diatomaceous earth and place them in a container for disposal according to local regulations. Dispose of through a licensed waste disposal contractor.

Contaminated absorbent material can pose the same hazard as spilled product.

6.4. Reference to other sections

Information not available

SECTION 7. Handling and storage**7.1. Precautions for safe handling**

Protective measures: Wear appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be used in any process in which this product is used. Do not get in eyes, on skin or clothing. Do not swallow.

Avoid breathing vapors or mists. Avoid release into the environment. Use only with adequate ventilation. Wear an appropriate respirator when ventilation is inadequate.

Store in the original container or an approved alternative made of a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be dangerous. Do not reuse the container.

General occupational hygiene advice: Eating, drinking and smoking are prohibited in areas where the material is handled, stored or processed. Workers must wash their hands and faces before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering food and beverage areas. See also Section 8 for further information on hygiene measures.

7.2. Conditions for safe storage, including any incompatibilities

Shield UV light sources. Do not store above the following temperature: 38°C (100.4°F). Store in accordance with local regulations. Store in the original container protected from direct sunlight in a dry, cool, well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Shop locked. Keep container tightly closed and sealed until ready for use. Open containers must be carefully closed and kept in an upright position to avoid leaks. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection**8.1. Control parameters**

Regulatory references:

DEU	Deutschland	Forschungsgemeinschaft MAK- und BAT-Werte-Liste 2022 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe Mitteilung 58
ESP	España	Límites de exposición profesional para agentes químicos en España 2023
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France Décret n° 2021-1849 du 28 décembre 2021
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
	TLV-ACGIH	ACGIH 2023

Trimethylolpropane trimethacrylate esters**Health - Derived no-effect level - DNEL / DMEL**

Route of exposure	Effects on consumers		Effects on workers					
	Acute	Acute	Chronic	Chronic	Acute local	Acute	Chronic	Chronic
	local	systemic	local	systemic		systemic	local	systemic
Oral				1,5 mg/kg bw/d				
Inhalation				2,6 mg/m3				14,81 mg/m3
Skin			4,67 mg/cm2	15 mg/kg bw/d			9,33 mg/cm2	42 mg/kg bw/d

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SECTION 8. Exposure controls/personal protection ... / >>

TPO

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				83,3 µg/kg/ bw/day				
Inhalation				0,145 mg/m3				0,822 mg/m3
Skin				83,3 µg/kg bw/day				0,233 mg/kg bw/d

Titanium dioxide

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
MAK	DEU	0,3		2,4		RESP	Hinweis
VLA	ESP	10					
VLEP	FRA	10					
WEL	GBR	10				INHAL	
WEL	GBR	4				RESP	
TLV-ACGIH		0,2				RESP	

Isobornyl methacrylate

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				0,21 mg/kg bw/d				
Inhalation				0,36 mg/m3				1,22 mg/m3
Skin				0,21 mg/kg bw/d				0,35 mg/kg bw/d

Legend:

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

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

8.2. Exposure controls

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

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves.

The following should be considered when choosing work glove material (see standard EN 374): compatibility, degradation, failure time and permeability.

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

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN ISO 16321).

RESPIRATORY PROTECTION

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. 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).

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

SECTION 8. Exposure controls/personal protection ... / >>

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

SECTION 9. Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Properties	Value	Information
Appearance	liquid	
Colour	pink	
Odour	Caratteristico. Odore di acrilato	
Melting point / freezing point	not available	
Initial boiling point	not available	
Flammability	not available	
Lower explosive limit	not available	
Upper explosive limit	not available	
Flash point	> 93,3 °C	Remark:vaso chiuso
Auto-ignition temperature	not available	
Decomposition temperature	not available	
pH	not available	
Kinematic viscosity	not available	
Solubility	not available	
Partition coefficient: n-octanol/water	not available	
Vapour pressure	not available	
Density and/or relative density	1,1 g/cm3	
Relative vapour density	not available	
Particle characteristics	not applicable	

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

Information not available

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

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

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

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

Hazardous polymerization may occur under certain storage or use conditions.

These could cause the product to polymerize exothermically. Inadvertent contact with them should be avoided.

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

Under normal conditions of storage and use, no hazardous decomposition products should be generated.

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

Potential acute health effects

Inhalation: May cause respiratory irritation.

Ingestion: No known significant effects or critical hazards.

Skin contact: Causes skin irritation. May cause an allergic skin reaction.

Eye contact: Causes serious eye irritation.

Symptoms linked to physical, chemical and toxicological characteristics

Eye contact: Adverse symptoms may include the following:

pain or irritation

irritation

redness

Inhalation Adverse symptoms may include the following:

irritation of the respiratory tract

cough

Skin contact: Adverse symptoms may include the following:

irritation

redness

Ingestion No specific data.

Potential chronic health effects

General: Once sensitized, a severe allergic reaction may occur if subsequently exposed to very low levels.

Trimethylolpropane trimethacrylate esters

Result: Skin - Mild irritant, Species: Rabbit, Exposure: 500 mg

Titanium dioxide

Result: Skin - Mild irritant, species: Human, exposure: 72 hours 300 ug l

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)

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

SECTION 11. Toxicological information ... / >>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

May cause respiratory irritation

Isobornyl methacrylate

Category 3: Target Organs: Irritation of the respiratory tract

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

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity

Titanium dioxide

Acute LC50 3 mg/l Fresh water Crustaceans - Ceriodaphnia dubia - Newborn 48 hours

Acute LC50 6.5 mg/l Fresh water Daphnia - Daphnia pulex - Newborn 48 hours

Trimethylolpropane trimethacrylate esters

LC50 - for Fish

2 mg/l/96h fish - oncorhynchus

EC50 - for Algae / Aquatic Plants

3,88 mg/l/72h Algae

Chronic NOEC for Algae / Aquatic Plants

0,177 mg/l algae

Titanium dioxide

LC50 - for Fish

> 1000 mg/l/96h Fish - Fundulus heteroclitus

12.2. Persistence and degradability

Titanium dioxide

Degradability: information not available

12.3. Bioaccumulative potential

TPO

BCF: 53 to 72, Potential: low

Trimethylolpropane trimethacrylate esters

Partition coefficient: n-octanol/water

2,749 potential: low

Isobornyl methacrylate

SECTION 12. Ecological information ... / >>

Partition coefficient: n-octanol/water 5,09 Potential: high

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessmentOn the basis of available data, the product does not contain any PBT or vPvB in percentage \geq than 0,1%.**12.6. Endocrine disrupting properties**

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7. Other adverse effects

Information not available

SECTION 13. Disposal considerations**13.1. Waste treatment methods**

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

CONTAMINATED PACKAGING

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

Product

Disposal methods: The generation of waste should be avoided or minimized wherever possible.

Disposal of this product, solutions and any by-products must always comply with the requirements of environmental protection and waste disposal legislation and the requirements of regional local authorities. Dispose of surplus and non-recyclable products through a licensed waste disposal contractor. Waste must not be disposed of untreated into sewers unless it fully complies with the requirements of all relevant authorities.

Hazardous waste: The classification of the product may meet the criteria for hazardous waste.

Packaging

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled.

Incineration or landfill should only be considered when recycling is not feasible.

Special Precautions: This material and its container must be disposed of safely. Caution should be exercised when handling emptied containers that have not been cleaned or rinsed.

Empty containers or containers may retain some product residue. Avoid dispersion and runoff of spilled material and contact with soil, waterways, drains and sewers.

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

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SECTION 14. Transport information ... / >>

14.6. Special precautions for user

not applicable

Transport within the user's premises: always transport in closed, vertical and secure containers. Make sure that people transporting the product know what to do in the event of an accident or spill.

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

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)

TPO

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:

Carc. 2	Carcinogenicity, category 2
Repr. 2	Reproductive toxicity, category 2
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Skin Sens. 1	Skin sensitization, category 1
Skin Sens. 1A	Skin sensitization, category 1A
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H351	Suspected of causing cancer.
H361f	Suspected of damaging fertility.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.

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SECTION 16. Other information ... / >>

H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent, bioaccumulative and toxic
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PMT: Persistent, mobile and toxic
- 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
- vPvM: Very persistent and very mobile
- 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)
 23. Delegated Regulation (UE) 2023/707
- 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

SECTION 16. Other information ... / >>

- 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:

04 / 05 / 06 / 07.