

## Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

#### 1.1. Product identifier

Code:	<b>SCEP04702_</b>
Product name	<b>Saatitex PHU 2 red</b>
Chemical name and synonym	<b>Water based polymer emulsion</b>

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

Intended use	<b>Aqueous emulsion of water dispersible polymers, pigments and plasticizers for screen printing.</b>
--------------	---

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

Name	<b>SAATI S.P.A.</b>
Full address	<b>Via Milano, 14</b>
District and Country	<b>22070 Appiano Gentile (CO) Italy</b>
	<b>Tel. 0039.031.9711</b>
	<b>Fax 0039.031.933.392</b>
e-mail address of the competent person responsible for the Safety Data Sheet	<b>info.it@saatichem.com</b>

#### 1.4. Emergency telephone number

For urgent inquiries refer to	<b>SAATI SPA - tel+39 0319711 - fax+39 031933392</b>
	<b>CAV Ospedale Niguarda Milano tel+39 0266101029</b>
	<b>CAV IRCCS Fond.Maugeri Pavia tel+39 038224444</b>
	<b>CAV Policlinico Gemelli Roma tel+39 063054343</b>
	<b>CAV Ospedale Cardarelli Napoli tel+39 0817472870</b>

### 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 2015/830.

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:

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: --

Hazard statements:

<b>H412</b>	Harmful to aquatic life with long lasting effects.
<b>EUH208</b>	Contains: 5-Chloro-2-methyl-4-isothiazolin-3-one/2-methyl-2h-isothiazol-3-one Glycerol, propoxilated, esters with acrylic acid
	May produce an allergic reaction.

Precautionary statements:

<b>P273</b>	Avoid release to the environment.
-------------	-----------------------------------

**SECTION 2. Hazards identification ... / >>**
**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%.

**SECTION 3. Composition/information on ingredients**
**3.2. Mixtures**

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
<b>Ditrimetilol propane tetraacrylate</b>		
CAS	94108-97-1 $5 \leq x < 10$	<b>Eye Irrit. 2 H319, Aquatic Chronic 2 H411</b>
EC	302-434-9	
INDEX		
Reg. no.	01-2119977121-41-xxxx	
<b>Propanol, oxybis-, dibenzoate</b>		
CAS	27138-31-4 $5 \leq x < 7,5$	<b>Aquatic Chronic 3 H412</b>
EC	248-258-5	
INDEX		
Reg. no.	01-2119529241-49-xxxx	
<b>Ethyl-4-dimethyl aminobenzoate</b>		
CAS	10287-53-3 $0,25 \leq x < 0,3$	<b>Repr. 1B H360, Aquatic Chronic 2 H411</b>
EC	233-634-3	
INDEX		
Reg. no.	01-2120766020-67	
<b>Glycerol, propoxilated, esters with acrylic acid</b>		
CAS	52408-84-1 $0,15 \leq x < 0,2$	<b>Eye Irrit. 2 H319, Skin Sens. 1 H317</b>
EC	500-114-5	
INDEX		
Reg. no.	01-2119487948-12-xxxx	
<b>2-BROMO-2-NITROPROPAN-1,3-DIOL</b>		
CAS	52-51-7 $0,05 \leq x < 0,1$	<b>Acute Tox. 4 H302, Acute Tox. 4 H312, Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335, Aquatic Acute 1 H400 M=10, Aquatic Chronic 1 H410 M=1</b>
EC	200-143-0	
INDEX	603-085-00-8	
Reg. no.		
<b>5-Chloro-2-methyl-4-isothiazolin-3-one/2-methyl-2h-isothiazol-3-one</b>		
CAS	55965-84-9 $0 \leq x < 0,0015$	<b>Acute Tox. 2 H310, Acute Tox. 2 H330, Acute Tox. 3 H301, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1A H317, Aquatic Acute 1 H400 M=100, Aquatic Chronic 1 H410 M=100</b>
EC	611-341-5	
INDEX	613-167-00-5	
Reg. no.		

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

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. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. 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

#### Ditrimetilol propane tetraacrylate

##### Predicted no-effect concentration - PNEC

Normal value in fresh water	0,001	mg/l
Normal value in marine water	0	mg/l
Normal value for fresh water sediment	0,484	mg/kg dw
Normal value for marine water sediment	0,0048	mg/kg dw
Normal value for water, intermittent release	0,012	mg/l
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	0,096	mg/kg dw

##### 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
Inhalation							VND	5,88 mg/m3
Skin							VND	1,67 mg/kg

#### Propanol, oxybis-, dibenzoate

##### Predicted no-effect concentration - PNEC

Normal value in fresh water	0,0037	mg/l
Normal value in marine water	0,00037	mg/l
Normal value for fresh water sediment	1,49	mg/kg
Normal value for marine water sediment	0,149	mg/kg
Normal value for water, intermittent release	0,037	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	1	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	80 mg/kg	VND	5 mg/kg				
Inhalation	VND	8,7 mg/m3	VND	8,69 mg/m3	VND	35,08 mg/m3	VND	8,8 mg/m3
Skin	VND	80 mg/kg bw/d	VND	0,22 mg/kg bw/d	VND	170 mg/kg bw/d	VND	10 mg/kg bw/d

#### Ethyl-4-dimethyl aminobenzoate

##### Predicted no-effect concentration - PNEC

Normal value in fresh water	0,002	mg/l
Normal value in marine water	0	mg/l
Normal value for fresh water sediment	0,113	mg/kg dw
Normal value for marine water sediment	0,011	mg/kg dw
Normal value for water, intermittent release	0,019	mg/l
Normal value of STP microorganisms	100	mg/l
Normal value for the food chain (secondary poisoning)	740	mg/kg
Normal value for the terrestrial compartment	0,021	mg/kg dw

##### 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
Inhalation							VND	1,2 mg/kg
Skin							VND	0,3 mg/kg bw/d

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

**Glycerol, propoxilated, esters with acrylic acid**

**Predicted no-effect concentration - PNEC**

Normal value in fresh water	0,00574	mg/l
Normal value in marine water	0,00057	mg/l
	4	
Normal value for fresh water sediment	0,078	mg/kg dw
Normal value for marine water sediment	0,0078	mg/kg dw
Normal value for water, intermittent release	0,0574	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the food chain (secondary poisoning)	5,6	mg/kg
Normal value for the terrestrial compartment	0,00111	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	1,39 mg/kg				
Inhalation			VND	4,87 mg/m3			VND	16,22 mg/m3
Skin			VND	1,15 mg/kg			VND	1,92 mg/kg

**2-BROMO-2-NITROPROPAN-1,3-DIOL**

**Predicted no-effect concentration - PNEC**

Normal value in fresh water	0,01	mg/l
Normal value in marine water	0,0008	mg/l
Normal value for fresh water sediment	0,041	mg/kg
Normal value for marine water sediment	0,041	mg/kg
Normal value for water, intermittent release	0,0025	mg/l
Normal value of STP microorganisms	0,43	mg/l
Normal value for the terrestrial compartment	0,5	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	1,1 mg/kg	VND	0,35 mg/kg				
Inhalation	1,3 mg/m3	3,7 mg/m3	1,3 mg/m3	1,2 mg/m3	4,2 mg/m3	12,3 mg/m3	4,2 mg/m3	4,1 mg/m3
Skin	VND	4,2 mg/kg	VND	1,4 mg/kg	VND	7 mg/kg	VND	2,3 mg/kg

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

**8.2. Exposure controls**

Engineering Controls: Provide adequate ventilation to control air contaminants below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Aspiratory system is recommended.

RESPIRATORY PROTECTION: If exposure levels exceed the PEL/TLV levels, use approved respirator.

SKIN PROTECTION: Nitrile gloves are required to prevent skin contact.

EYE PROTECTION: Safety glasses required.

OTHER PROTECTION : Face Shield and apron are recommended.

**ENVIRONMENTAL EXPOSURE CONTROLS**

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	viscous liquid	
Colour	red	
Odour	Light	

**SECTION 9. Physical and chemical properties** ... / >>

Odour threshold	Not available
pH	4,8
Melting point / freezing point	Not available
Initial boiling point	100 °C
Boiling range	Not available
Flash point	Not available
Evaporation Rate	Not available
Flammability of solids and gases	Not available
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	18 mmHg
Vapour density	Not available
Relative density	1,05
Solubility	partially soluble in water
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	7300 mPa*s
Explosive properties	Not available
Oxidising properties	Not available

**9.2. Other information**

Total solids (250°C / 482°F)	46,20 %
------------------------------	---------

**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**

Information not available

**10.6. Hazardous decomposition products**

Information not available

**SECTION 11. Toxicological information**

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

**11.1. Information on toxicological effects**

Ethyl-4-dimethyl aminobenzoate  
 Ethyl-4-dimethyl aminobenzoate:  
 Skin irritation: Non-irritating to the skin  
 Eye irritation: Non-irritating to the eyes  
 LD50> 2000 mg / Kg (oral, rat)  
 LD50> 2000 mg / Kg (dermal, rat).

**SECTION 11. Toxicological information ... / >>**

Glycerol, propoxilated, esters with acrylic acid  
 Propoxylated glycerol, esters with acrylic acid: Eye irritation: Irritating to eyes  
 Skin Irritation: Non-irritating to skin  
 Sensitization: skin sensitizer

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)

2-BROMO-2-NITROPROPAN-1,3-DIOL

LD50 (Oral) 305 mg/kg study report; rat  
 LD50 (Dermal) > 2000 mg/kg OECD 402; rat  
 LC50 (Inhalation) > 0,588 mg/l study report; rat

Propanol, oxybis-, dibenzoate

LD50 (Oral) 3914 mg/kg Rat  
 LD50 (Dermal) > 2000 mg/kg Rat  
 LC50 (Inhalation) > 200 mg/L/air Rat

Ditrimetilol propane tetraacrylate

LD50 (Oral) 5000 mg/kg bw Rat  
 LD50 (Dermal) > 2000 mg/kg Rat

Ethyl-4-dimethyl aminobenzoate

LD50 (Oral) > 2000 mg/kg bw Rat  
 LD50 (Dermal) > 2000 mg/kg bw Rat

Glycerol, propoxilated, esters with acrylic acid

LD50 (Oral) 2000 mg/kg bw Rat  
 LD50 (Dermal) 2000 mg/kg bw Rabbit

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

May produce an allergic reaction.

Contains:

5-Chloro-2-methyl-4-isothiazolin-3-one/2-methyl-2h-isothiazol-3-one  
 Glycerol, propoxilated, esters with acrylic acid

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

**SECTION 11. Toxicological information ... / >>**
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

**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.

Ethyl-4-dimethyl aminobenzoate

Ethyl-4-dimethyl aminobenzoate:

Possible impact on the environment / Ecotoxicity:

Do not discharge into drains or the environment; dispose of waste in an authorized waste collection point

**12.1. Toxicity**
**2-BROMO-2-NITROPROPAN-1,3-DIOL**

LC50 - for Fish	41,2 mg/l/96h EPA OPP 72-1; Oncorhynchus mykiss
EC50 - for Crustacea	1,4 mg/l/48h OECD 202; Daphnia magna
EC50 - for Algae / Aquatic Plants	0,37 mg/l/72h OECD 201; Pseudokirchnerella subcapitata; growth rate
Chronic NOEC for Fish	21,5 mg/l OECD 210; Oncorhynchus mykiss; 49d
Chronic NOEC for Crustacea	0,27 mg/l OECD 211; Daphnia magna; 21d

**Propanol, oxybis-, dibenzoate**

LC50 - for Fish	3,7 mg/l/96h
EC50 - for Crustacea	19,3 mg/l/48h
EC50 - for Algae / Aquatic Plants	4,9 mg/l/72h

**Ditrimetilol propane tetraacrylate**

LC50 - for Fish	1,2 mg/l/96h Cyprinus carpio
EC50 - for Crustacea	10 mg/l/48h Daphnia magna

**Ethyl-4-dimethyl aminobenzoate**

LC50 - for Fish	1,9 mg/l/96h Oncorhynchus mykiss
EC50 - for Crustacea	4,5 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	2,8 mg/l/72h Pseudokirchneriella subcapitata
Chronic NOEC for Fish	1,2 mg/l Oncorhynchus mykiss
Chronic NOEC for Crustacea	1,2 mg/l Oncorhynchus mykiss
Chronic NOEC for Algae / Aquatic Plants	0,29 mg/l Pseudokirchneriella subcapitata

**Glycerol, propoxilated, esters with acrylic acid**

LC50 - for Fish	5,74 mg/l/96h Danio rerio (OECD TG 203)
EC50 - for Crustacea	91,4 mg/l/48h Daphnia magna (OECD TG 202)
EC50 - for Algae / Aquatic Plants	12,2 mg/l/72h Desmodesmus subspicatus (OECD TG 201)

**12.2. Persistence and degradability**
**2-BROMO-2-NITROPROPAN-1,3-DIOL**

Rapidly degradable



**SECTION 12. Ecological information ... / >>**

Propanol, oxybis-, dibenzoate  
 Rapidly degradable

Ditrimetilol propane tetraacrylate  
 NOT rapidly degradable

Ethyl-4-dimethyl aminobenzoate  
 NOT rapidly degradable

Glycerol, propoxilated, esters with acrylic acid  
 Rapidly degradable

**12.3. Bioaccumulative potential**

5-Chloro-2-methyl-4-isothiazolin-3-one/2-methyl-2h-isothiazol-3-one  
 BCF 3,1

Glycerol, propoxilated, esters with acrylic acid  
 Partition coefficient: n-octanol/water 2,52 (OECD 107)

**12.4. Mobility in soil**

Ditrimetilol propane tetraacrylate  
 Partition coefficient: soil/water 3,61

**12.5. Results of PBT and vPvB assessment**

Glycerol, propoxilated, esters with acrylic acid  
 Propoxylated glycerol, esters with acrylic acid: not PBT and vPvB

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

**12.6. 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**

Not applicable

**14.2. UN proper shipping name**

Not applicable

**14.3. Transport hazard class(es)**

Not applicable

**SECTION 14. Transport information** ... / >>

**14.4. Packing group**

Not applicable

**14.5. Environmental hazards**

Not applicable

**14.6. Special precautions for user**

Not applicable

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

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/EC: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

<u>Product</u>	
<u>Point</u>	3 - 40

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 (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Information not available

German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)

WGK 2: Hazard to waters

**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>Repr. 1B</b>	Reproductive toxicity, category 1B
<b>Acute Tox. 2</b>	Acute toxicity, category 2
<b>Acute Tox. 3</b>	Acute toxicity, category 3
<b>Acute Tox. 4</b>	Acute toxicity, category 4
<b>Skin Corr. 1B</b>	Skin corrosion, category 1B
<b>Eye Dam. 1</b>	Serious eye damage, category 1
<b>Eye Irrit. 2</b>	Eye irritation, category 2
<b>Skin Irrit. 2</b>	Skin irritation, category 2

**SECTION 16. Other information ... / >>**

<b>STOT SE 3</b>	Specific target organ toxicity - single exposure, category 3
<b>Skin Sens. 1</b>	Skin sensitization, category 1
<b>Skin Sens. 1A</b>	Skin sensitization, category 1A
<b>Aquatic Acute 1</b>	Hazardous to the aquatic environment, acute toxicity, category 1
<b>Aquatic Chronic 1</b>	Hazardous to the aquatic environment, chronic toxicity, category 1
<b>Aquatic Chronic 2</b>	Hazardous to the aquatic environment, chronic toxicity, category 2
<b>Aquatic Chronic 3</b>	Hazardous to the aquatic environment, chronic toxicity, category 3
<b>H360</b>	May damage fertility or the unborn child.
<b>H310</b>	Fatal in contact with skin.
<b>H330</b>	Fatal if inhaled.
<b>H301</b>	Toxic if swallowed.
<b>H302</b>	Harmful if swallowed.
<b>H312</b>	Harmful in contact with skin.
<b>H314</b>	Causes severe skin burns and eye damage.
<b>H318</b>	Causes serious eye damage.
<b>H319</b>	Causes serious eye irritation.
<b>H315</b>	Causes skin irritation.
<b>H335</b>	May cause respiratory irritation.
<b>H317</b>	May cause an allergic skin reaction.
<b>H400</b>	Very toxic to aquatic life.
<b>H410</b>	Very toxic to aquatic life with long lasting effects.
<b>H411</b>	Toxic to aquatic life with long lasting effects.
<b>H412</b>	Harmful to aquatic life with long lasting effects.

**LEGEND:**

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 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 NUMBER: 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: EC Regulation 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 STEL: Short-term exposure limit
- TWA: Time-weighted average 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) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 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

**SECTION 16. Other information** ... / >>

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) 2018/1480 (XIII Atp. CLP)  
16. Regulation (EU) 2019/521 (XII 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:

02 / 03 / 08 / 11 / 12 / 15.