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: **M4101, M4171, M4172, M4173, M4174, M4177, M4182, M4200, M4201, M4202, M4203**

Product name **BLU MASTICE PER MARMO STYRENE-FREE**

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

Intended use **Mastic for marble, Professional use only.**

Uses related to substances:

Identified Uses	Industrial	Professional	Consumer
TRIETHYLENE GLYCOL DIMETHACRYLATE	-	ERC: 8c, 8e, 8f. PROC: 10, 13, 15, 18, 19, 5, 8a, 8b, 9.	-

Uses advised against: no one in particular

1.3. Details of the supplier of the safety data sheet

Name **ILPA ADESIVI SRL**

Full address **Via Ferorelli, 4**

District and Country **70132 BARI (BARI)**
ITALIA

Tel. + 39 0805383837

Fax + 39 0805377807

e-mail address of the competent person responsible for the Safety Data Sheet **laboratorio@ilpa.it**

1.4. Emergency telephone number

For urgent inquiries refer to **+ 39 0808974667 (Technical support - 8,00 - 17,00 - LUN-VEN; MON-FRI)(Italian time zone)**
Safety Executive (HSE) Chemicals Regulation Directorate 5S.1 Redgrave Court, Merton Road, Bootle, Merseyside. L20 7HS.
Phone: +44 151 9513317

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:

Skin sensitization, category 1A	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:

P280 Wear protective gloves / eye protection / face protection.
P333+P313 If skin irritation or rash occurs: Get medical advice / attention.
P362+P364 Take off contaminated clothing and wash it before reuse.

Contains:
2-hydroxyethyl methacrylate
Methacrylic acid, monoester with propane-1,2-diol
MALEIC ANHYDRIDE
COBALT BIS 2-ETHYL HEXANOATE
TRIETHYLENE GLYCOL DIMETHACRYLATE
2,2 '- [(4-methylphenyl) imino] bisethanol

Product not intended for uses provided for by Dir. 2004/42/CE.

2.3. Other hazards

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

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
2-hydroxyethyl methacrylate		
CAS 868-77-9 EC 212-782-2 INDEX 607-124-00-X Reg. no. 01-2119490169-29	4,5 ≤ x < 5	Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1 H317, Classification note/notes according to Annex VI to the CLP Regulation: D
Methacrylic acid, monoester with propane-1,2-diol		
CAS 27813-02-1 EC 248-666-3 INDEX - Reg. no. 01-2119490226-37-0002	2 ≤ x < 2,5	Eye Irrit. 2 H319, Skin Sens. 1 H317
TRIETHYLENE GLYCOL DIMETHACRYLATE		
CAS 109-16-0 EC 203-652-6 INDEX - Reg. no. 01-2119969287-21	1,5 ≤ x < 2	Skin Sens. 1B H317
COBALT BIS 2-ETHYL HEXANOATE		
CAS 136-52-7 EC 205-250-6 INDEX - Reg. no. 01-2119524678-29	0,15 ≤ x < 0,2	Repr. 1B H360, Eye Irrit. 2 H319, Skin Sens. 1A H317, Aquatic Acute 1 H400 M=1, Aquatic Chronic 3 H412
STYRENE		
CAS 100-42-5 EC 202-851-5 INDEX 601-026-00-0 Reg. no. 01-2119457861-32	0,15 ≤ x < 0,2	Flam. Liq. 3 H226, Repr. 2 H361d, Acute Tox. 4 H332, STOT RE 1 H372, Asp. Tox. 1 H304, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Aquatic Chronic 3 H412, Classification note/notes according to Annex VI to the CLP Regulation: D
2,2 '- [(4-methylphenyl) imino] bisethanol		
CAS 3077-12-1 EC 221-359-1 INDEX - Reg. no. 01-2120791684-40	0,1 ≤ x < 0,15	Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Sens. 1 H317, Aquatic Chronic 3 H412
XYLENE (MIXTURE OF ISOMERS)		
CAS 1330-20-7	0,05 ≤ x < 0,1	Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Classification note/notes according to Annex VI to the CLP Regulation: C

EC 215-535-7 INDEX 601-022-00-9 Reg. no. 01-2119488216-32		
MALEIC ANHYDRIDE CAS 108-31-6 EC 203-571-6 INDEX 607-096-00-9 Reg. no. 01-2119472428-31-XXXX	0,001 ≤ x < 0,05	Acute Tox. 4 H302, STOT RE 1 H372, Skin Corr. 1B H314, Eye Dam. 1 H318, Resp. Sens. 1 H334, Skin Sens. 1A H317, EUH071
DIPROPYLENE GLYCOL MONOMETHYL ETHER CAS 34590-94-8 EC 252-104-2 INDEX - Reg. no. 01-2119450011-60-XXXX	0 ≤ x < 0,05	Substance with a community workplace exposure limit.

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.

PROTECTIVE MEASURES FOR THE FIRST RESCUE WORKERS: for PPE (personal protection equipment) required for first aid refer to section 8.2 of this safety data sheet.

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
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

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other

sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

No use other than specified in Section 1.2 of this safety data sheet.

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 2019
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
GRC	Ελλάδα	Π.Δ. 26/2020 (ΦΕΚ 50/Α` 6.3.2020) Εναρμόνιση της ελληνικής νομοθεσίας προς τις διατάξεις των οδηγιών 2017/2398/ΕΕ, 2019/130/ΕΕ και 2019/983/ΕΕ «για την τροποποίηση της οδηγίας 2004/37/ΕΚ ``σχετικά με την προστασία των εργαζομένων από τους κινδύνους που συνδέονται με την έκθεση σε καρκινογόνους ή μεταλλαξιγόνους παράγοντες κατά την εργασία``»
HRV	Hrvatska	Pravilnik o izmjenama i dopunama Pravilnika o zaštiti radnika od izloženosti opasnimkemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021)
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
NLD	Nederland	Arbeidsomstandighedenregeling. Lijst van wettelijke grenswaarden op grond van de artikelen 4.3, eerste lid, en 4.16, eerste lid, van het Arbeidsomstandighedenbesluit
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
ROU	România	Hotararea 157/2020 pentru modificarea Hotărârii Guvernului nr. 1.218/2006 privind stabilirea cerinţelor minime de securitate şi sănătate în muncă pentru asigurarea protecţiei lucrătorilor împotriva riscurilor legate de prezenţa agenţilor chimici, precum şi pentru modificarea şi completarea Hotărârii Guvernului nr. 1.093/2006 privind stabilirea cerinţelor minime de securitate şi sănătate pentru protecţia lucrătorilor împotriva riscurilor legate de expunerea la agenţi cancerigeni sau mutageni la locul de muncă
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.
	TLV-ACGIH	ACGIH 2020

2-hydroxyethyl methacrylate

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,482	mg/l
Normal value in marine water	0,482	mg/l
Normal value for fresh water sediment	3,79	mg/kg/d
Normal value for marine water sediment	3,79	mg/kg/d
Normal value for water, intermittent release	1	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,476	mg/kg/d

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			NPI	0,83 mg/kg bw/d				
Inhalation	NPI	NPI	NPI	2,9 mg/m3	NPI	NPI	NPI	4,9 mg/m3

Skin	NPI	NPI	NPI	0,83 mg/kg bw/d	NPI	NPI	NPI	1,3 mg/kg bw/d

Methacrylic acid, monoester with propane-1,2-diol

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,904	mg/l
Normal value in marine water	0,904	mg/l
Normal value for fresh water sediment	6,28	mg/kg/d
Normal value for marine water sediment	6,28	mg/kg/d
Normal value for water, intermittent release	0,972	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,727	mg/kg/d

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	NPI	NPI	VND	2,5 mg/kg bw/d				
Inhalation	NPI	NPI	NPI	8,8 mg/m3	NPI	NPI	NPI	17,7 mg/m3
Skin	NPI	NPI	VND	2,5 mg/kg bw/d	NPI	NPI	VND	4,2 mg/kg bw/d

TRIETHYLENE GLYCOL DIMETHACRYLATE

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,164	mg/l
Normal value in marine water	0,0164	mg/l
Normal value for fresh water sediment	1,85	mg/kg/d
Normal value for marine water sediment	0,185	mg/kg/d
Normal value for water, intermittent release	0,164	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,274	mg/kg/d

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	NPI	NPI	VND	8,33 mg/kg bw/d				
Inhalation	NPI	NPI	NPI	14,5 mg/m3	NPI	NPI	NPI	48,5 mg/m3
Skin	NPI	VND	NPI	8,33 mg/kg bw/d	NPI	VND	NPI	13,9 mg/kg bw/d

COBALT BIS 2-ETHYL HEXANOATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
OEL	EU	0,05				INHAL

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,0006	mg/l
Normal value in marine water	0,00236	mg/l

Normal value for fresh water sediment	9,5	mg/kg/d
Normal value for marine water sediment	9,5	mg/kg/d
Normal value of STP microorganisms	0,37	mg/l
Normal value for the terrestrial compartment	10,9	mg/kg/d

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	NPI	VND	VND	0,0558 mg/kg bw/d				
Inhalation	NPI	NPI	0,037 mg/m3	NPI	NPI	NPI	0,235 mg/m3	VND
Skin	VND	NPI	VND	NPI	VND	NPI	VND	NPI

STYRENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
MAK	DEU	86	20	172	40	
VLA	ESP	86	20	172	40	
VLEP	FRA	100	23,3	200	46,6	
TLV	GRC	425	100	1050	250	
GVI/KGVI	HRV	430	100	1080	250	SKIN
TGG	NLD	107				
TLV	ROU	50	12	150	35	
WEL	GBR	430	100	1080	250	
TLV-ACGIH		10		20		

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,028	mg/l
Normal value in marine water	0,014	mg/l
Normal value for fresh water sediment	0,614	mg/kg/d
Normal value for marine water sediment	0,0614	mg/kg/d
Normal value for water, intermittent release	0,04	mg/l
Normal value of STP microorganisms	5	mg/l
Normal value for the terrestrial compartment	0,2	mg/kg/d

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			VND	2,1 mg/kg bw/d				
Inhalation	182,75 mg/m3	174,25 mg/m3	VND	10,2 mg/m3	306 mg/m3	289 mg/m3	VND	85 mg/m3
Skin			VND	343 mg/kg bw/d			VND	406 mg/kg bw/d

2,2 '- [(4-methylphenyl) imino] bisethanol

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,026	mg/l

Normal value in marine water	0,003	mg/l
Normal value for fresh water sediment	0,121	mg/kg
Normal value for marine water sediment	0,012	mg/kg
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,009	mg/kg/d

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		VND		0.16 mg/kg bw/d				
Inhalation	NPI	NPI	NPI	0.58 mg/m3	NPI	NPI	NPI	3.29 mg/m3
Skin	VND	NPI	VND	0.17 mg/kg bw/d	VND	NPI	VND	0.47 mg/kg bw/d

XYLENE (MIXTURE OF ISOMERS)

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	440	100	880	200	SKIN
MAK	DEU	440	100	880	200	SKIN
VLA	ESP	221	50	442	100	SKIN
VLEP	FRA	221	50	442	100	SKIN
TLV	GRC	435	100	650	150	
GVI/KGVI	HRV	221	50	442	100	SKIN
VLEP	ITA	221	50	442	100	SKIN
TGG	NLD	210		442		SKIN
VLE	PRT	221	50	442	100	SKIN
TLV	ROU	221	50	442	100	SKIN
WEL	GBR	220	50	441	100	SKIN
OEL	EU	221	50	442	100	SKIN
TLV-ACGIH		434	100	651	150	

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,327	mg/l
Normal value in marine water	0,327	mg/l
Normal value for fresh water sediment	12,46	mg/kg/d
Normal value for marine water sediment	12,46	mg/kg/d
Normal value for water, intermittent release	0,327	mg/l
Normal value of STP microorganisms	6,58	mg/l
Normal value for the terrestrial compartment	2,31	mg/kg/d

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			VND	1,6 mg/kg bw/d				

Inhalation	174 mg/m3	174 mg/m3	VND	14,8 mg/m3	289 mg/m3	289 mg/m3	VND	77 mg/m3
Skin			VND	108 mg/kg bw/d			VND	180 mg/kg bw/d

MALEIC ANHYDRIDE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	0,081	0,02	0,081 (C)	0,02 (C)	
MAK	DEU	0,081	0,02	0,081 (C)	0,02 (C)	C = 0,20 mg/m3
VLA	ESP	0,4	0,1			
VLEP	FRA			1		
TLV	GRC	1				
GVI/KGVI	HRV	0,41	0,1	0,8	0,2	INHAL
GVI/KGVI	HRV	0,41	0,1	0,8	0,2	SKIN
TLV	ROU	1	0,25	3	0,75	
WEL	GBR	1		3		
TLV-ACGIH		0,01	0,0025			

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,075	mg/l
Normal value in marine water	0,0075	mg/l
Normal value for fresh water sediment	0,06	mg/kg
Normal value for marine water sediment	0,006	mg/kg
Normal value for water, intermittent release	48,1	mg/l
Normal value of STP microorganisms	4,46	mg/l
Normal value for the food chain (secondary poisoning)	6,67	mg/kg
Normal value for the terrestrial compartment	0,01	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		0,1 mg/kg bw/d		0,06 mg/kg bw/d				
Inhalation			0,08 mg/m3	0,05 mg/m3	0,8 mg/m3	0,8 mg/m3	0,32 mg/m3	0,19 mg/m3
Skin		0,1 mg/kg bw/d		0,1 mg/kg bw/d		0,2 mg/kg bw/d		0,2 mg/kg bw/d

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

TLV	GRC	600	100	900	150	
GVI/KGVI	HRV	308	50			SKIN
VLEP	ITA	308	50			SKIN
TGG	NLD	300				
VLE	PRT	308	50			SKIN
TLV	ROU	308	50			SKIN
WEL	GBR	308	50			SKIN
OEL	EU	308	50			SKIN
TLV-ACGIH		606	100	909	150	SKIN

Predicted no-effect concentration - PNEC		
Normal value in fresh water	19	mg/l
Normal value in marine water	1,9	mg/l
Normal value for fresh water sediment	70,2	mg/kg
Normal value for marine water sediment	7,02	mg/kg
Normal value for water, intermittent release	190	mg/l
Normal value of STP microorganisms	4168	mg/l
Normal value for the terrestrial compartment	2,74	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				1,67 mg/kg bw/d				
Inhalation				37,2 mg/m3				310 mg/m3
Skin				15 mg/kg bw/d				65 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 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 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

Appearance	paste	
Colour	various	
Odour	mild	
Odour threshold	Not available	
pH	Not applicable	
Melting point / freezing point	Not available	Substance:2-hydroxyethyl methacrylate Temperature:<-60°C
Initial boiling point	Not available	Substance:2-hydroxyethyl methacrylate Temperature:213°C (101,3 kPa)
Boiling range	Not available	
Flash point	> 93 °C	
Evaporation rate	Not available	
Flammability (solid, gas)	not applicable	
Lower inflammability limit	Not available	
Upper inflammability limit	Not available	
Lower explosive limit	Not available	
Upper explosive limit	Not available	
Vapour pressure	Not available	Concentration:8 Pa (T=20°C) Substance:2-hydroxyethyl methacrylate
Vapour density	Not available	Concentration:4,5 (air=1) Substance:2-hydroxyethyl methacrylate
Relative density	1,87 g/ml	
Solubility	soluble in organic solvents	Concentration:≥ 100 g/l (T=20°C) Substance:2-hydroxyethyl methacrylate

Partition coefficient: n-octanol/water	Not available	Concentration:Log Pow 0,42 (T=20°C) Substance:2-hydroxyethyl methacrylate
Auto-ignition temperature	Not available	Substance:2-hydroxyethyl methacrylate Temperature:375°C (1 Bar)
Decomposition temperature	Not available	
Viscosity	700 ± 50 Pas (T = 25 °C)	
Explosive properties	Product does not present an explosion hazard.	Substance:2-hydroxyethyl methacrylate
Oxidising properties	not applicable	

9.2. Other information

VOC (Directive 2010/75/EC) :	0,52 %	-	9,78	g/litre
VOC (volatile carbon) :	0,50 %	-	9,34	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.

STYRENE

Polymerises at temperatures above 65°C/149°F.Fire hazard.Possibility of explosion.

Added with an inhibitor that requires a small amount of dissolved oxygen at temperatures < 25°C/77°F.

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.

STYRENE

May react dangerously with: peroxides,strong acids.May polymerise on contact with: aluminium trichloride,azobisisobutyronitrile,dibenzoyl peroxide,sodium.Risk of explosion on contact with: butyllithium,chlorosulphuric acid,diterbutyl peroxide,oxidising substances,oxygen.

XYLENE (MIXTURE OF ISOMERS)

Stable in normal conditions of use and storage.Reacts violently with: strong oxidants,strong acids,nitric acid,perchlorates.May form explosive mixtures with: air.

DIPROPYLENE GLYCOL MONOMETHYL ETHER

May react violently with: strong oxidising agents.

10.4. Conditions to avoid

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

STYRENE

Avoid contact with: oxidising substances,copper,strong acids.

DIPROPYLENE GLYCOL MONOMETHYL ETHER

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

10.5. Incompatible materials

STYRENE

Incompatible materials: plastic materials.

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

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

STYRENE

WORKERS: inhalation; contact with the skin.

XYLENE (MIXTURE OF ISOMERS)

WORKERS: inhalation; contact with the skin.
POPULATION: ingestion of contaminated food or water; inhalation of ambient air.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

STYRENE

The acute toxicity by inhalation at 1000 ppm affects the central nervous system with headache and dizziness, lack of coordination; irritation of the eye and respiratory tract mucous membranes occurs at 500 ppm. Chronic exposure causes depression of the central and peripheral nervous system with loss of memory, headache and drowsiness starting at 20 ppm; digestive disorders with nausea and loss of appetite; irritation of the respiratory tract with chronic bronchitis; dermatosis. Repeated exposure, at low doses of inhaled substance, causes irreversible changes to hearing and may cause changes in colour vision. No certain data is available on the reversibility of the visual impairment. Repeated skin exposure causes irritation. The substance degreases the skin, which can cause dryness and cracking.

XYLENE (MIXTURE OF ISOMERS)

Toxic effect on the central nervous system (encephalopathy); irritating for the skin, conjunctiva, cornea and respiratory apparatus.

Interactive effects

STYRENE

The metabolism of the substance is inhibited by ethanol. When styrene is photo-oxidised with ozone and nitrogen dioxide, as in the formation of smog, products highly irritating for the human eye may ensue.

XYLENE (MIXTURE OF ISOMERS)

Intake of alcohol interferes with the metabolism of the substance, inhibiting it. Ethanol consumption (0.8 g/kg) before a 4-hour exposure to xylene vapours (145 and 280 ppm) causes a 50% reduction in the excretion of methyl hippuric acid, whereas the concentration of xylenes in the blood increases approx. 1.5-2 times. At the same time there is an increase in the secondary side effects of the ethanol. The metabolism of the xylenes is increased by phenobarbital and 3-methyl-colantrene type enzyme inducers. Aspirin and xylenes mutually inhibit their conjugation with the glycine, which results in a decrease in urinary excretion of methyl hippuric acid. Other industrial products can interfere with the metabolism of xylenes.

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-hydroxyethyl methacrylate

LD50 (Oral) 5564 mg/kg RAT, according to (FDA, 1959 in food, drugs and cosmetics)

LD50 (Dermal) > 5000 mg/kg RABBIT, (standard acute method)

XYLENE (MIXTURE OF ISOMERS)

LD50 (Oral) 3523 mg/kg Rat (equivalent or similar to EU Method B.1)

LD50 (Dermal) 4200 mg/kg Rabbit (Industrial Medicine 39, 215-200, 1970)

LC50 (Inhalation) 26 mg/l/4h Rat(equivalent or similar to EU Method B.2)

DIPROPYLENE GLYCOL MONOMETHYL ETHER

LD50 (Oral) > 5000 mg/kg RAT

LD50 (Dermal) > 9500 mg/kg RAT

STYRENE

LD50 (Oral) 5000 mg/kg Rat (MSDS Supplier)

LD50 (Dermal) > 2000 mg/kg Rat (OECD Guideline 402)

LC50 (Inhalation) 11,8 mg/l/4h Rat (Archives of Environmental Health 18: 878-882 - sito ECHA)

MALEIC ANHYDRIDE

LD50 (Oral) 400 mg/kg Rat

LD50 (Dermal) 610 mg/kg Rat

Methacrylic acid, monoester with propane-1,2-diol

LD50 (Oral) > 2000 mg/kg RAT, according to (OECD Guideline 401)

LD50 (Dermal) > 5000 mg/kg rabbit, standard acute method

COBALT BIS 2-ETHYL HEXANOATE

LD50 (Oral) 3129 mg/kg Rat - Sprague-Dawley according to (OECD Guideline 425)

LD50 (Dermal) > 2000 mg/kg Rat - Wistar according to (OECD Guideline 402)

2,2 '- [(4-methylphenyl) imino] bisethanol

LD50 (Oral) 959 mg/kg Rat, equivalent or similar to (OECD Guideline 401)

LD50 (Dermal) > 2000 mg/kg Rat, according to (OECD Guideline 402)

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

STYRENE

Classified in Group 2B (possible human carcinogen) by the International Agency for Research on Cancer (IARC) - (IARC, 2002).
Classified as "probable carcinogen" by the US National Toxicology Program (NTP) - (US DHHS, 2014).

XYLENE (MIXTURE OF ISOMERS)

Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC).
The US Environmental Protection Agency (EPA) affirms that "the data is inadequate for an assessment of the carcinogenic potential".

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 Viscosity: 700 ± 50 Pas (T = 25 °C)

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

2-hydroxyethyl methacrylate	
LC50 - for Fish	> 100 mg/l/96h Oryzias latipes, according to (OECD Guideline 203)
EC50 - for Crustacea	380 mg/l/48h Daphnia magna, according to (OECD Guideline 202)
EC50 - for Algae / Aquatic Plants	345 mg/l/72h Selenastrum capricornutum, according to (OECD Guideline 201)
Chronic NOEC for Crustacea	24,1 mg/l 21 d Daphnia magna (OECD Guideline 211 (Daphnia magna Reproduction Test))
XYLENE (MIXTURE OF ISOMERS)	
LC50 - for Fish	2,6 mg/l/96h Oncorhynchus mykiss (OECD TG 203)
Chronic NOEC for Fish	1,3 mg/l 56d Oncorhynchus mykiss (Appl. Sci. Branch, Eng. Res. Cent. Denver, CO: 15p.)
Chronic NOEC for Crustacea	1,17 mg/l 7d Ceriodaphnia dubia (Ecotoxicology and Environmental Safety 39, 136-146)
STYRENE	
LC50 - for Fish	10 mg/l/96h Pimephales promelas (OECD Guideline 203, GLP)
EC50 - for Crustacea	4,7 mg/l/48h Daphnia magna (OECD Guideline 202, GLP)
EC50 - for Algae / Aquatic Plants	4,9 mg/l/72h Selenastrum capricornutum (EPA OTS 797.1050, GLP)
Chronic NOEC for Crustacea	1,01 mg/l/21d Daphnia magna (OECD Guideline 211, GLP)
Methacrylic acid, monoester with propane-1,2-diol	
EC50 - for Crustacea	> 143 mg/l/48h Daphnia magna, according to (OECD Guideline 202)
EC50 - for Algae / Aquatic Plants	> 97,2 mg/l/72h Pseudokirchnerella subcapitata, according to (OECD Guideline 201)
TRIETHYLENE GLYCOL DIMETHACRYLATE	
LC50 - for Fish	16,4 mg/l/96h (Danio rerio) (OECD TG 203: Fish, Acute Toxicity Test)
EC50 - for Algae / Aquatic Plants	72,8 mg/l/72h (Pseudokirchnerella subcapitata, OECD Guideline 201)
Chronic NOEC for Crustacea	32 mg/l 21d (Daphnia magna, OECD Guideline 211)
2,2 '- [(4-methylphenyl) imino] bisethanol	
LC50 - for Fish	> 100 mg/l/96h Cyprinus carpio, according to (OECD Guideline 203)
EC50 - for Crustacea	48 mg/l/48h Daphnia magna, according to (OECD Guideline 202)
EC50 - for Algae / Aquatic Plants	> 100 mg/l/72h Pseudokirchneriella subcapitata, according to (OECD Guideline 201)

12.2. Persistence and degradability

2-hydroxyethyl methacrylate

Rapidly degradable
92-100% after 14 days, according to (OECD Guideline 301 C)

XYLENE (MIXTURE OF ISOMERS)

Solubility in water	100 - 1000 Handbook of aqueous solubility data. mg/l

Rapidly degradable
OECD Guideline 301 F, GLP

DIPROPYLENE GLYCOL MONOMETHYL ETHER

Solubility in water	1000 - 10000 mg/l

Rapidly degradable

STYRENE

Solubility in water	320 mg/l

Rapidly degradable
10 d, 68% according to (ISO DIS 9408)

MALEIC ANHYDRIDE

Solubility in water	> 10000 mg/l

Entirely degradable

Methacrylic acid, monoester with propane-1,2-diol
Rapidly degradable
rapidamente biodegradabile (OECD TG 301 C).

TRIETHYLENE GLYCOL DIMETHACRYLATE
Rapidly degradable
facilmente biodegradabile, 85%, (OECD TG 301 B: CO_2 Evolution Test).

COBALT BIS 2-ETHYL HEXANOATE

Solubility in water	> 10000 mg/l

Rapidly degradable
approximately 60% CO2 evolution over a 10 day interval, according to (OECD Guideline 301 B)

2,2 '- [(4-methylphenyl) imino] bisethanol

Rapidly degradable
According to: OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)

12.3. Bioaccumulative potential

2-hydroxyethyl methacrylate

Partition coefficient: n-octanol/water	0,42 Log Kow (OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)).

XYLENE (MIXTURE OF ISOMERS)

Partition coefficient: n-octanol/water	3,12 American Chemical Society, Washington DC
BCF	25,9 Appl. Sci. Branch, Eng. Res. Cent. Denver, CO: 15p.

DIPROPYLENE GLYCOL MONOMETHYL ETHER

Partition coefficient: n-octanol/water	0,0043

STYRENE

Partition coefficient: n-octanol/water	2,96
BCF	74

MALEIC ANHYDRIDE

Partition coefficient: n-octanol/water	-2,78

Methacrylic acid, monoester with propane-1,2-diol

Partition coefficient: n-octanol/water	2,3 Log Kow (OECD Guideline 117).

TRIETHYLENE GLYCOL DIMETHACRYLATE

Partition coefficient: n-octanol/water	2,3 Log Kow (OECD Guideline 117).

12.4. Mobility in soil

XYLENE (MIXTURE OF ISOMERS)

Partition coefficient: soil/water	2,73 equivalent or similar to OECD Guideline 121

STYRENE

Partition coefficient: soil/water	352 (Section 4.3 of Chapter on QSAR in the TGD)

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. 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

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

Product

Point	3. Liquid substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/ 2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1. 40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to that Regulation or not.

Contained substance

Point	75	CALCIUM CARBONATE
Point	75	CALCIUM CARBONATE Reg. no.: 01-2119486795-18
Point	75	2-hydroxyethyl methacrylate Reg. no.: 01-2119490169-29
Point	75	STYRENE Reg. no.: 01-2119457861-32
Point	75	XYLENE (MIXTURE OF ISOMERS) Reg. no.: 01-2119488216-32
Point	75	MALEIC ANHYDRIDE Reg. no.: 01-2119472428-31-XXXX

Regulation (EC) No. 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 (EC) Reg. 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 been performed for the following contained substances

STYRENE

SECTION 16. Other information

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

Flam. Liq. 3	Flammable liquid, category 3
Repr. 1B	Reproductive toxicity, category 1B
Repr. 2	Reproductive toxicity, category 2
Acute Tox. 4	Acute toxicity, category 4
STOT RE 1	Specific target organ toxicity - repeated exposure, category 1
Asp. Tox. 1	Aspiration hazard, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Skin Corr. 1B	Skin corrosion, category 1B
Eye Dam. 1	Serious eye damage, category 1
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
Resp. Sens. 1	Respiratory sensitization, category 1
Skin Sens. 1	Skin sensitization, category 1
Skin Sens. 1A	Skin sensitization, category 1A
Skin Sens. 1B	Skin sensitization, category 1B
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1

Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H226	Flammable liquid and vapour.
H360	May damage fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

Use descriptor system:

ERC	**8c**	Widespread use leading to inclusion into/onto article (indoor)
ERC	**8e**	Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)
ERC	**8f**	Widespread use leading to inclusion into/onto article (outdoor)
PROC	**10**	Roller application or brushing
PROC	**13**	Treatment of articles by dipping and pouring
PROC	**15**	Use as laboratory reagent
PROC	**18**	General greasing /lubrication at high kinetic energy conditions
PROC	**19**	Manual activities involving hand contact
PROC	**5**	Mixing or blending in batch processes
PROC	**8a**	Transfer of substance or mixture (charging and discharging) at non- dedicated facilities
PROC	**8b**	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC	**9**	Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

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
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)
17. Regulation (EU) 2019/1148
18. Regulation (EU) 2020/217 (XIV 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.

Training for workers:
Worker training should include content, updates and duration depending on the risk profiles assigned to the business sectors they belong

Changes to previous review:

The following sections were modified:
01 / 02 / 03 / 04 / 05 / 07 / 08 / 09 / 10 / 11 / 12 / 14 / 15 / 16.