Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878

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

1.1. Product identifier

Code: **22M**
Product name **EASY-LAST COAT (A)**

UFI : **K3G1-40AP-A00Q-96VQ**

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

Intended use **Bi-component coloured top coat**

1.3. Details of the supplier of the safety data sheet

Name **NORD RESINE S.p.A.**
Full address **Via Fornace Vecchia, 79**
District and Country **31058 Susegana (TV)**
Italia
Tel. +39 0438-437511
Fax +39 0438-435155

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

Supplier: **NORD RESINE S.p.A.**

1.4. Emergency telephone number

For urgent inquiries refer to **+39 0438 437511**

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:

Flammable liquid, category 3	H226	Flammable liquid and vapour.

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:

H226 Flammable liquid and vapour.
EUH208 Contains: Fatty acids, tall-oil, compds. with oleylamine
1,6-esandiil-bis(2-(2-(1-etilpentil)-3-ossazolidinil)etil)carbammato
May produce an allergic reaction.

SECTION 2. Hazards identification ... / >>

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P370+P378	In case of fire: use carbon anhydride, foam, nebulized water to extinguish.

VOC (Directive 2004/42/EC) :
Two-pack reactive performance coatings for specific end use such as floors.

VOC given in g/litre of product in a ready-to-use condition :		147,18
Limit value:		500,00
- Catalysed with :	33,33 %	EASY-LAST COAT (B)

2.3. Other hazards

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

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

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification		x = Conc. %	Classification (EC) 1272/2008 (CLP)
TITANIUM DIOXIDE			
INDEX		7 ≤ x < 11	**EUH212**
EC	*236-675-5*		
CAS	*13463-67-7*		
REACH Reg.	*01-2119489379-17*		
2,2,4-TRIMETHYL-1,3-PENTANEDIOL			
INDEX		1 ≤ x < 3	**Eye Irrit. 2 H319**
EC	*205-619-1*		
CAS	*144-19-4*		
REACH Reg.	*01-2119941373-40*		
2-BUTYL-2-ETHYL-1,3-PROPANEDIOL			
INDEX		1 ≤ x < 3	**Eye Irrit. 2 H319**
EC	*204-111-7*		
CAS	*115-84-4*		
REACH Reg.	*01-2119450133-52*		
Reaction mass of ethylbenzene and m-xylene and p-xylene			
INDEX		1 ≤ x < 3	**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 according to Annex VI to the CLP Regulation: C**
EC	*905-562-9*		**ATE Dermal: 1100 mg/kg, ATE Inhalation vapours: 11 mg/l**
CAS			
REACH Reg.	*01-2119555267-33*		
Propylidynetrimethanol			
INDEX		1 ≤ x < 3	**Repr. 2 H361fd**
EC	*201-074-9*		
CAS	*77-99-6*		
REACH Reg.	*01-2119486799-10*		
2-METHOXY-1-METHYLETHYL ACETATE			
INDEX	*607-195-00-7*	1 ≤ x < 3	**Flam. Liq. 3 H226, STOT SE 3 H336**
EC	*203-603-9*		
CAS	*108-65-6*		
REACH Reg.	*01-2119475791-29*		
1,6-esandiil-bis(2-(2-(1-etilpentil)-3-ossazolidinil)etil)carbammato			
INDEX	*616-079-00-5*	0,5 ≤ x < 1	**Skin Sens. 1 H317**
EC	*411-700-4*		
CAS	*140921-24-0*		
REACH Reg.	*01-0000015906-63*		

SECTION 3. Composition/information on ingredients ... / >>

N-BUTYL ACETATE
INDEX *607-025-00-1* 0,5 ≤ x < 1 **Flam. Liq. 3 H226, STOT SE 3 H336, EUH066**
EC *204-658-1*
CAS *123-86-4*
REACH Reg. *01-2119485493-29*

MIXED XYLENES, ETHYLBENZENE
INDEX *601-022-00-9* 0 < 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, Aquatic Chronic 3 H412, Classification note according to Annex VI to the CLP Regulation: C**
EC *215-535-7* **ATE Dermal: 1100 mg/kg, ATE Inhalation vapours: 11 mg/l**
CAS *1330-20-7*
REACH Reg. *01-2119488216-32*

Hydrocarbons, C10-C12, isoalkanes, <2% aromatics
INDEX 0 < x < 0,1 **Flam. Liq. 3 H226, Asp. Tox. 1 H304, Aquatic Chronic 2 H411, EUH066**
EC *923-037-2* **EUH066: ≥ 0%**
CAS
REACH Reg. *01-2119471991-29*

Fatty acids, tall-oil, compds. with oleylamine
INDEX 0 < x < 0,1 **STOT RE 2 H373, Eye Dam. 1 H318, Skin Sens. 1A H317**
EC *288-315-1*
CAS *85711-55-3*
REACH Reg. *01-2119974148-28*

ETHYLBENZENE
INDEX *601-023-00-4* 0 < x < 0,1 **Flam. Liq. 2 H225, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Aquatic Chronic 3 H412**
EC *202-849-4* **LC50 Inhalation vapours: 17,2 mg/l/4h**
CAS *100-41-4*
REACH Reg. *01-2119489370-35*

TOLUENE
INDEX *601-021-00-3* 0 < x < 0,1 **Flam. Liq. 2 H225, Repr. 2 H361d, Asp. Tox. 1 H304, STOT RE 2 H373, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Chronic 3 H412**
EC *203-625-9*
CAS *108-88-3*
REACH Reg. *01-2119471310-51*

XYLENE (MIXTURE OF ISOMERS)
INDEX *601-022-00-9* 0 < 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 according to Annex VI to the CLP Regulation: C**
EC *215-535-7* **ATE Dermal: 1100 mg/kg, ATE Inhalation vapours: 11 mg/l**
CAS *1330-20-7*
REACH Reg. *01-2119488216-32*

ETHYLBENZENE
INDEX *601-023-00-4* 0 < x < 0,1 **Flam. Liq. 2 H225, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373**
EC *202-849-4* **LC50 Inhalation vapours: 17,2 mg/l/4h**
CAS *100-41-4*
REACH Reg. *01-2119489370-35*

QUARTZ
INDEX 0 < x < 0,1 **STOT RE 1 H372**
EC *238-878-4*
CAS *14808-60-7*

ETHYL METHYL KETONE
INDEX *606-002-00-3* 0 < x < 0,1 **Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066**
EC *201-159-0*
CAS *78-93-3*
REACH Reg. *01-2119457290-43*

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

No effects requiring implementation of special first aid measures are expected. The following information represents practical indications of correct behaviour in the event of contact with a chemical product, even if not hazardous.
In case of doubt or in the presence of symptoms contact a doctor and show him this document.
In case of more severe symptoms, ask for immediate medical aid.
EYES: Remove, if present, contact lenses if the situation allows you to do so easily. Wash immediately with plenty of water for at least 15

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

minutes, opening the eyelids fully. Get medical advice/attention.
SKIN: Take off contaminated clothing. Wash immediately and thoroughly with running water (and soap if possible). Get medical advice. Avoid further contact with contaminated clothing.
INGESTION: Do not induce vomiting unless explicitly authorised by a doctor. Do not give anything by mouth to an unconscious person. Get medical advice/attention.
INHALATION: Remove victim to fresh air, away from the accident scene. Get medical advice/attention.

Rescuer protection

It is good practice for rescuers lending support to a person who has been exposed to a chemical substance or to a mixture to wear personal protective equipment. The nature of such protection depends on the hazard level of the substance or mixture, on the type of exposure and on the extent of the contamination. In the absence of other more specific indications, use of disposable gloves in the event of possible contact with body fluids is recommended. For the type of PPE suitable for the characteristics of the substance or mixture, see section 8.

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

Specific information on symptoms and effects caused by the product are unknown.

DELAYED EFFECTS: Based on the information currently available, there are no known cases of delayed effects following exposure to this product.

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

If symptoms occur, whether acute or delayed, consult a doctor.
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Treatment: see section 4.1

Means to have available in the workplace for specific and immediate treatment

Running water for skin and eye wash.

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.

Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

SECTION 6. Accidental release measures ... / >>

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.

2-METHOXY-1-METHYLETHYL ACETATE
Store in an inert atmosphere, sheletered from moisture because it hydrolises easily.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory references:

CZE	Česká Republika	NAŘÍZENÍ VLÁDY ze dne 10. května 2021, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci
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 FranceDécret n° 2021-1849 du 28 décembre 2021
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''»
HUN	Magyarország	Az innovációért és technológiáért felelős miniszter 5/2020. (II. 6.) ITM rendelete a kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
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
POL	Polska	Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
ROU	România	Hotărârea nr. 53/2021 pentru modificarea hotărârii guvernului nr. 1.218/2006, precum și pentru modificarea și completarea hotărârii guvernului nr. 1.093/2006
RUS	Россия	ПОСТАНОВЛЕНИЕ от 13 февраля 2018 г. N 25 ОБ УТВЕРЖДЕНИИ ГИГИЕНИЧЕСКИХ

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

		НОРМАТИВОВ ГН 2.2.5.3532-18 "ПРЕДЕЛЬНО ДОПУСТИМЫЕ КОНЦЕНТРАЦИИ (ПДК) ВРЕДНЫХ ВЕЩЕСТВ В ВОЗДУХЕ РАБОЧЕЙ ЗОНЫ"
SVN	Slovenija	Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu (Uradni list RS, št. 100/01, 39/05, 53/07, 102/10, 43/11 – ZVZD-1, 38/15, 78/18 in 78/19)
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
EU	OEL EU	Directive (EU) 2022/431; 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 2023

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					
TLV	GRC		10				
GVI/KGVI	HRV	10				INHAL	
GVI/KGVI	HRV	4				RESP	
NDS/NDSCh	POL	10				INHAL	
TLV	ROU	10		15			
ПДК	RUS	10					а, Ф
WEL	GBR	10				INHAL	
WEL	GBR	4				RESP	
TLV-ACGIH		0,2				RESP	

2-METHOXY-1-METHYLETHYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
TLV	CZE	270	49,14	550	100,1	SKIN	
AGW	DEU	270	50	270	50		
MAK	DEU	270	50	270	50		
VLA	ESP	275	50	550	100	SKIN	
VLEP	FRA	275	50	550	100	SKIN	
TLV	GRC	275	50	550	100		
AK	HUN	275	50	550	100		
GVI/KGVI	HRV	275	50	550	100	SKIN	
VLEP	ITA	275	50	550	100	SKIN	Allegato XXXVIII D.Lgs. 81/08
TGG	NLD	550					
VLE	PRT	275	50	550	100	SKIN	
NDS/NDSCh	POL	260		520		SKIN	
TLV	ROU	275	50	550	100	SKIN	
ПДК	RUS			10			п
MV	SVN	275	50	550	100	SKIN	
WEL	GBR	274	50	548	100	SKIN	
OEL	EU	275	50	550	100	SKIN	

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,635	mg/l
Normal value in marine water	0,0635	mg/l
Normal value for fresh water sediment	3,29	mg/kg
Normal value for marine water sediment	0,329	mg/kg
Normal value for water, intermittent release	6,35	mg/l
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	0,29	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/d				
Inhalation				33 mg/m3				275 mg/m3
Skin				54,8 mg/kg/d				153,5 mg/kg/d

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

QUARTZ

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP		0,05			RESP
VLEP	FRA	0,1				RESP
GVI/KGVI	HRV	0,1				
VLEP	ITA	0,1				RESP
TGG	NLD	0,075				RESP
VLE	PRT	0,025				RESP
NDS/NDSCh	POL	0,1				RESP
TLV	ROU	0,1				RESP
MV	SVN	0,15				RESP
OEL	EU	0,1				RESP
TLV-ACGIH		0,025				RESP

TOLUENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
TLV	CZE	192	50,112	384	100,224	SKIN	
AGW	DEU	190	50	760	200	SKIN	
MAK	DEU	190	50	380	100	SKIN	
VLA	ESP	192	50	384	100	SKIN	
VLEP	FRA	76,8	20	384	100	SKIN	
TLV	GRC	192	50	384	100		
AK	HUN	192	50	384	100	SKIN	
GVI/KGVI	HRV	192	50	384	100	SKIN	
VLEP	ITA	192	50			SKIN	Allegato XXXVIII D.Lgs. 81/08
TGG	NLD	150		384			
VLE	PRT	192	50	384	100	SKIN	
NDS/NDSCh	POL	100		200		SKIN	
TLV	ROU	192	50	384	100	SKIN	
ПДК	RUS	50		150			п
MV	SVN	192	50	384	100	SKIN	
WEL	GBR	191	50	384	100	SKIN	
OEL	EU	192	50	384	100	SKIN	
TLV-ACGIH			20				

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,68	mg/l
Normal value in marine water	0,68	mg/l
Normal value for fresh water sediment	16,39	mg/kg/d
Normal value for marine water sediment	16,39	mg/kg/d
Normal value of STP microorganisms	13,61	mg/l
Normal value for the terrestrial compartment	2,89	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
Inhalation	226 mg/m3	226 mg/m3	56,5 mg/m3	56,5 mg/m3	384 mg/m3	384 mg/m3	192 mg/m3	192 mg/m3
Skin	LOW	NPI	NPI	226 mg/kg bw/d	LOW	NPI	NPI	384 mg/kg bw/d

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

ETHYLBENZENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
TLV	CZE	200	45,4	500	113,5	SKIN	
AGW	DEU	88	20	176	40	SKIN	
MAK	DEU	88	20	176	40	SKIN	
VLA	ESP	441	100	884	200	SKIN	
VLEP	FRA	88,4	20	442	100	SKIN	
TLV	GRC	435	100	545	125		
AK	HUN	442	100	884	200	SKIN	
GVI/KGVI	HRV	442	100	884	200	SKIN	
VLEP	ITA	442	100	884	200	SKIN	Allegato XXXVIII D.Lgs. 81/08
TGG	NLD	215		430		SKIN	
VLE	PRT	442	100	884	200	SKIN	
NDS/NDSCh	POL	200		400		SKIN	
TLV	ROU	442	100	884	200	SKIN	
ПДК	RUS	50		150			п
MV	SVN	442	100	884	200	SKIN	
WEL	GBR	441	100	552	125	SKIN	
OEL	EU	442	100	884	200	SKIN	
TLV-ACGIH		87	20				

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,1	mg/l
Normal value in marine water	0,01	mg/l
Normal value for fresh water sediment	13,7	mg/kg/d
Normal value for marine water sediment	1,37	mg/kg/d
Normal value for marine water, intermittent release	0,1	mg/l
Normal value of STP microorganisms	9,6	mg/l
Normal value for the food chain (secondary poisoning)	20	mg/kg
Normal value for the terrestrial compartment	2,68	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		1,6 mg/kg bw/d				
Inhalation	LOW	LOW	LOW	15 mg/m3	293 mg/m3	LOW	442 mg/m3	77 mg/m3
Skin	NPI	NPI	NPI	NPI	NPI	NPI	NPI	180 mg/kg bw/d

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

ETHYL METHYL KETONE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	600	200,4	900	300,6	
AGW	DEU	600	200	600	200	SKIN
MAK	DEU	600	200	600	200	SKIN
VLA	ESP	600	200	900	300	
VLEP	FRA	600	200	900	300	SKIN
TLV	GRC	600	200	900	300	
AK	HUN	600	200	900	300	SKIN
GVI/KGVI	HRV	600	200	900	300	
VLEP	ITA	600	200	900	300	
TGG	NLD	590		500		SKIN
VLE	PRT	600	200	900	300	
NDS/NDSCh	POL	450		900		SKIN
TLV	ROU	600	200	900	300	
ПДК	RUS	200		400		п
MV	SVN	600	200	900	300	SKIN
WEL	GBR	600	200	899	300	SKIN
OEL	EU	600	200	900	300	
TLV-ACGIH		590	200	885	300	

Predicted no-effect concentration - PNEC

Normal value in fresh water	55,8	mg/l
Normal value in marine water	55,8	mg/l
Normal value for fresh water sediment	284,74	mg/kg
Normal value of STP microorganisms	709	mg/l
Normal value for the food chain (secondary poisoning)	100	mg/kg
Normal value for the terrestrial compartment	22,5	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				31 mg/kg bw/d				
Inhalation				106 mg/m3				600 mg/m3
Skin				412 mg/kg bw/d				1161 mg/kg bw/d

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

N-BUTYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	241		723		
AGW	DEU	300	62	600	124	
MAK	DEU	480	100	960	200	
VLA	ESP	241	50	723	150	
VLEP	FRA	241	50	723	150	
TLV	GRC	710	150	950	200	
AK	HUN	241	50	723	150	
GVI/KGVI	HRV	241	50	723	150	
VLEP	ITA	241	50	723	150	Allegato XXXVIII D.Lgs. 81/08
TGG	NLD	150				
VLE	PRT	241	50	723	150	
NDS/NDSCh	POL	240		720		
TLV	ROU	241	50	723	150	
ПДК	RUS			0,1		п
MV	SVN	300	62	600	124	
WEL	GBR	724	150	966	200	
OEL	EU	241	50	723	150	
TLV-ACGIH			50		150	

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,18	mg/l
Normal value in marine water	0,018	mg/l
Normal value for fresh water sediment	0,981	mg/kg/d
Normal value for marine water sediment	0,0981	mg/kg/d
Normal value for water, intermittent release	0,36	mg/l
Normal value of STP microorganisms	35,6	mg/l
Normal value for the terrestrial compartment	0,0903	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		2 mg/kg/d		2 mg/kg/d				
Inhalation	300 mg/m3	300 mg/m3	35,7 mg/m3	35,7 mg/m3	600 mg/m3	600 mg/m3	300 mg/m3	300 mg/m3
Skin		6 mg/kg/d		6 mg/kg/d		11 mg/kg bw/d		11 mg/kg bw/d

1,6-esandiil-bis(2-(2-(1-etilpentil)-3-ossazolidinil)etil)carbammato

Predicted no-effect concentration - PNEC

Normal value in fresh water	43	µg/L
Normal value in marine water	430	µg/L
Normal value for fresh water sediment	164,5	mg/kg
Normal value for marine water sediment	16,5	mg/kg
Normal value for water, intermittent release	0,43	mg/l
Normal value for marine water, intermittent release	4,3	µg/L
Normal value of STP microorganisms	35	mg/l
Normal value for the terrestrial compartment	32,9	mg/kg
Normal value for the atmosphere	NPI	

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		0,33 mg/kg bw/d				
Inhalation	NPI	NPI	NPI	0,58 mg/m3	NPI	NPI	NPI	3,3 mg/m3
Skin	MED	NPI	MED	3,3 mg/kg bw/d	MED	NPI	MED	9,3 mg/kg bw/d

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

Fatty acids, tall-oil, compds. with oleylamine

Predicted no-effect concentration - PNEC

Normal value in fresh water	NPI	
Normal value in marine water	NPI	
Normal value for fresh water sediment	NEA	
Normal value for marine water sediment	NEA	
Normal value of STP microorganisms	NPI	
Normal value for the food chain (secondary poisoning)	470	µg/kg
Normal value for the terrestrial compartment	NEA	
Normal value for the atmosphere	NPI	

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		12,0 µg/kg				
Inhalation		NEA	NEA	NEA	NEA	NEA	NEA	NEA
Skin		NPI	HIGH	12,0 µg/kg	HIGH	NPI	HIGH	24,0 µg/kg

2,2,4-TRIMETHYL-1,3-PENTANEDIOL

Predicted no-effect concentration - PNEC

Normal value in fresh water	109,1	µg/L
Normal value in marine water	1,091	mg/l
Normal value for fresh water sediment	903	µg/kg
Normal value for marine water sediment	90,3	µg/kg
Normal value for marine water, intermittent release	10,91	µg/L
Normal value of STP microorganisms	20	mg/l
Normal value for the terrestrial compartment	117	µg/kg
Normal value for the atmosphere	NPI	

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		18,0 mg/kg		6,0 mg/kg				
Inhalation		NPI	NPI	2,6 mg/m³	NPI	NPI	NPI	6,61 mg/m³
Skin		NPI	NPI	6,0 mg/kg	NPI	LOW	NPI	7,03 mg/kg

2-BUTYL-2-ETHYL-1,3-PROPANEDIOL

Predicted no-effect concentration - PNEC

Normal value in fresh water	100	µg/L
Normal value in marine water	1	mg/l
Normal value for marine water, intermittent release	10	µg/L
Normal value of STP microorganisms	6,5	mg/l

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		750,0 µg/kg				
Inhalation		NPI	NPI	1,3 mg/m³	NPI	NPI	NPI	5,3 mg/m³
Skin		NPI	NPI	750,0 µg/kg	NPI	NPI	NPI	1,5 mg/kg

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

Reaction mass of ethylbenzene and m-xylene and p-xylene

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLEP	ITA	221	50	442	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	0,25	mg/l
Normal value in marine water	0,25	mg/l
Normal value for marine water sediment	14,33	mg/kg
Normal value for the terrestrial compartment	2,41	mg/kg

MIXED XYLENES, ETHYLBENZENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	200		400		SKIN
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	
AK	HUN	221		442		SKIN
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
NDS/NDSCh	POL	100				
MV	SVN	221	50			SKIN
WEL	GBR	220	50	441	100	
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 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		NPI		5 mg/kg bw/d				
Inhalation	260 mg/m3	260 mg/m3	65,3 mg/m3	65,3 mg/m3	442 mg/m3	442 mg/m3	221 mg/m3	221 mg/m3
Skin	LOW	LOW	NPI	125 mg/kg bw/d		LOW		212 mg/kg bw/d

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

XYLENE (MIXTURE OF ISOMERS)

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	200	46	400	92	SKIN
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 Allegato XXXVIII D.Lgs. 81/08
TGG	NLD	210		442		SKIN
VLE	PRT	221	50	442	100	SKIN
NDS/NDSCh	POL	100		200		SKIN
TLV	ROU	221	50	442	100	SKIN
MV	SVN	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
Normal value for marine water sediment	12,46	mg/kg
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

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								1,6 mg/kg/d
Inhalation				14,8 mg/m3	289 mg/m3	289 mg/m3		77 mg/m3
Skin				108 mg/kg/d				180 mg/kg/d

Propylidynetrimethanol

Predicted no-effect concentration - PNEC

Normal value in fresh water	NPI
Normal value in marine water	NPI
Normal value for fresh water sediment	NPI
Normal value for marine water sediment	NPI
Normal value for water, intermittent release	NPI
Normal value of STP microorganisms	NPI
Normal value for the terrestrial compartment	NPI
Normal value for the atmosphere	NPI

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		0,34 mg/kg bw/d				
Inhalation	NPI	NPI	NPI	0,58 mg/m3	NPI	NPI	NPI	3,3 mg/m3
Skin	NPI	NPI	NPI	0,34 mg/kg bw/d	NPI	NPI	NPI	0,94 mg/kg bw/d

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

ETHYLBENZENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
TLV	CZE	200	45,4	500	113,5	SKIN	
AGW	DEU	88	20	176	40	SKIN	
MAK	DEU	88	20	176	40	SKIN	
VLA	ESP	441	100	884	200	SKIN	
VLEP	FRA	88,4	20	442	100	SKIN	
TLV	GRC	435	100	545	125		
AK	HUN	442		884		SKIN	
GVI/KGVI	HRV	442	100	884	200	SKIN	
VLEP	ITA	442	100	884	200	SKIN	Allegato XXXVIII D.Lgs. 81/08
TGG	NLD	215		430		SKIN	
VLE	PRT	442	100	884	200	SKIN	
NDS/NDSCh	POL	200		400		SKIN	
TLV	ROU	442	100	884	200	SKIN	
ПДК	RUS	50		150			п
MV	SVN	442	100	884	200	SKIN	
WEL	GBR	441	100	552	125	SKIN	
OEL	EU	442	100	884	200	SKIN	
TLV-ACGIH		87	20				

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,1	mg/l
Normal value in marine water	0,01	mg/l
Normal value for fresh water sediment	13,7	mg/kg/d
Normal value for marine water sediment	1,37	mg/kg/d
Normal value for marine water, intermittent release	0,1	mg/l
Normal value of STP microorganisms	9,6	mg/l
Normal value for the food chain (secondary poisoning)	20	mg/kg
Normal value for the terrestrial compartment	2,68	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		1,6 mg/kg bw/d				
Inhalation	LOW	LOW	LOW	15 mg/m3	293 mg/m3	LOW	442 mg/m3	77 mg/m3
Skin	NPI	NPI	NPI	NPI	NPI	NPI	NPI	180 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.
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, permeability time.
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.
Protect your hands with gloves of the following type:
Material: Nitrile rubber (NBR)
In the case of mixtures, work glove resistance to chemical agents must be verified before use, as it is not predictable. Gloves have a wear time that depends on use type and duration.
Thickness: 0,35 mm
Glove thickness must be selected based on the minimum required breakthrough time.
Breakthrough time: 480 min
Glove resistance depends on various elements, such as temperature and other environmental factors.
SKIN PROTECTION
Wear category I professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

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

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.
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
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	liquid	
Colour	various	
Odour	characteristic of solvent	
Odour threshold	not determined	Reason for missing data:not determined
Melting point / freezing point	not determined	Reason for missing data:not determined
Initial boiling point	not determined	Reason for missing data:not determined
Flammability	flammable liquid	
Lower explosive limit	not determined	Reason for missing data:not determined
Upper explosive limit	not determined	Reason for missing data:not determined
Flash point	26 °C	
Auto-ignition temperature	not determined	Reason for missing data:not determined
Decomposition temperature	not determined	Reason for missing data:not determined
pH	not applicable	
Kinematic viscosity	not determined	Reason for missing data:not determined
Solubility	insoluble in water	
Partition coefficient: n-octanol/water	not applicable	
Vapour pressure	not determined	Reason for missing data:not determined
Density and/or relative density	1,6 kg/l	
Relative vapour density	not determined	Reason for missing data:not determined
Particle characteristics	not applicable	

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

VOC (Directive 2004/42/EC) : 5,78 % - 92,54 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.

2-METHOXY-1-METHYLETHYL ACETATE
Stable in normal conditions of use and storage.
With the air it may slowly develop peroxides that explode with an increase in temperature.

TOLUENE
Avoid exposure to: light.
ETHYL METHYL KETONE

SECTION 10. Stability and reactivity ... / >>

Reacts with: light metals,strong oxidants.Attacks various types of plastic materials.Decomposes under the effect of heat.

N-BUTYL ACETATE

Decomposes on contact with: water.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

2-METHOXY-1-METHYLETHYL ACETATE

May react violently with: oxidising substances,strong acids,alkaline metals.

TOLUENE

Risk of explosion on contact with: fuming sulphuric acid,nitric acid,silver perchlorate,nitrogen dioxide,non-metal halogenates,acetic acid,organic nitrocompounds.May form explosive mixtures with: air.May react dangerously with: strong oxidising agents,strong acids,sulphur.

ETHYLBENZENE

Reacts violently with: strong oxidants.Attacks various types of plastic materials.May form explosive mixtures with: air.

ETHYL METHYL KETONE

May form peroxides with: air,light,strong oxidising agents.Risk of explosion on contact with: hydrogen peroxide,nitric acid,sulphuric acid.May react dangerously with: oxidising agents,trichloromethane,alkalis.Forms explosive mixtures with: air.

N-BUTYL ACETATE

Risk of explosion on contact with: strong oxidising agents.May react dangerously with: alkaline hydroxides,potassium tert-butoxide.Forms explosive mixtures with: air.

MIXED XYLENES, ETHYLBENZENE

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

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.

ETHYLBENZENE

Reacts violently with: strong oxidants.Attacks various types of plastic materials.May form explosive mixtures with: air.

10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

ETHYL METHYL KETONE

Avoid exposure to: sources of heat.

N-BUTYL ACETATE

Avoid exposure to: moisture,sources of heat,naked flames.

10.5. Incompatible materials

2-METHOXY-1-METHYLETHYL ACETATE

Incompatible with: oxidising substances,strong acids,alkaline metals.

ETHYL METHYL KETONE

Incompatible with: strong oxidants,inorganic acids,ammonia,copper,chloroform.

N-BUTYL ACETATE

Incompatible with: water,nitrates,strong oxidants,acids,alkalis,zinc.

10.6. Hazardous decomposition products

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

ETHYLBENZENE

May develop: methane,styrene,hydrogen,ethane.

ETHYLBENZENE

May develop: methane,styrene,hydrogen,ethane.

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

SECTION 11. Toxicological information ... / >>

MIXED XYLENES, ETHYLBENZENE
Has a toxic effect on the CNS (encephalopathies). Irritating to the skin, conjunctivae, cornea and respiratory apparatus.

Metabolism, toxicokinetics, mechanism of action and other information

2-METHOXY-1-METHYLETHYL ACETATE
The main route of entry is the skin, whereas the respiratory route is less important due to the low vapour pressure of the product.

Information on likely routes of exposure

2-METHOXY-1-METHYLETHYL ACETATE
WORKERS: inhalation; contact with the skin.

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

ETHYLBENZENE
WORKERS: inhalation; contact with the skin.
POPULATION: ingestion of contaminated food or water; contact with the skin of products containing the substance.

N-BUTYL ACETATE
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 envoronmental air.

ETHYLBENZENE
WORKERS: inhalation; contact with the skin.
POPULATION: ingestion of contaminated food or water; contact with the skin of products containing the substance.

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

2-METHOXY-1-METHYLETHYL ACETATE
Above 100 ppm causes irritation of the eye, nose and oropharynx mucous membranes. At 1000 ppm, disturbance of equilibrium and severe eye irritation can be noticed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and eye irritation with direct contact. No chronic effects on humans have been reported (INCR, 2010).

TOLUENE
Toxic effect on the central and peripheral nervous system with encephalopathy and polyneuritis; irritating for the skin, conjunctiva, cornea and respiratory apparatus.

ETHYLBENZENE
As the counterparts of benzene, may have an acute effect on the central nervous system, with depression, narcosis, often preceded by dizziness and associated with headache (Ispesl). Is irritating for skin, conjunctiva and respiratory tract.

N-BUTYL ACETATE
In humans, the substance's vapours cause irritation of the eyes and nose. In the event of repeated exposure, skin irritation, dermatitis (dryness and cracking of the skin) and keratitis appear.

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

ETHYLBENZENE
As the counterparts of benzene, may have an acute effect on the central nervous system, with depression, narcosis, often preceded by dizziness and associated with headache (Ispesl). Is irritating for skin, conjunctiva and respiratory tract.

Interactive effects

TOLUENE
Certain drugs and other industrial products can interfere with the metabolism of the toluene.

N-BUTYL ACETATE
A case of acute intoxication been reported involving a 33 year old worker while cleaning a tank with a preparation containing xylenes, butyl acetate and ethylene glycol acetate. The person had irritation of the conjunctiva and upper respiratory tract, drowsiness and motor coordination disorders, which disappeared within 5 hours. The symptoms are attributed to poisoning by mixed xylenes and butyl acetate, with a possible synergistic effect responsible for the neurological effects. Cases of vacuolar keratitis are

SECTION 11. Toxicological information ... / >>

reported in workers exposed to a mixture of butyl acetate and isobutanol vapours, but with uncertainty concerning the responsibility of a particular solvent (INRC, 2011).

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 - vapours) of the mixture:	> 20 mg/l
ATE (Oral) of the mixture:	Not classified (no significant component)
ATE (Dermal) of the mixture:	>2000 mg/kg

TITANIUM DIOXIDE

LD50 (Oral):	> 10000 mg/kg Rat

2-METHOXY-1-METHYLETHYL ACETATE

LD50 (Dermal):	> 5000 mg/kg Rat
LD50 (Oral):	5155 mg/kg Rat

TOLUENE

LD50 (Dermal):	12124 mg/kg Rabbit
LD50 (Oral):	5580 mg/kg Rat
LC50 (Inhalation vapours):	28,1 mg/l/4h Rat

ETHYLBENZENE

LD50 (Dermal):	15400 mg/kg Rabbit
LD50 (Oral):	3500 mg/kg Rat
LC50 (Inhalation vapours):	17,2 mg/l/4h Rat

ETHYL METHYL KETONE

LD50 (Dermal):	6480 mg/kg Rabbit
LD50 (Oral):	2737 mg/kg Rat
LC50 (Inhalation vapours):	23,5 mg/l/8h Rat

N-BUTYL ACETATE

LD50 (Dermal):	> 14112 mg/kg Rabbit
LD50 (Oral):	10760 mg/kg Rat
LC50 (Inhalation vapours):	21,1 mg/l/4h Rat

Hydrocarbons, C10-C12, isoalkanes, <2% aromatics

LD50 (Dermal):	> 5000 mg/kg Rabbit
LD50 (Oral):	> 5000 mg/kg Rat
LC50 (Inhalation vapours):	> 4951 mg/l/4h Rat

1,6-esandiil-bis(2-(2-(1-etilpentil)-3-ossazolidinil)etil)carbammato

LD50 (Dermal):	> 2000 mg/kg Rat
LD50 (Oral):	> 2000 mg/kg Rat
LC50 (Inhalation vapours):	> 20 mg/l/4h Rat

Fatty acids, tall-oil, compds. with oleylamine

LD50 (Oral):	2000 mg/kg (rat)

2,2,4-TRIMETHYL-1,3-PENTANEDIOL

LD50 (Dermal):	5000 mg/kg
LD50 (Oral):	2000 mg/kg (rat)
LC50 (Inhalation mists/powders):	4,5 mg/L/6/h (rat)

2-BUTYL-2-ETHYL-1,3-PROPANEDIOL

LD50 (Dermal):	2000 mg/kg (rat)
LD50 (Oral):	2900 mg/kg (rat)

SECTION 11. Toxicological information ... / >>

Reaction mass of ethylbenzene and m-xylene and p-xylene

LD50 (Dermal):	12126 mg/kg Rabbit
ATE (Dermal):	1100 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
LD50 (Oral):	3523 mg/l Rat
LC50 (Inhalation vapours):	27,124 mg/l/4h Rat
ATE (Inhalation vapours):	11 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)

MIXED XYLENES, ETHYLBENZENE

LD50 (Dermal):	4350 mg/kg Rabbit
ATE (Dermal):	1100 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
LD50 (Oral):	3523 mg/kg Rat
LC50 (Inhalation vapours):	26 mg/l/4h Rat

XYLENE (MIXTURE OF ISOMERS)

LD50 (Dermal):	4350 mg/kg Rabbit
ATE (Dermal):	1100 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
LD50 (Oral):	3523 mg/kg Rat
LC50 (Inhalation vapours):	26 mg/l/4h Rat

Propylidynetrimethanol

LD50 (Dermal):	> 10000 mg/kg Rabbit
LD50 (Oral):	14700 mg/kg Rat
LC50 (Inhalation mists/powders):	> 0,85 mg/l/4h Rat

ETHYLBENZENE

LD50 (Dermal):	15400 mg/kg Rabbit
LD50 (Oral):	3500 mg/kg Rat
LC50 (Inhalation vapours):	17,2 mg/l/4h Rat

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

2-METHOXY-1-METHYLETHYL ACETATE
Species: rabbit
Result: non-irritating
Method: OECD 404

N-BUTYL ACETATE
Species: rabbit
Result: non-irritating
Method: OECD 404

2,2,4-TRIMETHYL-1,3-PENTANEDIOL
Species: rabbit
Result: slightly irritating
Method: OECD 404

2-BUTYL-2-ETHYL-1,3-PROPANEDIOL
Species: rabbit
Result: slightly irritating
Method: OECD 404

XYLENE (MIXTURE OF ISOMERS)
Causes irritation (redness, burning sensation), dryness and slight flaking of the skin

Propylidynetrimethanol
Species: Rabbit
Result: slightly irritating

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

SECTION 11. Toxicological information ... / >>

2-METHOXY-1-METHYLETHYL ACETATE
Species: rabbit
Result: non-irritating
Method: OECD 405

N-BUTYL ACETATE
Species: rabbit
Result: non-irritating
Method: OECD 405

2,2,4-TRIMETHYL-1,3-PENTANEDIOL
Species: rabbit
Result: irritating
Method: OECD 405

2-BUTYL-2-ETHYL-1,3-PROPANEDIOL
Species: rabbit
Result: irritating
Method: OECD 405

XYLENE (MIXTURE OF ISOMERS)
Irritating to eyes

Propylidynetrimethanol
Species: Rabbit
Result: slightly irritating

RESPIRATORY OR SKIN SENSITISATION

May produce an allergic reaction.
Contains:
Fatty acids, tall-oil, compds. with oleylamine
1,6-esandiil-bis(2-(2-(1-etilpentil)-3-ossazolidinil)etil)carbammato

2-METHOXY-1-METHYLETHYL ACETATE
Species: guinea pig
Result: non-sensitizing
Method: OECD 406

N-BUTYL ACETATE
Species: guinea pig
Result: non-sensitizing
Method: OECD 406

Skin sensitization

Fatty acids, tall-oil, compds. with oleylamine
Skin sensitization:
Species: mouse
Method: OECD 429
Classification: sensitizing.

2,2,4-TRIMETHYL-1,3-PENTANEDIOL
Skin sensitization:
Species: Guinea pig
Result: negative
Classification: Does not cause skin sensitization.

Propylidynetrimethanol
Species: Mouse
Method: OECD TG 429
Result: negative
Classification: Does not cause skin sensitization.

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

SECTION 11. Toxicological information ... / >>

Does not meet the classification criteria for this hazard class

TOLUENE
Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC) - (IARC, 1999).
The US Environmental Protection Agency (EPA) affirms that "the data is inadequate for an assessment of the carcinogenic potential".

ETHYLBENZENE
Classified in Group 2B (possible human carcinogen) by the International Agency for Research on Cancer (IARC) - (IARC, 2000).
Classified in Group D (not classifiable as a human carcinogen) by the US Environmental Protection Agency (EPA) - (US EPA file on-line 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".

ETHYLBENZENE
Classified in Group 2B (possible human carcinogen) by the International Agency for Research on Cancer (IARC) - (IARC, 2000).
Classified in Group D (not classifiable as a human carcinogen) by the US Environmental Protection Agency (EPA) - (US EPA file on-line 2014).

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

Adverse effects on sexual function and fertility

Propylidynetrimethanol
Species: Rat, male/female
Method: OECD Test Guideline 443
Test type: One-generation study
Application method: Oral
Dosage levels: 0 - 74 - 225 - 750 mg/kg
NOAEL (parents, general toxicity): 74 mg/kg body weight/day
NOAEL (parents, fertility): 225 mg/kg body weight/day
NOAEL (descendants): < 74 mg/kg body weight/day

Adverse effects on development of the offspring

Propylidynetrimethanol
NOAEL (maternal): 74 mg/kg
NOAEL (developmental toxicity): 225 mg/kg body weight/day
LOAEL (teratogenicity): 74 mg/kg
Species: Rat, male and female
Application method: Oral
Dosage levels: 0 - 74 - 225 - 750 mg/kg body weight/day
NOAEL (teratogenicity): 100 mg/kg
NOAEL (maternal): 100 mg/kg
NOAEL (developmental toxicity): 100 mg/kg body weight/day
Species: Rat, female
Application method: Oral
Dosage levels: 0 - 100 - 300 - 1000 mg/kg body weight/day
Method: OECD TG 414

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

Target organs

SECTION 11. Toxicological information ... / >>

ETHYLBENZENE
Test: STOT RE - Route: Inhalation. Auditory system, ears

Fatty acids, tall-oil, compds. with oleylamine
Species: rat
OECD 422 method
Target organs: gastro-intestinal system
Effects: May cause damage to organs in case of prolonged or repeated exposure

XYLENE (MIXTURE OF ISOMERS)
May cause damage to organs (respiratory tract) through prolonged or repeated exposure.

ETHYLBENZENE
Test: STOT RE - Route: Inhalation. Auditory system, ears

Route of exposure

Fatty acids, tall-oil, compds. with oleylamine
Oral

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

11.2. Information on other hazards

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

SECTION 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1. Toxicity

2-METHOXY-1-METHYLETHYL ACETATE

LC50 - for Fish	> 100 mg/l/96h Oncorhynchus mykiss
EC50 - for Crustacea	> 500 mg/l/48h Daphnia magna
Chronic NOEC for Crustacea	> 100 mg/l Daphnia magna

TOLUENE

LC50 - for Fish	5,5 mg/l/96h
EC50 - for Crustacea	3,78 mg/l/48h
EC50 - for Algae / Aquatic Plants	> 134 mg/l/72h

N-BUTYL ACETATE

LC50 - for Fish	18 mg/l/96h Pimephales promelas
EC50 - for Crustacea	44 mg/l/48h Daphnia magna
Chronic NOEC for Crustacea	23 mg/l Daphnia magna

1,6-esandiil-bis(2-(2-(1-etilpentil)-3-ossazolidinil)etil)carbammato

LC50 - for Fish	199,2 mg/l/96h
EC50 - for Crustacea	193 mg/l/48h
EC50 - for Algae / Aquatic Plants	> 29 mg/l/72h
Chronic NOEC for Algae / Aquatic Plants	12,5 mg/l

Fatty acids, tall-oil, compds. with oleylamine

Chronic NOEC for Crustacea	> 2,3 mg/l

2,2,4-TRIMETHYL-1,3-PENTANEDIOL

LC50 - for Fish	700 mg/l/96h
EC50 - for Crustacea	109,1 mg/l/48h
EC50 - for Algae / Aquatic Plants	110,1 mg/l/72h
Chronic NOEC for Algae / Aquatic Plants	110,1 mg/l

SECTION 12. Ecological information ... / >>

2-BUTYL-2-ETHYL-1,3-PROPANEDIOL

LC50 - for Fish	100 mg/l/6h
EC50 - for Crustacea	100 mg/l/48h
EC50 - for Algae / Aquatic Plants	> 94 mg/l/72h
Chronic NOEC for Algae / Aquatic Plants	45 mg/l

Reaction mass of ethylbenzene and m-xylene and p-xylene

LC50 - for Fish	2,6 mg/l/96h p-xilene

Propylidynetrimethanol

LC50 - for Fish	1000 mg/l/96h
EC50 - for Crustacea	13000 mg/l/48h Daphnia magna
Chronic NOEC for Crustacea	> 1000 mg/l Daphnia magna

12.2. Persistence and degradability

TITANIUM DIOXIDE

Solubility in water	< 0,001 mg/l

Degradability: information not available

2-METHOXY-1-METHYLETHYL ACETATE

Solubility in water	> 10000 mg/l
Rapidly degradable	83% (28 d, OECD 301 F)

TOLUENE

Solubility in water	100 - 1000 mg/l

Rapidly degradable

ETHYLBENZENE

Solubility in water	1000 - 10000 mg/l

Rapidly degradable

ETHYL METHYL KETONE

Solubility in water	> 10000 mg/l

Rapidly degradable

N-BUTYL ACETATE

Solubility in water	1000 - 10000 mg/l
Rapidly degradable	>90% (28 d)

1,6-esandiil-bis(2-(2-(1-etilpentil)-3-ossazolidinil)etil)carbammato

Solubility in water	1,679 g/l

Entirely degradable

Fatty acids, tall-oil, compds. with oleylamine

Rapidly degradable

2,2,4-TRIMETHYL-1,3-PENTANEDIOL

Solubility in water	31,5 g/l

Rapidly degradable

2-BUTYL-2-ETHYL-1,3-PROPANEDIOL

Solubility in water	8800 mg/l

Reaction mass of ethylbenzene and m-xylene and p-xylene

Rapidly degradable

MIXED XYLENES, ETHYLBENZENE

Degradability: information not available

XYLENE (MIXTURE OF ISOMERS)

Solubility in water	100 - 1000 mg/l

Degradability: information not available

ETHYLBENZENE

Solubility in water	1000 - 10000 mg/l

Rapidly degradable

SECTION 12. Ecological information ... / >>

12.3. Bioaccumulative potential

2-METHOXY-1-METHYLETHYL ACETATE	
Partition coefficient: n-octanol/water	1,2 Log Kow 20°C - OECD 117
TOLUENE	
Partition coefficient: n-octanol/water	2,73
BCF	90
ETHYLBENZENE	
Partition coefficient: n-octanol/water	3,6
ETHYL METHYL KETONE	
Partition coefficient: n-octanol/water	0,3
N-BUTYL ACETATE	
Partition coefficient: n-octanol/water	2,3 25°C - OECD 117
BCF	15,3
1,6-esandiil-bis(2-(2-(1-etilpentil)-3-ossazolidinil)etil)carbammato	
Partition coefficient: n-octanol/water	6,853
Fatty acids, tall-oil, compds. with oleylamine	
Partition coefficient: n-octanol/water	1
2,2,4-TRIMETHYL-1,3-PENTANEDIOL	
Partition coefficient: n-octanol/water	1,25
2-BUTYL-2-ETHYL-1,3-PROPANEDIOL	
Partition coefficient: n-octanol/water	2,2
Reaction mass of ethylbenzene and m-xylene and p-xylene	
BCF	25,9
MIXED XYLENES, ETHYLBENZENE	
Partition coefficient: n-octanol/water	3,12
BCF	25,9
XYLENE (MIXTURE OF ISOMERS)	
Partition coefficient: n-octanol/water	3,12
BCF	25,9
Propylidynetrimethanol	
Partition coefficient: n-octanol/water	-0,47
BCF	< 17 Cyprinus carpio
ETHYLBENZENE	
Partition coefficient: n-octanol/water	3,6

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ 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.
Waste transportation may be subject to ADR restrictions.
The management of waste arising from the use or dispersal of this product must be organised in accordance with occupational safety regulations. See section 8 for possible need for PPE.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

14.1. UN number or ID number

ADR / RID, IMDG, IATA: UN 1263

14.2. UN proper shipping name

ADR / RID: PAINT or PAINT RELATED MATERIAL
IMDG: PAINT or PAINT RELATED MATERIAL
IATA: PAINT or PAINT RELATED MATERIAL

14.3. Transport hazard class(es)

ADR / RID: Class: 3 Label: 3

IMDG: Class: 3 Label: 3

IATA: Class: 3 Label: 3

14.4. Packing group

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards

ADR / RID: NO
IMDG: not marine pollutant
IATA: NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 30	Limited Quantities: 5 lt	Tunnel restriction code: (D/E)
	Special provision: 163, 367, 650		
IMDG:	EMS: F-E, S-E	Limited Quantities: 5 lt	
IATA:	Cargo:	Maximum quantity: 220 L	Packaging instructions: 366
	Passengers:	Maximum quantity: 60 L	Packaging instructions: 355
	Special provision:	A3, A72, A192	

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: P5c

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006
Product
Point 3 - 40
Contained substance
Point 75

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors
not applicable

Substances in Candidate List (Art. 59 REACH)
On the basis of available data, the product does not contain any SVHC in percentage ≥ than 0,1%.

Substances subject to authorisation (Annex XIV REACH)
None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:
None

Substances subject to the Rotterdam Convention:
None

Substances subject to the Stockholm Convention:
None

Healthcare controls
Information not available

VOC (Directive 2004/42/EC) :
Two-pack reactive performance coatings for specific end use such as floors.

15.2. Chemical safety assessment

A chemical safety assessment has been performed for the following contained substances
2-METHOXY-1-METHYLETHYL ACETATE
ETHYL METHYL KETONE
N-BUTYL ACETATE
Reaction mass of ethylbenzene and m-xylene and p-xylene

SECTION 16. Other information

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

Flam. Liq. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
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
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
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
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H361d	Suspected of damaging the unborn child.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H312	Harmful in contact with skin.

SECTION 16. Other information ... / >>

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.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH212	Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.

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)

SECTION 16. Other information ... / >>

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
24. Delegated Regulation (UE) 2023/1434 (XIX Atp. CLP)
25. Delegated Regulation (UE) 2023/1435 (XX Atp. CLP)
26. Delegated Regulation (UE) 2024/197 (XXI Atp. CLP)

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.

CALCULATION METHODS FOR CLASSIFICATION
Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:
The following sections were modified:
01 / 09.