Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH

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

1.1. Product identifier

Product name **PLT 33 WHITE: 160, 160 HD,**
UFI : **4QD2-80XF-V00K-5Q0G**

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

Intended use **Pad printing ink.**

1.3. Details of the supplier of the safety data sheet

Name **COMEC ITALIA SRL**
Full address **Piazzale del lavoro 149**
District and Country **21044 Cavaria (VA)**
ITALIA

Tel. +39 0331 219516

Fax +39 0331 216161

e-mail address of the competent person responsible for the Safety Data Sheet **info@comec-italia.it**
Supplier: **Edgardo Baggini**

1.4. Emergency telephone number

For urgent inquiries refer to **CENTRO ANTIVELENI OSPEDALE NIGUARDA MILANO Tel. 02/66101029 (24/24h) - CENTRO ANTIVELENI POLICLINICO A.GEMELL ROMA Tel. 06/3054343 (24/24h) -**

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.
Serious eye damage, category 1	H318	Causes serious eye damage.
Skin irritation, category 2	H315	Causes skin irritation.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

Signal words: Danger

Hazard statements:

H226	Flammable liquid and vapour.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains: Phthalic anhydride with less than 0,05% of maleic anhydride May produce an allergic reaction.

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P310	Immediately call a POISON CENTER or a doctor.
P370+P378	In case of fire: use chemical powder, CO2 or dry send to extinguish.
P264	Wash the hands thoroughly after handling.

Contains: CYCLOHEXANONE
BUTANOL

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 -	27 ≤ x < 28,5	
EC 236-675-5		
CAS 13463-67-7		
CYCLOHEXANONE		
INDEX 606-010-00-7	10,5 ≤ x < 12	Flam. Liq. 3 H226, Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Eye Dam. 1 H318, Skin Irrit. 2 H315
EC 203-631-1		LD50 Oral: 1535 mg/kg, LD50 Dermal: 1100 mg/kg, LC50 Inhalation vapours:

		11 mg/l/4h
CAS 108-94-1		
REACH Reg. 01-2119453616-35-xxxx		
BUTYLGLYCOL ACETATE		
INDEX 607-038-00-2	8 ≤ x < 9	Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332
EC 203-933-3		LD50 Oral: 1880 mg/kg, LD50 Dermal: 1500 mg/kg, STA Inhalation vapours: 11 mg/l
CAS 112-07-2		
REACH Reg. 01-2119475112-47xxxx		
2-METHOXY-1-METHYLETHYL ACETATE		
INDEX 607-195-00-7	6 ≤ x < 7	Flam. Liq. 3 H226, STOT SE 3 H336
EC 203-603-9		
CAS 108-65-6		
REACH Reg. 01-2119475791-29-xxxx		
AROMATIC HYDROCARBONS, C9		
INDEX -	5 ≤ x < 6	Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H335, STOT SE 3 H336, Aquatic Chronic 2 H411, EUH066, Classification note according to Annex VI to the CLP Regulation: P
EC 918-668-5		
CAS -		
REACH Reg. 01-2119455851-35-xxxx		
XYLENE (MIXTURE OF ISOMERS)		
INDEX 601-022-00-9	2,5 ≤ 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, Aquatic Chronic 3 H412, Classification note according to Annex VI to the CLP Regulation: C
EC 215-535-7		STA Dermal: 1100 mg/kg, LC50 Inhalation vapours: 11,58 mg/l/4h
CAS 1330-20-7		
REACH Reg. 01-2119488216-32-xxxx		
BUTANOL		
INDEX 603-004-00-6	2 ≤ x < 2,5	Flam. Liq. 3 H226, Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335, STOT SE 3 H336
EC 200-751-6		STA Oral: 500 mg/kg
CAS 71-36-3		
REACH Reg. 01-2119484630-38		
ETHYLBENZENE		
INDEX 601-023-00-4	0,24 ≤ x < 0,25	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-xxxx		
CHLOROBENZENE		
INDEX 602-033-00-1	0,21 ≤ x < 0,22	Flam. Liq. 3 H226, Acute Tox. 4 H332, Skin Irrit. 2 H315, Aquatic Chronic 2 H411
EC 203-628-5		LC50 Inhalation vapours: 15,5 mg/l/4h
CAS 108-90-7		
REACH Reg. 01-2119432722-45-xxxx		
Phthalic anhydride with less than		

0,05% of maleic anhydride

INDEX 607-009-00-4	0,12 ≤ x < 0,14	Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335, Resp. Sens. 1 H334, Skin Sens. 1 H317, EUH208
EC 201-607-5		STA Oral: 500 mg/kg
CAS 85-44-9		
REACH Reg. 01-2119457017-41		

N-BUTYL ACETATE

INDEX 607-025-00-1	0,03 ≤ x < 0,05	Flam. Liq. 3 H226, STOT SE 3 H336, EUH066
EC 204-658-1		
CAS 123-86-4		
REACH Reg. 01-2119485493-29-xxxx		

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

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.
SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Wash contaminated clothing before using it again.
INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.
INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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
Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.
UNSUITABLE EXTINGUISHING EQUIPMENT
Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Excess pressure may form in containers exposed to fire at a risk of explosion. 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.

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)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

BGR	България	НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. ЗА ЗАЩИТА НА РАБОТЕЩИТЕ ОТ РИСКОВЕ, СВЪРЗАНИ С ЕКСПОЗИЦИЯ НА ХИМИЧНИ АГЕНТИ ПРИ РАБОТА (изм. ДВ. бр.5 от 17 Януари 2020г.)
CZE	Česká Republika	Nařízení vlády č. 41/2020 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů
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
DNK	Danmark	Bekendtgørelse om grænseværdier for stoffer og materialer - BEK nr 1458 af 13/12/2019
ESP	España	Límites de exposición profesional para agentes químicos en España 2021
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
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 şi pentru modificarea şi completarea hotărârii guvernului nr. 1.093/2006
SWE	Sverige	Hygieniska gränsvärden, Arbetsmiljöverkets föreskrifter och allmänna råd om hygieniska gränsvärden (AFS 2018:1)
TUR	Türkiye	Kimyasal Maddelerle Çalışmalarda Sağlık ve Güvenlik Önlemleri Hakkında Yönetmelik 12.08.2013 / 28733
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 2021

TITANIUM DIOXIDE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	10				RESP
TLV	DNK	6				Som Ti
VLA	ESP	10				
VLEP	FRA	10				
NDS/NDSCh	POL	10				INHAL
TLV	ROU	10		15		
NGV/KGV	SWE	5				Totaldamm
WEL	GBR	10				INHAL
WEL	GBR	4				RESP
TLV-ACGIH		2,5				RESP

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,127	mg/l
Normal value in marine water	1	mg/l
Normal value for fresh water sediment	1000	mg/kg
Normal value for marine water sediment	100	mg/kg
Normal value for water, intermittent release	0,61	mg/l
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	100	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				700 mg/m3					
Inhalation									10 mg/m3

CYCLOHEXANONE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
TLV	BGR	40,8	10	81,6	20	SKIN	
TLV	CZE	40	9,8	80	196	SKIN	
AGW	DEU	80	20	80	20	SKIN	
TLV	DNK	41	10			SKIN	E
VLA	ESP	41	10	82	20	SKIN	
VLEP	FRA	40,8	10	81,6	20		
VLEP	ITA	40,8	10	81,6	20	SKIN	
TGG	NLD			50		SKIN	
VLE	PRT	40,8	10	81,6	20	SKIN	
NDS/NDSCh	POL	40		80		SKIN	
TLV	ROU	40,8	10	81,6	20	SKIN	
NGV/KGV	SWE	41	10	81	20	SKIN	
ESD	TUR	40,8	10	81,6	20	SKIN	
WEL	GBR	41	10	82	20	SKIN	
OEL	EU	40,8	10	81,6	20	SKIN	
TLV-ACGIH		80	20	201	50	SKIN	

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	0,512	mg/kg
Normal value for marine water sediment	0,0512	mg/kg
Normal value for water, intermittent release	0,329	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,0435	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				1,5 mg/kg bw/d				
Inhalation			VND	10 mg/m3			VND	40 mg/m3
Skin			VND	1 mg/kg bw/d			VND	4 mg/kg bw/d

Polymer based on vinyl compounds

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLEP	ITA	2	1			

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								1 mg/m3

BUTYLGLYCOL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
TLV	BGR	133	20	333	50	SKIN	
TLV	CZE	130	19,5	300	45	SKIN	
AGW	DEU	65	10	130 (C)	20 (C)	SKIN	11
MAK	DEU	66	10	132	20	SKIN	Hinweis
TLV	DNK	134	20			SKIN	E
VLA	ESP	133	20	333	50	SKIN	
VLEP	FRA	66,5	10	333	50		
VLEP	ITA	133	20	333	50	SKIN	
TGG	NLD	135		333		SKIN	
VLE	PRT	133	20	333	50	SKIN	
NDS/NDSCh	POL	100		300		SKIN	
TLV	ROU	133	20	333	50	SKIN	
NGV/KGV	SWE	70	10	333	50	SKIN	
ESD	TUR	133	20	333	50	SKIN	
WEL	GBR	133	20	332	50	SKIN	
OEL	EU	133	20	333	50	SKIN	
TLV-ACGIH		131	20				

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,304	mg/l
Normal value in marine water	0,03	mg/l
Normal value for fresh water sediment	2,03	mg/l
Normal value for marine water sediment	0,203	mg/l
Normal value for water, intermittent release	0,56	mg/l
Normal value of STP microorganisms	90	mg/l
Normal value for the food chain (secondary poisoning)	60	mg/kg
Normal value for the terrestrial compartment	0,415	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	36 mg/kg/d	VND	4,3 mg/kg/d				
Inhalation	200 mg/m3	499 mg/m3	VND	80 mg/m3	333 mg/m3	773 mg/m3	VND	133 mg/m3
Skin		72 mg/kg bw/d	VND	102 mg/kg/d	102 mg/kg/d	27 mg/kg/d	VND	169 mg/kg/d

2-METHOXY-1-METHYLETHYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	

TLV	BGR	275	50	550	100	SKIN	
TLV	CZE	270	49,14	550	100,1	SKIN	
AGW	DEU	270	50	270	50		
MAK	DEU	270	50	270	50		
TLV	DNK	275	50			SKIN	E
VLA	ESP	275	50	550	100	SKIN	
VLEP	FRA	275	50	550	100	SKIN	
VLEP	ITA	275	50	550	100	SKIN	
TGG	NLD	550					
VLE	PRT	275	50	550	100	SKIN	
NDS/NDSCh	POL	260		520		SKIN	
TLV	ROU	275	50	550	100	SKIN	
NGV/KGV	SWE	275	50	550	100	SKIN	
ESD	TUR	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/l
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			VND	1,67 mg/kg				
Inhalation			33 mg/m3	33 mg/m3	550 mg/m3		VND	275 mg/m3
Skin			VND	54,8 mg/kg			VND	153,5 mg/kg

AROMATIC HYDROCARBONS, C9

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLEP	ITA	100	20			1,2,3 trimetilbenzene
OEL	EU	100	20			1,2,3 trimetilbenzene
TLV-ACGIH			25			1,2,3 trimetilbenzene

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	11 mg/kg				11 mg/kg bw/d
Inhalation			VND	32 mg/m3			VND	150 mg/m3

Skin	VND	11 mg/kg		VND	25 mg/kg

XYLENE (MIXTURE OF ISOMERS)

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	221	50	442	100	SKIN
TLV	CZE	200	45,4	400	90,8	SKIN
AGW	DEU	440	100	880	200	SKIN
MAK	DEU	440	100	880	200	SKIN
TLV	DNK	109	25			SKIN E
VLA	ESP	221	50	442	100	SKIN
VLEP	FRA	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		200		SKIN
TLV	ROU	221	50	442	100	SKIN
NGV/KGV	SWE	221	50	442	100	SKIN
ESD	TUR	221	50	442	100	SKIN
WEL	GBR	220	50	441	100	SKIN
OEL	EU	221	50	442	100	SKIN
TLV-ACGIH			20			

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			VND	1,6 mg/kg/d				
Inhalation	174 mg/m3	174 mg/m3	VND	14,8 mg/m3	289 mg/m3	289 mg/m3	77 mg/m3	77 mg/m3
Skin			VND	108 mg/kg/d	174 mg/m3	VND	VND	180 mg/kg

BUTANOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	100		150		
TLV	CZE	300	97,5	600	195	

AGW	DEU	310	100	310	100		
MAK	DEU	310	100	310	100		
TLV	DNK			150 (C)	50 (C)	SKIN	
VLA	ESP	61	20	154	50		
VLEP	FRA			150	50		
TGG	NLD			45			
NDS/NDSCh	POL	50		150		SKIN	
TLV	ROU	100	33	200	66		
NGV/KGV	SWE	45	15	90	30	SKIN	
WEL	GBR			154	50	SKIN	
TLV-ACGIH		61	20				

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,082	mg/l
Normal value in marine water	0,0082	mg/l
Normal value for fresh water sediment	0,178	mg/kg
Normal value for marine water sediment	0,0178	mg/kg
Normal value for water, intermittent release	2,25	mg/l
Normal value of STP microorganisms	2476	mg/l
Normal value for the terrestrial compartment	0,015	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			VND	3125 mg/kg				
Inhalation			55 mg/m3	VND			310 mg/m3	VND

Soybean oil, epoxidized

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		5 mg/kg/d		0,8 mg/kg/d				
Inhalation		17,5 mg/m3		2,8 mg/m3		70 mg/m3		11,9 mg/m3
Skin		5 mg/kg/d		0,8 mg/kg/d	10 mg/kg/d	10 mg/kg/d		1,7 mg/kg/d

reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,018	mg/l
Normal value in marine water	0,0018	mg/l
Normal value for fresh water sediment	2	mg/kg/d
Normal value for marine water sediment	0,2	mg/kg/d
Normal value for water, intermittent release	0,018	mg/l
Normal value of STP microorganisms	100	mg/l
Normal value for the food chain (secondary poisoning)	41,33	mg/kg
Normal value for the terrestrial compartment	10	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				0,93 mg/kg bw/d				
Inhalation				1,62 mg/m3				6,6 mg/m3
Skin				0,83 mg/kg bw/d				1,67 mg/kg bw/d

ETHYLBENZENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
TLV	BGR	435		545		SKIN	
TLV	CZE	200	45,4	500	113,5	SKIN	
AGW	DEU	88	20	176	40	SKIN	
MAK	DEU	88	20	176	40	SKIN	
TLV	DNK	217	50			SKIN	E
VLA	ESP	441	100	884	200	SKIN	
VLEP	FRA	88,4	20	442	100	SKIN	
VLEP	ITA	442	100	884	200	SKIN	
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	
NGV/KGV	SWE	220	50	884	200	SKIN	
ESD	TUR	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 ECHA 2018
Normal value in marine water	0,01	mg/l ECHA 2018
Normal value for fresh water sediment	13,7	mg/kg ECHA 2018
Normal value for marine water sediment	1,37	mg/kg ECHA 2018
Normal value for water, intermittent release	0,1	mg/l ECHA 2018
Normal value of STP microorganisms	9,6	mg/l ECHA 2018
Normal value for the food chain (secondary poisoning)	20	mg/kg ECHA 2018
Normal value for the terrestrial compartment	2,68	mg/kg ECHA 2018

CHLOROBENZENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	23	5	70	15	
TLV	CZE	25	6,8	70	19,04	

AGW	DEU	23	5	46	10	
MAK	DEU	23	5	46	10	
TLV	DNK	23	5			E
VLA	ESP	23	5	70	15	
VLEP	FRA	23	5	70	15	
VLEP	ITA	23	5	70	15	
TGG	NLD	23		70		
VLE	PRT	23	5	70	15	
NDS/NDSCh	POL	23		70		
TLV	ROU	23	5	70	15	
NGV/KGV	SWE	23	5	70	15	
ESD	TUR	23	5	70	15	
WEL	GBR	4,7	1	14	3	SKIN
OEL	EU	23	5	70	15	
TLV-ACGIH		46	10			

Phthalic anhydride with less than 0,05% of maleic anhydride

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV-ACGIH		1				

N-BUTYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	710		950		
TLV	CZE	950	196,65	1200	248,4	
AGW	DEU	300	62	600 (C)	124 (C)	
TLV	DNK	710	150			
VLA	ESP	241	50	724	150	
VLEP	FRA	710	150	940	200	
VLEP	ITA	241	50	723	150	
TGG	NLD	150				
VLE	PRT	241	50	723	150	
NDS/NDSCh	POL	240		720		
TLV	ROU	241	50	723	150	
NGV/KGV	SWE	241	50	723 (C)	150 (C)	
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	0,01	mg/l

Normal value for fresh water sediment	0,98	mg/kg
Normal value for marine water sediment	0,09	mg/kg
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	0,09	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
Inhalation	859,7 mg/m3	895,7 mg/m3	102,34 mg/m3	102,34 mg/m3	960 mg/m3	960 mg/m3	480 mg/m3	480 mg/m3

HYDROM HYDROPHONE SILICATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	4				INHAL
MAK	DEU	4				INHAL

Traduci da: Indonesiano

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,0032	mg/l
Normal value in marine water	0,0032	mg/l
Normal value for fresh water sediment	15,6	mg/kg
Normal value for water, intermittent release	0,0032	mg/l
Normal value of STP microorganisms	35	mg/l
Normal value for the terrestrial compartment	0,865	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		1,3 mg/kg bw/d						
Inhalation				4,4 mg/m3				17,8 mg/m3
Skin				13 mg/kg bw/d				25,5 mg/kg bw/d

SODIUM HYDROXIDE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	2				
TLV	CZE	1		2		
TLV	DNK			2 (C)		
VLA	ESP			2		
VLEP	FRA	2				
NDS/NDSCh	POL	0,5		1		
NGV/KGV	SWE	1		2		INHAL
WEL	GBR			2		

TLV-ACGIH	2 (C)

Legend:

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

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

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION
Protect hands with category III work gloves (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.

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 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.

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

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	liquid	

Colour	various
Odour	typical of solvent
Melting point / freezing point	not available
Initial boiling point	> 140 °C
Flammability	not available
Lower explosive limit	not available
Upper explosive limit	not available
Flash point	23 ≤ T ≤ 60 °C
Auto-ignition temperature	not available
Decomposition temperature	not available
pH	not available
Kinematic viscosity	not available
Solubility	soluble in water and in polar solvents
Partition coefficient: n-octanol/water	not available
Vapour pressure	not available
Density and/or relative density	not available
Relative vapour density	not available
Particle characteristics	not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

VOC (Directive 2010/75/EU)	36,29 %
VOC (volatile carbon)	25,31 %

SECTION 10. Stability and reactivity

10.1. Reactivity

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

CYCLOHEXANONE

Attacks various types of plastic materials.

May condense under the effect of heat to form resinous compounds.

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.

BUTANOL

Attacks various types of plastic materials.

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.

CYCLOHEXANONE

Risk of explosion on contact with: hydrogen peroxide,nitric acid,heat,mineral acids.May react violently with: oxidising agents.Forms explosive mixtures with: air.

2-METHOXY-1-METHYLETHYL ACETATE

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

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.

BUTANOL

Reacts violently developing heat on contact with: aluminium,strong oxidising agents,strong reducing agents,hydrochloric acid.Forms explosive mixtures with: air.

ETHYLBENZENE

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

10.4. Conditions to avoid

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

CYCLOHEXANONE

Avoid exposure to: sources of heat,naked flames.

BUTANOL

Avoid exposure to: sources of heat,naked flames.

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.

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.

SECTION 11. Toxicological information

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

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

Metabolism, toxicokinetics, mechanism of action and other information

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.

XYLENE (MIXTURE OF ISOMERS)

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

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.

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).

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.

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.

Interactive effects

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.

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 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).

ACUTE TOXICITY

ATE (Inhalation - vapours) of the mixture:	> 20 mg/l
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	>2000 mg/kg

TITANIUM DIOXIDE

LD50 (Oral):	> 5000 mg/l Ratto/Rat
LC50 (Inhalation mists/powders):	> 6,82 mg/l Ratto/Rat

CYCLOHEXANONE

LD50 (Dermal):	1100 mg/kg 794 - 3160 / Coniglio / Rabbit
LD50 (Oral):	1535 mg/kg Ratto / Rat
LC50 (Inhalation vapours):	11 mg/l/4h Ratto / Rat (4h)

BUTYLGLYCOL ACETATE

LD50 (Dermal):	1500 mg/kg Coniglio / Rabbit
LD50 (Oral):	1880 mg/kg Ratto / Rat
LC50 (Inhalation vapours):	0,4 mg/l/4h Ratto - Rat
STA (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)

2-METHOXY-1-METHYLETHYL ACETATE

LD50 (Dermal):	> 5000 mg/kg Coniglio / Rabbit
LD50 (Oral):	8500 mg/kg Ratto / Rat
LC50 (Inhalation vapours):	4345 ppm/6h Ratto / Rat

AROMATIC HYDROCARBONS, C9

LD50 (Dermal):	> 3160 mg/kg Ratto / Rat
LD50 (Oral):	3492 mg/kg Ratto / Rat
LC50 (Inhalation vapours):	> 6193 mg/l/4h Ratto / Rat

XYLENE (MIXTURE OF ISOMERS)

LD50 (Dermal):	4350 mg/kg Rabbit
STA (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):	11,58 mg/l/4h Rat

BUTANOL

LD50 (Dermal):	3400 mg/kg Rabbit
LD50 (Oral):	2290 mg/kg Rat
STA (Oral):	500 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)
LC50 (Inhalation vapours):	17,76 mg/l/4h Rat

Soybean oil, epoxidized

LD50 (Dermal):	> 20 ml/kg Coniglio / Rabbit
LD50 (Oral):	> 5000 mg/kg Ratto / Rat

ETHYLBENZENE

LD50 (Dermal):	15354 mg/kg Rabbit
LD50 (Oral):	3500 mg/kg Rat
LC50 (Inhalation vapours):	17,2 mg/l/4h Rat

CHLOROBENZENE

LD50 (Oral):	> 2000 mg/kg Rat
LC50 (Inhalation vapours):	15,5 mg/l/4h Rat

N-BUTYL ACETATE

LD50 (Dermal):	> 14000 mg/kg Rabbit
LD50 (Oral):	> 10000 mg/kg Rat
LC50 (Inhalation vapours):	> 21 mg/l/4h Rat

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION

May produce an allergic reaction.
Contains:
Phthalic anhydride with less than 0,05% of maleic anhydride

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

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

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

11.2. Information on other hazards

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

SECTION 12. Ecological information

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

Soybean oil, epoxidized	
LC50 - for Fish	900 mg/l/48h 48h - Leuciscus idus melanotus
EC50 - for Crustacea	> 100 mg/l/24h 24h - Daphnia magna
EC50 - for Algae / Aquatic Plants	8 mg/l/72h Scenedsmus subspicatus
AROMATIC HYDROCARBONS, C9	
LC50 - for Fish	> 9,2 mg/l/96h Oncorhynchus mykiss
EC50 - for Crustacea	> 3,2 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 2,9 mg/l/72h Pseudokirchneriella subcapitata
TITANIUM DIOXIDE	
LC50 - for Fish	> 10000 mg/l/96h Cypridonon variegatus

2-METHOXY-1-METHYLETHYL ACETATE

LC50 - for Fish	134 mg/l/96h Pesce, Oncorhynchus mykiss OECD 203
EC50 - for Crustacea	> 500 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 1000 mg/l/72h Selenastrum capricornutum OECD 201
Chronic NOEC for Fish	47,5 mg/l Oryzias latipes 14 gg OECD 204
Chronic NOEC for Crustacea	100 mg/l Dapnia magna 21 gg OECD 202

ETHYLBENZENE

LC50 - for Fish	4,2 mg/l/96h Oncorhynchus mykiss OECD TG 203
EC50 - for Crustacea	2,4 mg/l/48h Daphnia magna (database Ecotox)
EC50 - for Algae / Aquatic Plants	3,6 mg/l/72h Pseudokirchneriella subcapitata (IUCLID)

CHLOROBENZENE

LC50 - for Fish	7,72 mg/l/96h Pimephales promelas

BUTANOL

LC50 - for Fish	1376 mg/l/96h Pimephales promelas
EC50 - for Crustacea	1328 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	225 mg/l/96h 96h - Selenastrum capricornutum

CYCLOHEXANONE

LC50 - for Fish	527 mg/l/96h 527 - 732 / Pimephales promelas
EC50 - for Crustacea	> 100 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 100 mg/l/72h Scenedesmus subspicatus

N-BUTYL ACETATE

LC50 - for Fish	18 mg/l/96h Pimephales promelas
EC50 - for Crustacea	44 mg/l/48h Daphnia Magna
EC10 for Algae / Aquatic Plants	674,7 mg/l/72h Desmodesmus subspicatus
Chronic NOEC for Crustacea	23 mg/l 21d/ Daphnia magna

BUTYLGLYCOL ACETATE

LC50 - for Fish	> 20 mg/l/96h Fish 20-40 mg/kg (48h)
EC50 - for Crustacea	145 mg/l/24h Daphnia Magna (24h)
EC50 - for Algae / Aquatic Plants	1570 mg/l/72h Scenedesmus subspicatus

12.2. Persistence and degradability

AROMATIC HYDROCARBONS, C9

Rapidly degradable

XYLENE (MIXTURE OF ISOMERS)

Solubility in water	100 - 1000 mg/l

Rapidly degradable

2-METHOXY-1-METHYLETHYL ACETATE

Solubility in water	> 10000 mg/l

Rapidly degradable

OECD Gl 301F 83% 10 d
ETHYLBENZENE

Solubility in water	200 mg/l ECHA 2018/05/18

Rapidly degradable
CHLOROBENZENE

Solubility in water	100 - 1000 mg/l

NOT rapidly degradable

BUTANOL

Solubility in water	78 mg/l

Rapidly degradable
CYCLOHEXANONE

Solubility in water	86 mg/l

Rapidly degradable
N-BUTYL ACETATE

Solubility in water	5,3 mg/l

Rapidly degradable
BUTYLGLYCOL ACETATE

Solubility in water	15000 mg/l

Rapidly degradable

12.3. Bioaccumulative potential

XYLENE (MIXTURE OF ISOMERS)

Partition coefficient: n-octanol/water	3,12
BCF	25,9

2-METHOXY-1-METHYLETHYL ACETATE

Partition coefficient: n-octanol/water	1,2
BCF	100

ETHYLBENZENE

Partition coefficient: n-octanol/water	3,6

CHLOROBENZENE

Partition coefficient: n-octanol/water	3

BUTANOL

Partition coefficient: n-octanol/water	1
BCF	3,16

CYCLOHEXANONE

Partition coefficient: n-octanol/water	0,86

N-BUTYL ACETATE

Partition coefficient: n-octanol/water	2,3
BCF	15,3

BUTYLGLYCOL ACETATE
Partition coefficient: n-octanol/water 1,51

12.4. Mobility in soil

XYLENE (MIXTURE OF ISOMERS)
Partition coefficient: soil/water 2,73

2-METHOXY-1-METHYLETHYL ACETATE
Partition coefficient: soil/water 1,7

CHLOROBENZENE
Partition coefficient: soil/water 2,42

BUTANOL
Partition coefficient: soil/water 0,388

CYCLOHEXANONE
Partition coefficient: soil/water 1,18

N-BUTYL ACETATE
Partition coefficient: soil/water < 3

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.
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: 1210

14.2. UN proper shipping name

ADR / RID: PRINTING INK or PRINTING INK RELATED MATERIAL
IMDG: PRINTING INK or PRINTING INK RELATED MATERIAL
IATA: PRINTING INK or PRINTING INK 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: NO
IATA: NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 30	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
	Special provision: 163, 367		
IMDG:	EMS: F-E, S-D	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 220 L	Packaging instructions: 366
	Pass.:	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

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

SECTION 16. Other information

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

Flam. Liq. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
Acute Tox. 4	Acute toxicity, category 4
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
Resp. Sens. 1	Respiratory sensitization, category 1
Skin Sens. 1	Skin sensitization, category 1
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.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
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.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
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.
EUH208	Contains <name of sensitising substance>. May produce an allergic reaction.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%

- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:
The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.
CALCULATION METHODS FOR CLASSIFICATION
Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

For information on any exposure scenarios of the substances present in the mixture, contact Sericom Italia srl.

Changes to previous review:
The following sections were modified:
01 / 02 / 03 / 08 / 09 / 11 / 12 / 14 / 15 / 16.