

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: **01FG**
Product name: **CEM-O-LUX PRIMER GRIGIO FINESTRA**

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

Intended use: **MONO-COMPONENT DRIVE-OVER COLOURED ENAMEL FOR CONCRETE FLOORS**

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:

Ireland
National Poisons Information Centre
+353 018092166
+353 018092566

Malta
Malta Competition and Consumer Affairs Authority (MCCAA)
+356 2395 2000

Belgium
Centre Antipoisons: +32 022649636

Germany
BfR Bundesinstitut für Risikobewertung: +49 30184120

Netherlands
National Poisons Information Center / University Medical Center Utrecht
+31 88 75 585 61

Croatia
Croatian Institute of Public Health, Division for Toxicology: +38514686910

Sveden
Swedish Poisons Information Centre: +46104566750

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:

SECTION 2. Hazards identification ... / >>

Flammable liquid, category 3	H226	Flammable liquid and vapour.
Aspiration hazard, category 1	H304	May be fatal if swallowed and enters airways.
Eye irritation, category 2	H319	Causes serious eye irritation.
Skin irritation, category 2	H315	Causes skin irritation.
Specific target organ toxicity - single exposure, category 3	H335	May cause respiratory irritation.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.
Hazardous to the aquatic environment, chronic toxicity, category 2	H411	Toxic 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.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P331	Do NOT induce vomiting.
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P301+P310	IF SWALLOWED: immediately call a POISON CENTER / doctor.
P370+P378	In case of fire: use carbon anhydride, foam, nebulized water to extinguish.
P273	Avoid release to the environment.

Contains: HYDROCARBONS, C9, AROMATICS
2-METHOXY-1-METHYLETHYL ACETATE
N-BUTYL ACETATE
Reaction mass of ethylbenzene and m-xylene and p-xylene

VOC (Directive 2004/42/EC) :

Binding primers.	
VOC given in g/litre of product in a ready-to-use condition :	650,73
Limit value:	750,00

2.3. Other hazards

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

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

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
HYDROCARBONS, C9, AROMATICS		
INDEX	35 ≤ x < 50	Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H335, STOT SE 3 H336, Aquatic Chronic 2 H411, EUH066
EC	918-668-5	
CAS	128601-23-0	
REACH Reg.	01-2119455851-35	
2-BUTOXYETHANOL		
INDEX	603-014-00-0 7 ≤ x < 10	Acute Tox. 3 H331, Acute Tox. 4 H302, Eye Irrit. 2 H319, Skin Irrit. 2 H315 LD50 Oral: 1200 mg/kg, LC50 Inhalation vapours: 3 mg/l/4h
EC	203-905-0	
CAS	111-76-2	
REACH Reg.	01-2119475108-36	
Reaction mass of ethylbenzene and m-xylene and p-xylene		
INDEX	5 ≤ x < 7	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	905-562-9	ATE Dermal: 1100 mg/kg, ATE Inhalation vapours: 11 mg/l
CAS		
REACH Reg.	01-2119555267-33	
2-METHOXY-1-METHYLETHYL ACETATE		
INDEX	607-195-00-7 5 ≤ x < 7	Flam. Liq. 3 H226, STOT SE 3 H336
EC	203-603-9	
CAS	108-65-6	
REACH Reg.	01-2119475791-29	
N-BUTYL ACETATE		
INDEX	607-025-00-1 5 ≤ x < 7	Flam. Liq. 3 H226, STOT SE 3 H336, EUH066
EC	204-658-1	
CAS	123-86-4	
REACH Reg.	01-2119485493-29	
TOLUENE		
INDEX	601-021-00-3 0,1 ≤ x < 0,5	Flam. Liq. 2 H225, Repr. 2 H361d, Asp. Tox. 1 H304, STOT RE 2 H373, Skin Irrit. 2 H315, STOT SE 3 H336
EC	203-625-9	
CAS	108-88-3	
REACH Reg.	01-2119471310-51	
METHYL METHACRYLATE		
INDEX	607-035-00-6 0 < x < 0,1	Flam. Liq. 2 H225, Skin Irrit. 2 H315, STOT SE 3 H335, Skin Sens. 1 H317, Classification note according to Annex VI to the CLP Regulation: D
EC	201-297-1	
CAS	80-62-6	
REACH Reg.	01-2119452498-28	
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	
ETHYLBENZENE		
INDEX	601-023-00-4 0 < x < 0,01	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	
Quartz (Respirable Crystalline Silica)		
INDEX	0 < x < 0,01	STOT RE 1 H372
EC	238-878-4	
CAS	14808-60-7	

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

ETHYL METHYL KETONE

INDEX 606-002-00-3 0 < x < 0,01 **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.

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

Xilene-Reactive mixture of Etilbenzene, M-XIILENE and P-XIILENE: Composition:

Xilene, M-Cas 108-38-3-EC 203-576-3-Index 601-022-00-9: Conc. % 46-60

Classification 1272/2008 (CLP): FLAM. Liq. 3 H226, acute tox. 4 H312, acute tox. 4 H332, Skin Irrit. 2 H315, note C

Xilene, P- CAS 106-42-3-ce 203-396-5-Index 601-022-00-9: conc. % 22-29

Classification 1272/2008 (CLP): FLAM. Liq. 3 H226, acute tox. 4 H312, acute tox. 4 H332, Skin Irrit. 2 H315, note C

Etilbenzene Cas 100-41-4-EC 202-849-4-Index 601-023-00-4: conc. % 6-26

Classification 1272/2008 (CLP): FLAM. Liq. 2 H225, acute tox. 4 H332, ASP. Tox. 1 H304, Stot Re 2 H373

Xilene, O- CAS 95-47-6-ce 202-422-2-Index 601-022-00-9: conc. % 0.6-13

Classification 1272/2008 (CLP): FLAM. Liq. 3 H226, acute tox. 4 H312, acute tox. 4 H332, Skin Irrit. 2 H315, note C.

Cumen content (Cas. N ° 98-82-8) <0.1%P

2-METHOXY-1-METHYLETHYL ACETATE

1-METHYL-2-METHOXYETHYL ACETATE - composition:

2-methoxypropyl acetate: content (W/W): < 0.3 %

CAS number: 70657-70-4 ; EC number: 274-724-2; Index Number: 607-251-00-0

Flam. Liq. 3 - Repr. 1B (fetus) - STOT SE 3 (irrit. for respiratory system) H226, H335, H360D.

SECTION 4. First aid measures

4.1. Description of first aid measures

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 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. In the event of respiratory symptoms (coughing, wheezing, breathing difficulty, asthma) keep the victim in a comfortable position for breathing. If necessary administer oxygen. If the subject stops breathing, administer artificial respiration. 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 SWALLOWED: immediately call a POISON CENTER / 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

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.

METHYL METHACRYLATE

Heat may cause the product to polymerise, which could lead to explosion.

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. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

SECTION 7. Handling and storage ... / >>

7.2. Conditions for safe storage, including any incompatibilities

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

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory references:

ALB	Shqipëria	VENDIM Nr. 522, datë 6.8.2014 PËR MIRATIMIN E RREGULLORES "PËR MBROJTJEN E SIGURISË DHE SHËNDETIT TË PUNËMARRËSVE NGA RISQET E LIDHURA ME AGJENTËT KIMIKË NË PUNË"
CZE	Česká Republika	NAŘÍZENÍ VLÁDY ze dne 18. října 2023, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů
DEU	Deutschland	WirkungDosisNOAELMAK-und BAT-Werte-Liste 2024 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe
ESP	España	Límites de exposición profesional para agentes químicos en España 2024
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France Décret 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 μεταλλαξιογόνους 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 OPASNIM KEMIKALIJAMA NA RADU, GRANIČNIM VRIJEDNOSTIMA IZLOŽENOSTI I BIOLOŠKIM GRANIČNIM VRIJEDNOSTIMA
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
NLD	Nederland	Regeling van de Minister van Sociale Zaken en Werkgelegenheid van 13 mei 2024, nr. 2024-0000092805, tot wijziging van de Arbeidsomstandighedenregeling in verband met de implementatie van Richtlijn 2022/431
PRT	Portugal	Decreto-Lei n.º 102/2024, de 4 de dezembro. Sumário: Transpõe para a ordem jurídica interna a Diretiva (UE) 2022/431, relativa à proteção dos trabalhadores contra riscos ligados à exposição a agentes cancerígenos ou mutagénicos e procede à quarta alteração
POL	Polska	ROZPORZĄDZENIE MINISTRA RODZINY, PRACY I POLITYKI SPOŁECZNEJ z dnia 24 czerwca 2024 r. zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
ROU	România	HOTĂRÂRE nr. 179 din 28 februarie 2024 pentru modificarea și completarea Hotărârii Guvernului nr. 1.093/2006 privind stabilirea cerințelor minime de securitate și sănătate pentru protecția lucrătorilor împotriva riscurilor legate de expunerea la agenți ca
RUS	Россия	ПОСТАНОВЛЕНИЕ от 13 февраля 2018 г. N 25 ОБ УТВЕРЖДЕНИИ ГИГИЕНИЧЕСКИХ 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 rakotvornim, mutagenim ali reprotoksičnim snovem pri delu. Ljubljana, četrtek 4. 4. 2024
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.
	ACGIH	ACGIH 2025
	RCP	ACGIH TLVs and BEIs – Appendix H

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

METHYL METHACRYLATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	ALB	50		100		
TLV	CZE	50	12	150	36	
AGW	DEU	210	50	420	100	
MAK	DEU	210	50	420	100	
VLA	ESP		50		100	
VLEP	FRA	205	50	410	100	
TLV	GRC		50		100	
AK	HUN	208	50	415	100	SKIN
GVI/KGVI	HRV	50		100		SKIN
VLEP	ITA		50		100	Allegato XXXVIII D.Lgs. 81/08
TGG	NLD	205		410		
VLE	PRT		50		100	
NDS/NDSch	POL	100		300		
TLV	ROU	205	50	410	100	
ПДК	RUS	10		20		n
MV	SVN	210	50	420	100	
WEL	GBR	208	50	416	100	
OEL	EU		50		100	
ACGIH		205	50	410	100	

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,94	mg/l
Normal value in marine water	0,094	mg/l
Normal value for fresh water sediment	10,2	mg/kg/d
Normal value for marine water sediment	1,02	mg/kg/d
Normal value for marine water, intermittent release	0,69	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	1,48	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		NPI		8,2 mg/kg bw/d				
Inhalation	208 mg/m3	NPI	104 mg/m3	74,3 mg/m3	416 mg/m3	NPI	208 mg/m3	384,4 mg/m3
Skin	1,5 mg/cm2	NPI	1,5 mg/cm2	8,2 mg/kg bw/d	1,5 mg/cm2	NPI	1,5 mg/cm2	13,67 mg/kg bw/d

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

2-METHOXY-1-METHYLETHYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	ALB	275	50	550	100	
TLV	CZE	275	50	550	100	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		n
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

Route of exposure	Effects on consumers		Effects on workers					
	Acute	Acute	Chronic	Chronic	Acute	Acute	Chronic	Chronic
	local	systemic	local	systemic	local	systemic	local	systemic
Oral				36				
				mg/kg/d				
Inhalation				33			NPI	275
				mg/m3				mg/m3
Skin			NPI	320			NPI	796
				mg/kg/d				mg/kg/d

Quartz (Respirable Crystalline Silica)

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 Allegato XXXVIII D. Lgs. 81/08
TGG	NLD	0,075				RESP
VLE	PRT	0,05				RESP
NDS/NDSch	POL	0,1				RESP
TLV	ROU	0,1				RESP
MV	SVN	0,05				RESP
OEL	EU	0,1				RESP
ACGIH		0,025				RESP

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

TOLUENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	ALB	192	50	384	100	SKIN
TLV	CZE	192	50	384	100	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	384	100	SKIN
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		n
MV	SVN	192	50	384	100	SKIN
WEL	GBR	191	50	384	100	SKIN
OEL	EU	192	50	384	100	SKIN
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

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation	226	226	56,5	56,5	384	384	192	192
	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3
Skin	LOW	NPI	NPI	226	LOW	NPI	NPI	384
				mg/kg bw/d				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	ALB	442	100	884	200	SKIN
TLV	CZE	200	45,33	500	113,32	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		n
MV	SVN	442	100	884	200	SKIN
WEL	GBR	441	100	552	125	SKIN
OEL	EU	442	100	884	200	SKIN
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

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		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 ... / >>

2-BUTOXYETHANOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	ALB	98	20	246	50	SKIN
TLV	CZE	100	20,4	200	40,8	SKIN
AGW	DEU	49	10	98	20	SKIN
MAK	DEU	49	10	98	20	SKIN Hinweis
VLA	ESP	98	20	245	50	SKIN
VLEP	FRA	49	10	246	50	SKIN
TLV	GRC	120	25			
AK	HUN	98	20	246	50	SKIN
GVI/KGVI	HRV	98	20	246	50	SKIN
VLEP	ITA	98	20	246	50	SKIN Allegato XXXVIII D.Lgs. 81/08
TGG	NLD	100		246		SKIN
VLE	PRT	98	20	246	50	SKIN
NDS/NDSch	POL	98		200		SKIN
TLV	ROU	98	20	246	50	SKIN
ПДК	RUS			10		n
MV	SVN	98	20	246	50	SKIN
WEL	GBR	123	25	246	50	SKIN
OEL	EU	98	20	246	50	SKIN
ACGIH		97	20			

Predicted no-effect concentration - PNEC

Normal value in fresh water	8,8	mg/l
Normal value in marine water	0,88	mg/l
Normal value for fresh water sediment	34,6	mg/kg/d
Normal value for marine water sediment	3,46	mg/kg/d
Normal value for marine water, intermittent release	26,4	mg/l
Normal value of STP microorganisms	463	mg/l
Normal value for the food chain (secondary poisoning)	20	mg/kg
Normal value for the terrestrial compartment	2,33	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		26,7 mg/kg bw/d		6,3 mg/kg bw/d				
Inhalation	147 mg/m3	426 mg/m3	NPI	59 mg/m3	246 mg/m3	1091 mg/m3	NPI	98 mg/m3
Skin	MED	NPI	NPI	NPI	MED	NPI	NPI	LOW

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	ALB	600	200	900	300	
TLV	CZE	600	200	900	300	
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	Allegato XXXVIII D.Lgs. 81/08
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		n
MV	SVN	600	200	900	300	SKIN
WEL	GBR	600	200	899	300	SKIN
OEL	EU	600	200	900	300	
ACGIH			75		150	SKIN

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

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				31				
				mg/kg bw/d				
Inhalation				106				600
				mg/m3				mg/m3
Skin				412				1161
				mg/kg bw/d				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/m ³	ppm	mg/m ³	ppm	
TLV	CZE	241	50	723	150	
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		n
MV	SVN	241	50	723	150	
WEL	GBR	724	150	966	200	
OEL	EU	241	50	723	150	
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

Route of exposure	Effects on consumers				Effects on workers			
	Acute	Acute	Chronic	Chronic	Acute	Chronic	Chronic	Chronic
	local	systemic	local	systemic	local	systemic	local	systemic
Oral		2		2				
		mg/kg/d		mg/kg/d				
Inhalation	300	300	35,7	35,7	600	600	300	300
	mg/m ³	mg/m ³	mg/m ³	mg/m ³	mg/m ³	mg/m ³	mg/m ³	mg/m ³
Skin		6		6		11		11
		mg/kg/d		mg/kg/d		mg/kg		mg/kg
						bw/d		bw/d

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

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m ³	ppm	mg/m ³	ppm	
VLEP	ITA	221	50	442	100	SKIN Allegato XXXVIII D.Lgs. 81/08
OEL	EU	221	50	442	100	SKIN
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

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

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 Allegato XXXVIII D.Lgs. 81/08
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
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

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		NPI		5				
				mg/kg bw/d				
Inhalation	260	260	65,3	65,3	442	442	221	221
	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3	mg/m3
Skin	LOW	LOW	NPI	125	LOW			212
				mg/kg bw/d				mg/kg bw/d

HYDROCARBONS, C9, AROMATICS

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
RCP		100	19			

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		NPI		7,5				
				mg/kg bw/d				
Inhalation	NPI	NPI	NPI	32	NPI	NPI	NPI	151
				mg/m3				mg/m3
Skin	NPI	NPI	NPI	7,5	NPI	NPI	NPI	12,5
				mg/kg bw/d				mg/kg bw/d

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.
VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

8.2. Exposure controls

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

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

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

Provide an emergency shower with face and eye wash station.

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

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: Polyvinyl alcohol (PVA)

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.

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.

Material: Laminated film - LLDPE

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: 0,06 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 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 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.

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	grey	
Odour	characteristic of solvent	
Melting point / freezing point	not determined	Reason for missing data: not determined
Initial boiling point	165 °C	Substance: HYDROCARBONS, C9, AROMATICS Initial boiling point: 165 °C
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	23 ≤ T ≤ 60 °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	Reason for missing data: substance/mixture is non-soluble (in water)
Kinematic viscosity	not determined	Reason for missing data: not determined
Solubility	soluble in organic solvents	
Partition coefficient: n-octanol/water	not applicable	
Vapour pressure	not determined	Reason for missing data: not determined
Density and/or relative density	1 kg/l	
Relative vapour density	not determined	Reason for missing data: not determined
Particle characteristics	not applicable	

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

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

Total solids (250°C / 482°F)	0 %		
VOC (Directive 2004/42/EC) :	65,07 %	- 650,73	g/litre
VOC (volatile carbon)	50,20 %	- 502,02	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.

2-BUTOXYETHANOL

Decomposes under the effect of heat.

ETHYL METHYL KETONE

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.

METHYL METHACRYLATE

May polymerise on contact with: ammonia, organic peroxides, persulphates. Risk of explosion on contact with: dibenzoyl peroxide, di-tert-butyl peroxide, propionaldehyde. May react dangerously with: strong oxidising agents. Forms explosive mixtures with: 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.

2-BUTOXYETHANOL

May react dangerously with: aluminium, oxidising agents. Forms peroxides 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.

10.4. Conditions to avoid

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

METHYL METHACRYLATE

Avoid exposure to: heat, UV rays. Avoid contact with: oxidising substances, reducing substances, acids, bases.

2-BUTOXYETHANOL

Avoid exposure to: sources of heat, naked flames.

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

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.

METHYL METHACRYLATE

When heated to decomposition releases: harsh fumes, zinc alloys.

ETHYLBENZENE

May develop: methane, styrene, hydrogen, ethane.

2-BUTOXYETHANOL

May develop: hydrogen.

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

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.

N-BUTYL 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.

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

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

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

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).

SECTION 11. Toxicological information ... / >>

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.

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.

Interactive effects

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

The intake of alcohol interferes with the metabolism of the substance, inhibiting it. The consumption of ethanol (0.8 g/kg) before an exposure of 4 hours in xylene vapors (145 and 280 ppm) causes a decrease of 50% of the excretion of methylippuric acid, while the concentration in the blood of xylene rises about 1.5-2 times. At the same time there is an increase in the side effects Secondaries of the Aannerol. The xylene metabolism has increased by enzymatic inductors like phenobarbital and 3-metal-cavennene.

Aspirin and xylenes mutually inhibit their conjugation with glycine, which has the consequence of the decrease urinary humilipopuric acid excretion. Other industrial products may interfere with the xylene metabolism.

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).

TOLUENE

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

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

HYDROCARBONS, C9, AROMATICS

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

2-BUTOXYETHANOL

LD50 (Dermal): > 2000 mg/kg Guinea pig
LD50 (Oral): 1200 mg/kg Guinea pig
LC50 (Inhalation vapours): 3 mg/l/4h Guinea pig

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)

2-METHOXY-1-METHYLETHYL ACETATE

LD50 (Dermal): 2000 mg/kg Rat
LD50 (Oral): 6190 mg/kg 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

SECTION 11. Toxicological information ... / >>

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

METHYL METHACRYLATE
LD50 (Dermal): 5000 mg/kg Rabbit
LD50 (Oral): > 7900 mg/kg Rat
LC50 (Inhalation mists/powders): 29,8 mg/l/4h Rat

MIXED XYLENES, ETHYLBENZENE
LD50 (Dermal): 4350 mg/kg Rabbit
LD50 (Oral): 3523 mg/kg Rat
LC50 (Inhalation vapours): 26 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

SKIN CORROSION / IRRITATION

Causes skin irritation
Repeated exposure may cause skin dryness or cracking.

2-BUTOXYETHANOL
Species: rabbit
Result: irritating
Method: EU Method B.4

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

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

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

2-BUTOXYETHANOL
Species: rabbit
Result: irritating
Method: OECD 405

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

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

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

SECTION 11. Toxicological information ... / >>

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

METHYL METHACRYLATE

Species: mouse
Result: skin sensitizer
Method: OECD 429

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

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).

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

May cause respiratory irritation
May cause drowsiness or dizziness

Target organs

HYDROCARBONS, C9, AROMATICS

Exposure methods: inhalation
Target organs: central nervous system
It can cause sleepiness or dizziness.

Exposure methods: inhalation

Target organs: respiratory tract
It can irritate the respiratory tract.

2-METHOXY-1-METHYLETHYL ACETATE

Target organs: central nervous system
It can cause sleepiness or dizziness.

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

HYDROCARBONS, C9, AROMATICS

NOAEL - Oral = 600 mg/kg/bw/d
Species: rat
Method: OECD 408

SECTION 11. Toxicological information ... / >>

NOAEC - Inhalation = 1800 mg/m³
Species: rat
Method: OECD 413

Target organs

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

ASPIRATION HAZARD

Toxic for aspiration

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 is toxic for aquatic organisms. In the long term, it has negative effects on the aquatic environment.

12.1. Toxicity

HYDROCARBONS, C9, AROMATICS EC50 - for Crustacea	3,2 mg/l/48h Daphnia magna
2-BUTOXYETHANOL EC10 for Algae / Aquatic Plants	370 mg/l/72h
Reaction mass of ethylbenzene and m-xylene and p-xylene LC50 - for Fish	2,6 mg/l/96h p-xylene
2-METHOXY-1-METHYLETHYL ACETATE LC50 - for Fish EC50 - for Crustacea Chronic NOEC for Crustacea	> 100 mg/l/96h Oncorhynchus mykiss 500 mg/l/48h Daphnia magna 100 mg/l Daphnia magna
N-BUTYL ACETATE LC50 - for Fish EC50 - for Crustacea Chronic NOEC for Crustacea	18 mg/l/96h Pimephales promelas 44 mg/l/48h Daphnia magna 23 mg/l Daphnia magna
TOLUENE LC50 - for Fish EC50 - for Crustacea EC50 - for Algae / Aquatic Plants	5,5 mg/l/96h 3,78 mg/l/48h > 134 mg/l/72h
METHYL METHACRYLATE LC50 - for Fish EC50 - for Crustacea EC50 - for Algae / Aquatic Plants	> 79 mg/l/96h Oncorhynchus mykiss 69 mg/l/48h Danio Rerio > 100 mg/l/72h Selenastrum capricornutum

12.2. Persistence and degradability

HYDROCARBONS, C9, AROMATICS Rapidly degradable	
2-BUTOXYETHANOL Solubility in water Rapidly degradable	900000 mg/l
Reaction mass of ethylbenzene and m-xylene and p-xylene Rapidly degradable	

SECTION 12. Ecological information ... / >>

2-METHOXY-1-METHYLETHYL ACETATE
Solubility in water > 10000 mg/l
Rapidly degradable 83% (28 d, OECD 301 F)

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

TOLUENE
Solubility in water 100 - 1000 mg/l
Rapidly degradable

METHYL METHACRYLATE
Solubility in water 15300 mg/l
Rapidly degradable

MIXED XYLENES, ETHYLBENZENE
Degradability: information not available

ETHYLBENZENE
Solubility in water 1000 - 10000 mg/l
Rapidly degradable

ETHYL METHYL KETONE
Solubility in water > 10000 mg/l
Rapidly degradable

12.3. Bioaccumulative potential

2-BUTOXYETHANOL
Partition coefficient: n-octanol/water 0,81

Reaction mass of ethylbenzene and m-xylene and p-xylene
BCF 25,9

2-METHOXY-1-METHYLETHYL ACETATE
Partition coefficient: n-octanol/water 1,2 Log Kow 20°C - OECD 117

N-BUTYL ACETATE
Partition coefficient: n-octanol/water 2,3 25°C - OECD 117
BCF 15,3

TOLUENE
Partition coefficient: n-octanol/water 2,73
BCF 90

METHYL METHACRYLATE
Partition coefficient: n-octanol/water 1,38

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

ETHYLBENZENE
Partition coefficient: n-octanol/water 3,6

ETHYL METHYL KETONE
Partition coefficient: n-octanol/water 0,3

12.4. Mobility in soil

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

SECTION 12. Ecological information ... / >>

METHYL METHACRYLATE
Partition coefficient: soil/water 0,94

MIXED XYLENES, ETHYLBENZENE
Partition coefficient: soil/water 2,73

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 \geq than 0,1%.

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

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

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

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

IMDG: PAINT

IATA: PAINT

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

SECTION 14. Transport information ... / >>

14.5. Environmental hazards

ADR / RID: Environmentally Hazardous



IMDG: Marine Pollutant



IATA: NO

For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

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-E2

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

<u>Product</u>		
Point	3 - 40	
<u>Contained substance</u>		
Point	75	
Point	48	TOLUENE REACH Reg.: 01-2119471310-51

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 \geq 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.

VOC (Directive 2004/42/EC) :
Binding primers.

15.2. Chemical safety assessment

SECTION 15. Regulatory information ... / >>

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. 3	Acute toxicity, category 3
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 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
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.
H331	Toxic if inhaled.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs through prolonged or repeated exposure.
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.

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

SECTION 16. Other information ... / >>

- 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

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2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
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5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
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- 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 / 02 / 03 / 04 / 08 / 09 / 10 / 11 / 12 / 14.