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:	**VCD-BMW-252**
Product name	**VCD-BMW-252 Two-coat car paint in spray can**

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

Intended use	**Spray Paint in metallic car colours**

Identified Uses	Industrial	Professional	Consumer
Body paint in spray can	✓	✓	✓
Uses Advised Against			
Uses other than those indicated.			

1.3. Details of the supplier of the safety data sheet

Name	**E-COMIT srl**
Full address	**Via G. Di Vittorio, 93-95 z.i. Terrafino**
District and Country	**50053 Empoli (Florence)** **Italy** **Tel. +39 0571530262**
e-mail address of the competent person responsible for the Safety Data Sheet	**info@e-comit.it**

1.4. Emergency telephone number

For urgent inquiries refer to

UNITED KINDOM - NHS (National Health Service): For urgent help for people aged 5 or over use 111 (online). Call 111 for children under 5. Call 999 if it's a life-threatening emergency.

IRELAND - Members of Public: +353 (01) 809 2166. (8.00 a.m. to 10.00 p.m. 7 days a week) Healthcare Professionals: +353 (01) 809 2566 (24 hour service)

AUSTRIA - Umweltbundesamt GmbH / Environment Agency +43 664 6210336

DENMARK - Danish Environmental Protection Agency +45 72 54 40 00

GERMANY - BfR Bundesinstitut für Risikobewertung / German Federal Institute for Risk Assessment - +49-30-18412-0

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

ROMANIA - The Toxicology Information Center from the Emergency Clinic Hospital of Bucharest - +40215992300

LUXEMBOURG - Centre Antipoisons (BE) on behalf of Ministère-Direction de la Santé +320 22649636/+352 24785551

GREECE - Hellenic Republic Independent Authority for Public Revenue D.G. of the General Chemical State Laboratory Directorate of Energy, Industrial and Chemical Products - +302106479250, +302106479450

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 ... / >>

Aerosol, category 1	H222	Extremely flammable aerosol.
	H229	Pressurised container: may burst if heated.
Acute toxicity, category 4	H332	Harmful if inhaled.
Aspiration hazard, category 1	H304	May be fatal if swallowed and enters airways.
Specific target organ toxicity - repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
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.

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:

H222	Extremely flammable aerosol.
H229	Pressurised container: may burst if heated.
H332	Harmful if inhaled.
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.
H336	May cause drowsiness or dizziness.

Precautionary statements:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251	Do not pierce or burn, even after use.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50°C / 122°F.
P501	Dispose of contents / container to . . .
P102	Keep out of reach of children.
P101	If medical advice is needed, have product container or label at hand.
P211	Do not spray on an open flame or other ignition source.

Contains: XYLENE (MIXTURE OF ISOMERS)
N-BUTYL ACETATE
ACETONE
ETHYL ACETATE

Statements on the aspiration toxicity classification were not included in the label elements, based on section 1.3.3. of Annex I to CLP.

VOC (Directive 2004/42/EC) :
Special finishes - All types.
VOC given in g/litre of product in a ready-to-use condition : 744,67
Limit value: 840,00

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)
Dimethyl ether			
INDEX	*603-019-00-8*	45 ≤ x < 47,5	**Flam. Gas 1A H220, Press. Gas H280**
EC	*204-065-8*		
CAS	*115-10-6*		
N-BUTYL ACETATE			
INDEX	*607-025-00-1*	13,5 ≤ x < 15	**Flam. Liq. 3 H226, STOT SE 3 H336, EUH066**
EC	*204-658-1*		
CAS	*123-86-4*		
REACH Reg.	*01-2119485493-29*		
XYLENE (MIXTURE OF ISOMERS)			
INDEX	*601-022-00-9*	12 ≤ x < 13,5	**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*		**LD50 Dermal: 2000 mg/kg, ATE Inhalation mists/powders: 1,5 mg/l**
CAS	*1330-20-7*		
ACETONE			
INDEX	*606-001-00-8*	7 ≤ x < 8	**Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066**
EC	*200-662-2*		
CAS	*67-64-1*		
REACH Reg.	*01-2119471330-49*		
ETHYL ACETATE			
INDEX	*607-022-00-5*	5 ≤ x < 6	**Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066**
EC	*205-500-4*		
CAS	*141-78-6*		
REACH Reg.	*01-2119475103-46*		
ETHYLBENZENE			
INDEX	*601-023-00-4*	2 ≤ x < 2,5	**Flam. Liq. 2 H225, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Aquatic Chronic 3 H412**
EC	*202-849-4*		**ATE Inhalation mists/powders: 1,5 mg/l**
CAS	*100-41-4*		
REACH Reg.	*01-2119489370-35*		
XYLENE			
INDEX	*601-022-00-9*	2 ≤ x < 2,5	**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*		**LD50 Dermal: >1700 mg/kg, ATE Inhalation mists/powders: 1,5 mg/l**
CAS	*1330-20-7*		
REACH Reg.	*01-2119488216-32*		
BUTANE-1-OL			
INDEX	*603-004-00-6*	0,6 ≤ x < 0,7	**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*		**ATE Oral: 500 mg/kg**
CAS	*71-36-3*		
REACH Reg.	*01-2119484630-38*		
pentyl acetate			
INDEX	*607-130-00-2*	0,35 ≤ x < 0,4	**Flam. Liq. 3 H226**
EC	*211-047-3*		
CAS	*628-63-7*		
2-Methylbutyl acetate			
INDEX		0,2 ≤ x < 0,25	**Flam. Liq. 3 H226**
EC	*210-843-8*		
CAS	*624-41-9*		
Hydrocarbons, C9-C11, nalkanes, isoalkanes, cyclics, <2% aromatics			
INDEX		0,1 ≤ x < 0,15	**Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H336**
EC	*919-857-5*		
CAS			
REACH Reg.	*01-2119463258-33*		

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

TOLUENE

INDEX	*601-021-00-3*	0 < x < 0,05	**Flam. Liq. 2 H225, Repr. 2 H361d, Asp. Tox. 1 H304, STOT RE 2 H373, Skin Irrit. 2 H315, STOT SE 3 H336, Aquatic Chronic 3 H412**
EC	*203-625-9*		
CAS	*108-88-3*		
REACH Reg.	*01-2119471310-51*		

isopentyl acetate

INDEX	*607-130-00-2*	0 < x < 0,05	**Flam. Liq. 3 H226, Aquatic Chronic 3 H412**
EC	*204-662-3*		
CAS	*123-92-2*		

N-BUTYL ACRYLATE

INDEX	*607-062-00-3*	0 < x < 0,05	**Flam. Liq. 3 H226, Acute Tox. 4 H332, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Skin Sens. 1 H317, Aquatic Chronic 3 H412, Classification note according to Annex VI to the CLP Regulation: D**
EC	*205-480-7*		**ATE Inhalation mists/powders: 1,5 mg/l**
CAS	*141-32-2*		
REACH Reg.	*01-2119453155-43*		

FORMALDEHYDE

INDEX	*605-001-00-5*	0 < x < 0,05	**Carc. 1B H350, Muta. 2 H341, Acute Tox. 3 H301, Acute Tox. 3 H311, Acute Tox. 3 H331, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1 H317, Classification note according to Annex VI to the CLP Regulation: B, D**
EC	*200-001-8*		**Skin Corr. 1B H314: ≥ 25%, Skin Irrit. 2 H315: ≥ 5% - < 25%, Skin Sens. 1 H317: ≥ 0,2%, Eye Dam. 1 H318: ≥ 25%, Eye Irrit. 2 H319: ≥ 5% - < 25%**
CAS	*50-00-0*		**LD50 Oral: 100 mg/kg, LD50 Dermal: 270 mg/kg, ATE Inhalation mists/powders: 0,501 mg/l**
REACH Reg.	*01-2119488953-20*		

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

The product is an aerosol containing propellants. For the purposes of calculation of the health hazards, propellants are not considered (unless they have health hazards). The percentages indicated are inclusive of the propellants.
Percentage of propellants: 45,16 %

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

Call a POISON CENTRE / doctor / . . . if you feel unwell.

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

Running water for skin and eye wash.

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.
UNSUITABLE EXTINGUISHING EQUIPMENT
None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
If overheated, aerosol cans can deform, explode and be propelled considerable distances. Put a protective helmet on before approaching the fire. Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear.
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

Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site. Send away individuals who are not suitably equipped. Wear protective gloves / protective clothing / eye protection / face protection.

6.2. Environmental precautions

Do not disperse in the environment.

6.3. Methods and material for containment and cleaning up

Use inert absorbent material to soak up leaked product. 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

Avoid bunching of electrostatic charges. Do not spray on flames or incandescent bodies. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Do not eat, drink or smoke during use. Do not breathe spray.

7.2. Conditions for safe storage, including any incompatibilities

Store in a place where adequate ventilation is ensured, away from direct sunlight at a temperature below 50°C / 122°F, away from any combustion sources.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory references:

ESP	España	Límites de exposición profesional para agentes químicos en España 2023
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en FranceDécret n° 2021-1849 du 28 décembre 2021
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
EU	OEL EU	Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2023

Hydrocarbons, C9-C11, nalkanes, isoalkanes, cyclics, <2% aromatics

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
OEL	EU	116	20			

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						1500 mg/kg		871 mg/kg
Skin						300 mg/kg		208 mg/kg

Dimethyl ether

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
OEL	EU	1920	1000			

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,155	mg/l
Normal value in marine water	0,016	mg/l
Normal value for fresh water sediment	0,681	mg/l
Normal value for marine water sediment	0,069	mg/l
Normal value for water, intermittent release	1,549	mg/l
Normal value of STP microorganisms	160	mg/l
Normal value for the terrestrial compartment	0,045	mg/l

isopentyl acetate

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
OEL	EU	270			50	

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

pentyl acetate

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
OEL	EU	270	50	540	100	

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,041	mg/l
Normal value in marine water	0,0041	mg/l
Normal value for fresh water sediment	0,286	mg/kg
Normal value for marine water sediment	0,0286	mg/kg
Normal value of STP microorganisms	72	mg/l
Normal value for the terrestrial compartment	0,033	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								266,226 mg/kg
Skin								31,55 mg/kg

2-Methylbutyl acetate

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
OEL	EU	270	50	540	100	

XYLENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	221	50	442	100	SKIN
VLEP	FRA	221	50	442	100	SKIN
VLEP	ITA	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	327	mg/l
Normal value in marine water	327	mg/l
Normal value for fresh water sediment	1246	mg/l
Normal value for marine water sediment	1246	mg/l
Normal value of STP microorganisms	658	mg/l
Normal value for the terrestrial compartment	231	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						442 mg/kg	221 mg/kg	221 mg/kg
Skin								3182 mg/kg

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

BUTANE-1-OL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	61	20	154	50	
VLEP	FRA			150	50	
WEL	GBR			154	50	SKIN
TLV-ACGIH		61	20			

Predicted no-effect concentration - PNEC

Normal value in fresh water	82	mg/l
Normal value in marine water	82	mg/l
Normal value for fresh water sediment	178	mg/kg
Normal value for marine water sediment	178	mg/kg
Normal value of STP microorganisms	2476	mg/l
Normal value for the terrestrial compartment	15	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							310 mg/kg	310 mg/kg

FORMALDEHYDE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	0,37	0,3	0,74	0,6	
VLEP	FRA	0,37	0,3	0,74	0,6	
VLEP	ITA	0,37	0,3	0,74	0,6	
WEL	GBR	2,5	2	2,5	2	
OEL	EU	0,37	0,3	0,74	0,6	
TLV-ACGIH			0,1		0,3	

XYLENE (MIXTURE OF ISOMERS)

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	221	50	442	100	SKIN
VLEP	FRA	221	50	442	100	SKIN
VLEP	ITA	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
Inhalation					442 mg/m3	442 mg/m3		221 mg/m3
Skin								221 mg/kg/d

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

TOLUENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	192	50	384	100	SKIN
VLEP	FRA	76,8	20	384	100	SKIN
VLEP	ITA	192	50			SKIN
WEL	GBR	191	50	384	100	SKIN
OEL	EU	192	50	384	100	SKIN
TLV-ACGIH			20			

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,074	mg/l
Normal value in marine water	0,0074	mg/l
Normal value for fresh water sediment	1,78	mg/l
Normal value for marine water sediment	0,178	mg/l
Normal value for water, intermittent release	0,00378	mg/l
Normal value of STP microorganisms	0,84	mg/l
Normal value for the terrestrial compartment	0,313	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				8,13 mg/kg/d				8,13
Inhalation	226 mg/m3	226 mg/m3	56,5 mg/m3	56,5 mg/m3	384 mg/m3	384 mg/m3	192 mg/m3	192 mg/m3
Skin				226 mg/kg/d				384 mg/kg/d

ETHYLBENZENE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	441	100	884	200	SKIN
VLEP	FRA	88,4	20	442	100	SKIN
VLEP	ITA	442	100	884	200	SKIN
WEL	GBR	441	100	552	125	SKIN
OEL	EU	442	100	884	200	SKIN
TLV-ACGIH		87	20			

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,1	mg/l
Normal value in marine water	0,01	mg/l
Normal value for fresh water sediment	13,7	mg/l
Normal value for marine water sediment	1,37	mg/l
Normal value for water, intermittent release	0,1	mg/l
Normal value of STP microorganisms	9,6	mg/l
Normal value for the terrestrial compartment	2,68	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		1,6		1,6 mg/kg bw/d				
Inhalation				15 mg/m3	293 mg/m3	293		77 mg/m3
Skin								180 mg/kg/d

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

ACETONE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	1210	500			
VLEP	FRA	1210	500	2420	1000	
VLEP	ITA	1210	500			
WEL	GBR	1210	500	3620	1500	
OEL	EU	1210	500			
TLV-ACGIH			250		500	

Predicted no-effect concentration - PNEC

Normal value in fresh water	10,6	mg/l
Normal value in marine water	1,06	mg/l
Normal value for fresh water sediment	30,4	mg/kg
Normal value for marine water sediment	3,04	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				62 mg/kg/d				62
Inhalation				200 mg/m3	2420 mg/m3			1210 mg/m3
Skin				62 mg/kg/d				186 mg/kg/d

ETHYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	734	200	1468	400	
VLEP	FRA	734	200	1468	400	
VLEP	ITA	734	200	1468	400	
WEL	GBR	734	200	1468	400	
OEL	EU	734	200	1468	400	
TLV-ACGIH		1441	400			

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,26	mg/l
Normal value in marine water	0,026	mg/l
Normal value for fresh water sediment	1,25	mg/kg
Normal value for marine water sediment	0,125	mg/kg
Normal value of STP microorganisms	650	mg/l
Normal value for the terrestrial compartment	0,24	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					1468 mg/kg	1468 mg/kg	734 mg/kg	734 mg/kg
Skin								63 mg/kg

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

N-BUTYL ACETATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	241	50	723	150	
VLEP	FRA	241	50	723	150	
VLEP	ITA	241	50	723	150	
WEL	GBR	724	150	966	200	
OEL	EU	241	50	723	150	
TLV-ACGIH			50		150	

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,18	mg/l
Normal value in marine water	0,018	mg/l
Normal value for fresh water sediment	0,981	mg/kg/d
Normal value for marine water sediment	0,0981	mg/kg/d
Normal value for water, intermittent release	0,36	mg/l
Normal value of STP microorganisms	35,6	mg/l
Normal value for the terrestrial compartment	0,0903	mg/kg/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		2 mg/kg bw/d		2 mg/kg bw/d				
Inhalation	300 mg/m3	300 mg/m3	35,7 mg/m3	35,7 mg/m3	600 mg/m3	960 mg/kg	300 mg/m3	480 mg/kg
Skin		6 mg/kg/d				11 mg/kg bw/d		11 mg/kg bw/d

N-BUTYL ACRYLATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	11	2	53	10	
VLEP	FRA	11	2	53	10	
VLEP	ITA	11	2	53	10	
WEL	GBR	5	1	26	5	
OEL	EU	11	2	53	10	
TLV-ACGIH		10	2			

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.

Dimethyl ether
Derived no-effect level (DNEL)
type of application (use): worker
route of exposure: inhalation
health effects: chronic effects, systemic toxicity
DNEL value: 1,894 mg/m3

type of application (use): consumer
route of exposure: inhalation
health effects: chronic effects, systemic toxicity
DNEL value: 471 mg/m3

pentyl acetate
Target: Occasional emission - Value: 0.41 mg/l

XYLENE
Target: Occasional emission - Value: 0.327 mg/l

BUTANE-1-OL
Target: Occasional emission - Value: 2.25 mg/l

XYLENE (MIXTURE OF ISOMERS)
Components with biological limit values:

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

1.5 g/g creatinine
Matrix: urine
Pickup time: at the end of the shift
Biological indicator of exposure: methyllippuric acid

TOLUENE
Components with biological limit values:
IBE (Italy):
0.02 mg/l
Matrix: blood
Collection time: first last shift of the working week
Biological indicator of exposure: toluene

0.03 mg/l
Matrix: urine
Pickup time: at the end of the shift
Biological indicator of exposure: toluene 0.03 mg/g creatinine
Matrix: urine
Pickup time: at the end of the shift
Biological indicator of exposure: o-cresol

ETHYLBENZENE
Components with biological limit values:
IBE (Italy): 0.7 g/g creatinine
Matrix: urine
Pickup time: f.t.f.s.l.
Biological indicator of exposure: mandelic acid + phenylglyoxylic acid
-
Matrix: end-expiratory air
Pickup time: not critical

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.
Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).
HAND PROTECTION
None required.
SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.
EYE PROTECTION
Wear airtight protective goggles (see standard EN 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 AX filter combined with a type P filter should be worn (see standard EN 14387).
ENVIRONMENTAL EXPOSURE CONTROLS
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Dimethyl ether
Skin protection: Wear work clothes with long sleeves and safety footwear for professional category I use (EN 344 standard).
Hand protection: Wear category I work gloves (EN 374 standard) made of latex, PVC or equivalent. To make the final choice of material, evaluate its degradation, breaking time and permeation.
Eye protection: Wear airtight protective glasses and a face shield in case there is the possibility of contact with the face (EN 166 standard).
Respiratory protection: In case of short and modest exposure, wear a filter for organic gases and vapors (EN 371 standard). In case of intense and long-lasting exposure, wear self-contained breathing apparatus (EN 137 standard).
General hygiene and protection measures: Wash hands before breaks and at the end of work. Do not eat, drink or smoke when using. Equip work environments with an eyewash system and a safety shower.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties		Value		Information
Appearance		aerosol		
Colour		red		
Odour		characteristic of solvent		
Melting point / freezing point		not available		
Initial boiling point		not available		
Flammability		not available		
Lower explosive limit		not available		
Upper explosive limit		not available		
Flash point	≥	23	°C	
Auto-ignition temperature		not available		
Decomposition temperature		not available		
pH		not available		
Kinematic viscosity		not available		
Solubility		not available		
Partition coefficient: n-octanol/water		not available		
Vapour pressure		not available		
Density and/or relative density		0,82		
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

Information not available

SECTION 10. Stability and reactivity

10.1. Reactivity

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

Dimethyl ether
The substance is a highly flammable gas.

BUTANE-1-OL
Attacks various types of plastic materials.
FORMALDEHYDE
Decomposes under the effect of heat.
Acqueous solutions are stabilised with methanol but tend to polymerise over time.

TOLUENE
Avoid exposure to: light.
Avoid exposure to: light.

ACETONE
Decomposes under the effect of heat.
ETHYL ACETATE
Decomposes slowly into acetic acid and ethanol under the effect of light, air and water.

N-BUTYL ACETATE
Decomposes on contact with: water.
N-BUTYL ACRYLATE
When hot it can polymerise with explosion even when stabilised with 20 ppm of momomethyl ether hydroquinone. Store at below < 35°C/95°F and out of direct light. Always leave a layer of air on top of the liquid.

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

10.2. Chemical stability

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

Dimethyl ether
Stable in normal conditions of use and storage.
The substance is stable under normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

Dimethyl ether
The vapors of the substance can form an explosive mixture with air (formation of unstable peroxides).

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

BUTANE-1-OL
Reacts violently developing heat on contact with: aluminium,strong oxidising agents,strong reducing agents,hydrochloric acid.Forms explosive mixtures with: air.

FORMALDEHYDE
Risk of explosion on contact with: nitromethane,nitrogen dioxide,hydrogen peroxide,phenoles,performic acid,nitric acid.May polymerise on contact with: strong oxidising agents,alkalis.May react dangerously with: hydrochloric acid,magnesium carbonate,sodium hydroxide,perchloric acid,aniline.Forms explosive mixtures with: air.

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

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.

ACETONE
Risk of explosion on contact with: bromine trifluoride,fluorine dioxide,hydrogen peroxide,nitrosyl chloride,2-methyl-1,3 butadiene,nitromethane,nitrosyl perchlorate.May react dangerously with: potassium tert-butoxide,alkaline hydroxides,bromine,bromoform,isoprene,sodium,sulphur dioxide,chromium trioxide,chromyl chloride,nitric acid,chloroform,peroxymonosulphuric acid,phosphoryl oxychloride,chromosulphuric acid,fluorine,strong oxidising agents,strong reducing agents.Develops flammable gas on contact with: nitrosyl perchlorate.

ETHYL ACETATE
Risk of explosion on contact with: alkaline metals,hydrides,oleum.May react violently with: fluorine,strong oxidising agents,chlorosulphuric acid,potassium tert-butoxide.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.

N-BUTYL ACRYLATE
May polymerise on contact with: amines,bases,halogens,strong oxidising agents,acids,hydrogen compounds.May polymerise if exposed to: heat.Forms explosive mixtures with: hot air.

10.4. Conditions to avoid

Avoid overheating.

Dimethyl ether
Keep away from heat, sources of flame or sparks.

BUTANE-1-OL
Avoid exposure to: sources of heat,naked flames.

FORMALDEHYDE
Avoid exposure to: light,sources of heat,naked flames.

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

ETHYL ACETATE
Avoid exposure to: light,sources of heat,naked flames.

N-BUTYL ACETATE
Avoid exposure to: moisture,sources of heat,naked flames.

N-BUTYL ACRYLATE
Avoid exposure to: light,sources of heat,naked flames.

10.5. Incompatible materials

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

Strong reducing or oxidising agents, strong acids or alkalis, hot material.

Dimethyl ether
Acids, oxidizing agents, powdered metals, oxygen and carbon monoxide.

FORMALDEHYDE
Incompatible with: acids,alkalis,ammonia,tannin,strong oxidants,phenoles,copper salts,silver,iron.
ACETONE
Incompatible with: acids,oxidising substances.
ETHYL ACETATE
Incompatible with: acids,bases,strong oxidants,chlorosulphuric acid.
N-BUTYL ACETATE
Incompatible with: water,nitrates,strong oxidants,acids,alkalis,zinc.
N-BUTYL ACRYLATE
Incompatible with: amines,halogens,oxidising substances,strong acids,alkalis.

10.6. Hazardous decomposition products

Dimethyl ether
Thermal decomposition of the substance produces toxic vapors (carbon oxides, formaldehyde, methanol).

FORMALDEHYDE
When heated to decomposition releases: methanol,carbon monoxide.
ETHYLBENZENE
May develop: methane,styrene,hydrogen,ethane.
ACETONE
May develop: ketenes,irritant substances.

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

Information not available

Information on likely routes of exposure

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

XYLENE (MIXTURE OF ISOMERS)
WORKERS: inhalation; contact with the skin.
POPULATION: ingestion of contaminated food or water; inhalation of ambient air.

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

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

N-BUTYL ACETATE
WORKERS: inhalation; contact with the skin.

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

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

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

SECTION 11. Toxicological information ... / >>

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

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

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

Interactive effects

XYLENE
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.

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.

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

N-BUTYL ACETATE
A case of acute intoxication been reported involving a 33 year old worker while cleaning a tank with a preparation containing xylenes, butyl acetate and ethylene glycol acetate. The person had irritation of the conjunctiva and upper respiratory tract, drowsiness and motor coordination disorders, which disappeared within 5 hours. The symptoms are attributed to poisoning by mixed xylenes and butyl acetate, with a possible synergistic effect responsible for the neurological effects. Cases of vacuolar keratitis are 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 - mists / powders) of the mixture:	4,4 mg/l
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	>2000 mg/kg

Hydrocarbons, C9-C11, nalkanes, isoalkanes, cyclics,
<2% aromatics

LD50 (Dermal):	> 5000 mg/kg Specie: Coniglio
LD50 (Oral):	> 5000 mg/kg Specie: Ratto

pentyl acetate

LD50 (Dermal):	> 5000 mg/kg
LD50 (Oral):	> 5000 mg/kg
LC50 (Inhalation gas):	> 19,25 ppm/1h

XYLENE

LD50 (Dermal):	> 1700 mg/kg Rabbit
LC50 (Inhalation vapours):	5000 ppm/4h Rat
ATE (Inhalation mists/powders):	1,5 mg/l (figure used for calculation of the acute toxicity estimate of the mixture)

BUTANE-1-OL

LD50 (Dermal):	3430 mg/kg Rabbit
LD50 (Oral):	2292 mg/kg Rat
ATE (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):	1776 mg/l/4h Rat

SECTION 11. Toxicological information ... / >>

FORMALDEHYDE

LD50 (Dermal):	270 mg/kg Rabbit
LD50 (Oral):	100 mg/kg Rat
LC50 (Inhalation vapours):	0,588 mg/l/4h Rat

XYLENE (MIXTURE OF ISOMERS)

LD50 (Dermal):	2000 mg/kg Rabbit
LD50 (Oral):	3523 mg/kg Rat
LC50 (Inhalation vapours):	27,541 mg/l/4h Rat
ATE (Inhalation mists/powders):	1,5 mg/l (figure used for calculation of the acute toxicity estimate of the mixture)

TOLUENE

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

ETHYLBENZENE

LD50 (Dermal):	15400 mg/kg Rabbit
LD50 (Oral):	3500 mg/kg Rat
LC50 (Inhalation vapours):	17,6 mg/l/1h Rat
ATE (Inhalation mists/powders):	1,5 mg/l (figure used for calculation of the acute toxicity estimate of the mixture)

ETHYL ACETATE

LD50 (Dermal):	> 20000 mg/kg Specie: Coniglio
LD50 (Oral):	4100 mg/kg Specie: Topo

N-BUTYL ACETATE

LD50 (Dermal):	> 10000 mg/kg Rabbit
LD50 (Oral):	> 8000 mg/kg Rat
LC50 (Inhalation vapours):	21,1 mg/l/4h Rat

N-BUTYL ACRYLATE

LD50 (Dermal):	750 mg/kg Rabbit
LD50 (Oral):	900 mg/kg Rat
LC50 (Inhalation vapours):	10,3 mg/l/4h Rat

Hydrocarbons, C9-C11, nalkanes, isoalkanes, cyclics,
<2% aromatics
Test: LC50 - Route: Inhalation - Species: Rat > 4951 mg/m3 - Duration: 4h

Dimethyl ether
LC50 Inhalation rat 164,000 ppm respiratory, anesthetic, central nervous system depressant effects, narcosis, cardiac irregularity, coma.
Skin corrosion/irritation:
Based on expert assessments, the substance is not expected to cause skin irritation (not tested on animals). Contact of the substance in liquid phase with the skin can cause serious cold injuries.
Serious eye damage/eye irritation:
Based on expert assessments, the substance is not expected to cause eye irritation (not tested on animals). Contact of the substance in liquid phase with the eyes can cause serious cold injuries.
Respiratory or skin sensitization:
Based on expert assessments, the substance is not expected to have sensitizing effects (not tested on animals).
Repeated dose toxicity:
Inhalation studies conducted on rats have not shown significant toxicological effects.
Germ cell mutagenicity:
Tests conducted on cultures of bacterial or mammalian cells have not shown mutagenic effects.
Carcinogenicity
Animal testing has not shown any carcinogenic effects.
Reproductive toxicity: No reprotoxic effects.

XYLENE (MIXTURE OF ISOMERS)
ATE (Vapour inhalation): 11 mg/l estimated from table 3.1.2 of Annex I of CLP (data used to calculate the estimate of the acute toxicity of the mixture)

ETHYL ACETATE
OBSERVATIONS ON MAN:
400 ppm: irritating to eyes.
Severe toxic effects at 2000 ppm/60 min, symptoms of malaise at 800 ppm.
Inhalation toxicity: TCLo 400 ppm irritation to nose, eyes and respiratory system

SECTION 11. Toxicological information ... / >>

SKIN CORROSION / IRRITATION

Causes skin irritation

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

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
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".

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".

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

STOT - REPEATED EXPOSURE

May cause damage to organs

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

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

12.1. Toxicity

Dimethyl ether
LC50 (48 h) daphnia magna 755.549 mg/l

SECTION 12. Ecological information ... / >>

ETHYL ACETATE
Endpoint: LC50 - Species: Algae = 5600 mg/l - Duration h: 48
Endpoint: EC50 - Species: Daphnia = 3090 mg/l - Duration h: 24

Hydrocarbons, C9-C11, nalkanes, isoalkanes, cyclics, <2% aromatics

LC50 - for Fish	> 1000 mg/l/96h Specie: Pesci
EC50 - for Crustacea	1000 mg/l/48h Specie: Dafnie
EC50 - for Algae / Aquatic Plants	> 1000 mg/l/72h - Specie: Alghe

Dimethyl ether

LC50 - for Fish	> 4000 mg/l/96h trota iridea
EC50 - for Crustacea	> 4000 mg/l/48h daphnia magna

pentyl acetate

EC50 - for Algae / Aquatic Plants	> 466 mg/l/72h

BUTANE-1-OL

LC50 - for Fish	225 mg/l/96h Specie: Pesci

ETHYLBENZENE

LC50 - for Fish	4,2 mg/l/96h oncorhynchus mykiss
EC50 - for Crustacea	1,8 mg/l/48h
Chronic NOEC for Crustacea	1 mg/l
Chronic NOEC for Algae / Aquatic Plants	3,4 mg/l 72h

ETHYL ACETATE

LC50 - for Fish	230 mg/l/96h
EC50 - for Crustacea	260 mg/l/48h Specie: Dafnie
EC50 - for Algae / Aquatic Plants	> 100 mg/l/72h Specie: Alghe

N-BUTYL ACETATE

LC50 - for Fish	100 mg/l/96h Lepomis macrochirus
EC50 - for Algae / Aquatic Plants	674,7 mg/l/72h Desmodesmus subspicatus

12.2. Persistence and degradability

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

BUTANE-1-OL
Solubility in water 1000 - 10000 mg/l
Rapidly degradable

FORMALDEHYDE
Solubility in water 55000 mg/l
Rapidly degradable

XYLENE (MIXTURE OF ISOMERS)
Solubility in water 100 - 1000 mg/l
Rapidly degradable

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

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

ACETONE
Rapidly degradable

ETHYL ACETATE
Solubility in water > 10000 mg/l
Rapidly degradable

SECTION 12. Ecological information ... / >>

N-BUTYL ACETATE
Solubility in water 1000 - 10000 mg/l

N-BUTYL ACRYLATE
Solubility in water 1700 mg/l
Rapidly degradable

12.3. Bioaccumulative potential

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

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

FORMALDEHYDE
Partition coefficient: n-octanol/water 0,35
BCF < 1

XYLENE (MIXTURE OF ISOMERS)
Partition coefficient: n-octanol/water 3,12
BCF 25,9

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

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

ACETONE
Partition coefficient: n-octanol/water -0,23
BCF 3

ETHYL ACETATE
Partition coefficient: n-octanol/water 0,68
BCF 30

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

N-BUTYL ACRYLATE
Partition coefficient: n-octanol/water 2,38
BCF 37

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Waste transportation may be subject to ADR restrictions.
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 1950

14.2. UN proper shipping name

ADR / RID: AEROSOLS MIXTURE
IMDG: AEROSOLS MIXTURE
IATA: AEROSOLS, FLAMMABLE MIXTURE

14.3. Transport hazard class(es)

ADR / RID: Class: 2 Label: 2.1

IMDG: Class: 2 Label: 2.1

IATA: Class: 2 Label: 2.1

14.4. Packing group

ADR / RID, IMDG, IATA: -

14.5. Environmental hazards

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

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: --	Limited Quantities: 1 L	Tunnel restriction code: (D)
	Special provision: 190, 327, 344, 625		
IMDG:	EMS: F-D, S-U	Limited Quantities: 1 L	
IATA:	Cargo:	Maximum quantity: 150 Kg	Packaging instructions: 203
	Passengers:	Maximum quantity: 75 Kg	Packaging instructions: 203
	Special provision:	A145, A167, A802	

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: P3a

SECTION 15. Regulatory information ... / >>

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

Product

Point	40	

Contained substance

Point	75	
Point	72-77	FORMALDEHYDE REACH Reg.: 01-2119488953-20

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors
Regulated explosives precursor
The acquisition, introduction, possession or use of that regulated explosives precursor by members of the general public is subject to reporting obligations as set out in Article 9.
All suspicious transactions and significant disappearances and thefts must be reported to the relevant national contact point.

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.

VOC (Directive 2004/42/EC) :
Special finishes - All types.

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. Gas 1A	Flammable gas, category 1A
Aerosol 1	Aerosol, category 1
Aerosol 3	Aerosol, category 3
Flam. Liq. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
Press. Gas	Pressurised gas
Carc. 1B	Carcinogenicity, category 1B
Muta. 2	Germ cell mutagenicity, category 2
Repr. 2	Reproductive toxicity, category 2
Acute Tox. 3	Acute toxicity, 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
Skin Corr. 1B	Skin corrosion, category 1B
Skin Corr. 1C	Skin corrosion, category 1C
Skin Corr. 1	Skin corrosion, category 1
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Skin Sens. 1	Skin sensitization, category 1
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: may burst if heated.
H225	Highly flammable liquid and vapour.

SECTION 16. Other information ... / >>

H226	Flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H350	May cause cancer.
H341	Suspected of causing genetic defects.
H361d	Suspected of damaging the unborn child.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
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.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
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
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very persistent and very bioaccumulative
- vPvM: Very persistent and very mobile
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY
1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament

SECTION 16. Other information ... / >>

12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 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)
23. Delegated Regulation (UE) 2023/707

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

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

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

Changes to previous review:
The following sections were modified:
02 / 15.