

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: SPRAY-1K-OP.
Product name: NNO- NextNitro Matt
UFI : JH91-U0PJ-A00D-VSJA

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

Intended use: Car spray can paint direct gloss color

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 KINGDOM - 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.

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SECTION 2. Hazards identification ... / >>

Hazard classification and indication:

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.
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.
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 not 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
N-BUTYL ACETATE

VOC (Directive 2004/42/EC) :

Special finishes - All types.

VOC given in g/litre of product in a ready-to-use condition :

725,22

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 $\geq$ than 0,1%.

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

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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		
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 LD50 Dermal: 2000 mg/kg, ATE Inhalation mists/powders: 1,5 mg/l
EC 215-535-7		
CAS 1330-20-7		
N-BUTYL ACETATE		
INDEX 607-025-00-1	10,5 ≤ x < 12	Flam. Liq. 3 H226, STOT SE 3 H336, EUH066
EC 204-658-1		
CAS 123-86-4		
REACH Reg. 01-2119485493-29		
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		
N-BUTYL ACETATE		
INDEX 607-025-00-1	3 ≤ x < 3,5	Flam. Liq. 3 H226, STOT SE 3 H336, EUH066
EC 204-658-1		
CAS 123-86-4		
REACH Reg. 01-2119485493-29		
XYLENE		
INDEX 601-022-00-9	2,5 ≤ x < 3	Flam. Liq. 3 H226, Acute Tox. 4 H312, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Aquatic Chronic 3 H412, Classification note according to Annex VI to the CLP Regulation: C LD50 Dermal: >1700 mg/kg, ATE Inhalation mists/powders: 1,5 mg/l
EC 215-535-7		
CAS 1330-20-7		
REACH Reg. 01-2119488216-32		
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 ATE Inhalation mists/powders: 1,5 mg/l
EC 202-849-4		
CAS 100-41-4		
REACH Reg. 01-2119489370-35		
ETHYLBENZENE		
INDEX 601-023-00-4	0,9 ≤ x < 1	Flam. Liq. 2 H225, Acute Tox. 4 H332, Asp. Tox. 1 H304, STOT RE 2 H373, Aquatic Chronic 3 H412 ATE Inhalation mists/powders: 1,5 mg/l
EC 202-849-4		
CAS 100-41-4		
REACH Reg. 01-2119489370-35		
2-BUTOXYETHANOL		
INDEX 603-014-00-0	0,6 ≤ x < 0,7	Acute Tox. 3 H331, Acute Tox. 4 H302, Eye Irrit. 2 H319, Skin Irrit. 2 H315 LD50 Oral: 1746 mg/kg, ATE Inhalation mists/powders: 0,501 mg/l
EC 203-905-0		
CAS 111-76-2		
REACH Reg. 01-2119475108-36		
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		

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

4-methyl-pentan-2-one; methylisobutylketone
INDEX 606-004-00-4 0 < x < 0,05

EC 203-550-1
CAS 108-10-1
REACH Reg. 01-2119473980-30

Flam. Liq. 2 H225, Carc. 2 H351, Acute Tox. 4 H332, Eye Irrit. 2 H319, STOT SE 3 H336, EUH066
ATE Inhalation mists/powders: 1,5 mg/l

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

IF SWALLOWED: Immediately call a POISON CENTER / doctor / . . .

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.

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SECTION 5. Firefighting measures ... / >>

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 France Décret 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

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

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

XYLENE

Threshold Limit Value

Inorganic 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

Route of exposure	Effects on consumers		Effects on workers		Chronic systemic
	Acute	Acute	Chronic	Chronic	
	local	systemic	local	systemic	
Inhalation					442
					mg/kg
Skin					221
					mg/kg
					3182
					mg/kg

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			

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

XYLENE (MIXTURE OF ISOMERS)

Threshold Limit Value

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

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					442 mg/m3	442 mg/m3		221 mg/m3
Skin								221 mg/kg/d

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

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				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

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

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

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		1,6		1,6 mg/kg bw/d				
Inhalation				15 mg/m3	293 mg/m3	293		77 mg/m3
Skin								180 mg/kg/d

2-BUTOXYETHANOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
VLA	ESP	98	20	245	50	SKIN
VLEP	FRA	49	10	246	50	SKIN
VLEP	ITA	98	20	246	50	SKIN
WEL	GBR	123	25	246	50	SKIN
OEL	EU	98	20	246	50	SKIN
TLV-ACGIH		97	20			

Predicted no-effect concentration - PNEC

Normal value in fresh water	34,6	mg/kg
Normal value in marine water	3,46	mg/kg
Normal value for the terrestrial compartment	3,13	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
Inhalation								98 mg/kg
Skin								75 mg/kg

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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

Route of exposure	Effects on consumers			Effects on workers				
	Acute	Acute	Chronic	Chronic	Acute local	Acute	Chronic	Chronic
	local	systemic	local	systemic		systemic	local	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

4-methyl-pentan-2-one; methylisobutylketone

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations	
		mg/m3	ppm	mg/m3	ppm		
VLA	ESP	83	20	208	50		
VLEP	FRA	83	20	208	50		
VLEP	ITA	83	20	208	50		
WEL	GBR	208	50	416	100	SKIN	
OEL	EU	83	20	208	50		
TLV-ACGIH		82	20	307	75		

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers			Effects on workers				
	Acute	Acute	Chronic	Chronic	Acute local	Acute	Chronic	Chronic
	local	systemic	local	systemic		systemic	local	systemic
Inhalation					208 mg/kg	208 mg/kg	83 mg/kg	83 mg/kg

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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

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		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 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
Normal value for marine water sediment	0,0981	mg/kg
Normal value of STP microorganisms	35,6	mg/l
Normal value for the terrestrial compartment	0,0903	mg/kg

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

XYLENE

Target: Occasional emission - Value: 0.327 mg/l

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

XYLENE (MIXTURE OF ISOMERS)

Components with biological limit values:

1.5 g/g creatinine

Matrix: urine

Pickup time: at the end of the shift

Biological indicator of exposure: methylippuric 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

2-BUTOXYETHANOL

Target: Occasional emission - Value: 463 mg/l

N-BUTYL ACETATE

Target: Occasional emission - Value: 0.36 mg/l

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).

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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	colourless	
Odour	characteristic of solvent	
Odour threshold	not determined	
Melting point / freezing point	not applicable	
Initial boiling point	> 35 °C	
Boiling range	not determined	
Flammability	flammable liquid	
Lower explosive limit	not applicable	
Upper explosive limit	not applicable	
Flash point	< 23 °C	
Auto-ignition temperature	400 °C	
Decomposition temperature	not applicable	
Self-accelerating decomposition temperature (SADT)	not determined	
pH	not available	Concentration: 998 % Reason for missing data:substance/mixture is non-soluble (in water)
Kinematic viscosity	>20,5 mm2/sec a 40°	
Dynamic viscosity	not determined	
Solubility	insoluble in water	
Dissolution rate	not available	Reason for missing data:substance/mixture is non-soluble (in water)
Partition coefficient: n-octanol/water	not applicable	
Dispersion stability	not available	Reason for missing data:substance/mixture is non-soluble (in water)
Vapour pressure	not determined	
Density and/or relative density	0,84	
Relative vapour density	>Aria	
Particle characteristics		
Median equivalent diameter		
Remark:	Non applicable	
Size distribution		
Remark:	Non applicable	
Dustiness		
Remark:	Non applicable	
Specific surface area		
Remark:	Non applicable	
Shape		
Remark:	Non 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

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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.

TOLUENE

Avoid exposure to: light.

Avoid exposure to: light.

2-BUTOXYETHANOL

Decomposes under the effect of heat.

ACETONE

Decomposes under the effect of heat.

4-methyl-pentan-2-one; methylisobutylketone

Reacts violently with: light metals. Attacks various types of plastic materials.

N-BUTYL ACETATE

Decomposes on contact with: water.

N-BUTYL ACETATE

Decomposes on contact with: water.

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.

ETHYLBENZENE

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

XYLENE (MIXTURE OF ISOMERS)

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

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.

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.

4-methyl-pentan-2-one; methylisobutylketone

May react violently with: oxidising agents. Forms peroxides with: air. Forms explosive mixtures with: hot 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 ACETATE

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

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

explosive mixtures with: air.

10.4. Conditions to avoid

Avoid overheating.

Dimethyl ether

Keep away from heat, sources of flame or sparks.

2-BUTOXYETHANOL

Avoid exposure to: sources of heat,naked flames.

ACETONE

Avoid exposure to: sources of heat,naked flames.

4-methyl-pentan-2-one; methylisobutylketone

Avoid exposure to: sources of heat.

N-BUTYL ACETATE

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

N-BUTYL ACETATE

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

10.5. Incompatible materials

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

Dimethyl ether

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

ACETONE

Incompatible with: acids,oxidising substances.

4-methyl-pentan-2-one; methylisobutylketone

Incompatible with: oxidising substances,reducing substances.

N-BUTYL ACETATE

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

N-BUTYL ACETATE

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

10.6. Hazardous decomposition products

Dimethyl ether

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

ETHYLBENZENE

May develop: methane,styrene,hydrogen,ethane.

ETHYLBENZENE

May develop: methane,styrene,hydrogen,ethane.

2-BUTOXYETHANOL

May develop: hydrogen.

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.

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SECTION 11. Toxicological information ... / >>

ETHYLBENZENE

WORKERS: inhalation; contact with the skin.

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

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.

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.

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 (Ispešl). Is irritating for skin, conjunctiva and respiratory tract.

XYLENE (MIXTURE OF ISOMERS)

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

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 (Ispešl). 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.

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.

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SECTION 11. Toxicological information ... / >>

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).

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: 3,7 mg/l
ATE (Oral) of the mixture: >2000 mg/kg
ATE (Dermal) of the mixture: >2000 mg/kg

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)

ETHYLBENZENE

LD50 (Dermal): 15354 mg/kg Rabbit
LD50 (Oral): 3500 mg/kg Rat
LC50 (Inhalation vapours): 17,2 mg/l/4h Rat
ATE (Inhalation mists/powders): 1,5 mg/l
(figure used for calculation of the acute toxicity estimate of the mixture)

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)

2-BUTOXYETHANOL

LD50 (Dermal): 6411 mg/kg Ratto
LD50 (Oral): 1746 mg/kg Ratto
LC50 (Inhalation gas): 450 ppm/4h Ratto
ATE (Inhalation mists/powders): 0,501 mg/l
(figure used for calculation of the acute toxicity estimate of the mixture)

4-methyl-pentan-2-one; methylisobutylketone

LD50 (Dermal): > 16000 mg/kg Rabbit
LD50 (Oral): 2080 mg/kg Rat
LC50 (Inhalation gas): 3000 ppm/4h Topo

Safety Data Sheet According to Annex II to REACH - Regulation (EU) 2020/878**SECTION 11. Toxicological information** ... / >>**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 ACETATE

LD50 (Dermal): > 14000 mg/kg Coniglio
LD50 (Oral): > 10000 mg/kg Ratto

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)

2-BUTOXYETHANOL**OBSERVATIONS ON MAN:**

probable lethal oral dose: 50-500 mg/kg.

Following repeated and/or prolonged exposures causes headaches, drowsiness, weakness, stuttering, tremor, blurred vision, albuminuria and spinal cord damage bone.

N-BUTYL ACETATE

Test: LC50 - Route: Inhalation - Species: Rat > 21.1 mg/l - Duration: 4h

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".

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SECTION 11. Toxicological information ... / >>

ETHYLBENZENE

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

XYLENE (MIXTURE OF ISOMERS)

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

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

Dimethyl ether

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

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

2-BUTOXYETHANOL

LC50 - for Fish	1474 mg/kg Pesci
EC50 - for Crustacea	1550 mg/l/48h Dafnie
EC50 - for Algae / Aquatic Plants	911 mg/l/72h Alghe

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SECTION 12. Ecological information ... / >>

4-methyl-pentan-2-one; methylisobutylketone	
LC50 - for Fish	> 179 mg/l/96h Pesci
EC50 - for Crustacea	> 200 mg/l/48h Dafnie
Chronic NOEC for Crustacea	33 mg/l Dafnie
Chronic NOEC for Algae / Aquatic Plants	> 146 mg/l 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	
ETHYLBENZENE	
Solubility in water	1000 - 10000 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	
2-BUTOXYETHANOL	
Solubility in water	1000 - 10000 mg/l
Rapidly degradable	
ACETONE	
Rapidly degradable	
4-methyl-pentan-2-one; methylisobutylketone	
Solubility in water	> 10000 mg/l
Rapidly degradable	
N-BUTYL ACETATE	
Solubility in water	1000 - 10000 mg/l
N-BUTYL ACETATE	
Solubility in water	1000 - 10000 mg/l

12.3. Bioaccumulative potential

XYLENE	
Partition coefficient: n-octanol/water	3,12
BCF	25,9
ETHYLBENZENE	
Partition coefficient: n-octanol/water	3,6
XYLENE (MIXTURE OF ISOMERS)	
Partition coefficient: n-octanol/water	3,12
BCF	25,9
TOLUENE	
Partition coefficient: n-octanol/water	2,73
BCF	90

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SECTION 12. Ecological information ... / >>

ETHYLBENZENE	
Partition coefficient: n-octanol/water	3,6
2-BUTOXYETHANOL	
Partition coefficient: n-octanol/water	0,81
ACETONE	
Partition coefficient: n-octanol/water	-0,23
BCF	3
4-methyl-pentan-2-one; methylisobutylketone	
Partition coefficient: n-octanol/water	1,9
N-BUTYL ACETATE	
Partition coefficient: n-octanol/water	2,3
BCF	15,3
N-BUTYL ACETATE	
Partition coefficient: n-octanol/water	2,3
BCF	15,3

12.4. Mobility in soil

XYLENE	
Partition coefficient: soil/water	2,73
XYLENE (MIXTURE OF ISOMERS)	
Partition coefficient: soil/water	2,73
4-methyl-pentan-2-one; methylisobutylketone	
Partition coefficient: soil/water	2,008
N-BUTYL ACETATE	
Partition coefficient: soil/water	< 3
N-BUTYL ACETATE	
Partition coefficient: soil/water	< 3

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage $\geq$ 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 1950

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SECTION 14. Transport information ... / >>

14.2. UN proper shipping name

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

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 lt	Tunnel restriction code: (D)
	Special provision: 190, 327, 344, 625		
IMDG:	EMS: F-D, S-U	Limited Quantities: 1 lt	
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

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

<u>Product</u>	
Point	40
<u>Contained substance</u>	
Point	75

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 $\geq$ than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

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SECTION 15. Regulatory information ... / >>

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. 2	Carcinogenicity, 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
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
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.
H226	Flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H351	Suspected of causing cancer.
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.
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.
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)

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SECTION 16. Other information ... / >>

- 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

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 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
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 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
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- 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

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SECTION 16. Other information ... / >>

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.