

Safety Data Sheet

Conforms to Regulation (EC) No. 1907/2006 (REACH), Article 31, Annex II, as amended by Commission Regulation (EU) 2020/878

KERADECOR ZINKOVER

Date of first edition: 7/13/2021

Safety Data Sheet dated 1/10/2023

version 6

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

1.1. Product identifier

Mixture identification:

Trade name: KERADECOR ZINKOVER

Trade code: 18062021 -11

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

Recommended use: Paints/coatings - Protective and functional

Uses advised against: All uses other than recommended ones

1.3. Details of the supplier of the safety data sheet

Company: KERAKOLL S.p.A.

Via dell'Artigianato, 9

41049 Sassuolo (MODENA) - ITALY

Tel.+39 0536 816511 Fax. +39 0536816581

safety@kerakoll.com

1.4. Emergency telephone number

European emergency phone number 112

Kerakoll Italy - +39-0536-816511

Ireland

Poison information centre: 01 809 2166 (Daily 8am-10pm)

In case of emergency call 999 or 112

Malta

In case of emergency call: +356 2395 2000 (24h)

SECTION 2: Hazards identification



2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Flam. Liq. 2 Highly flammable liquid and vapour.

Skin Irrit. 2 Causes skin irritation.

Eye Irrit. 2 Causes serious eye irritation.

STOT SE 3 May cause respiratory irritation.

STOT RE 2 May cause damage to organs through prolonged or repeated exposure.

Aquatic Chronic 3 Harmful to aquatic life with long lasting effects.

DECL10 This titanium dioxide-containing product is not classified as carcinogen by inhalation because it does not meet the criteria stated in Note 10, Annex VI of Regulation (EC) 1272/2008.

Note 10: The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter $\leq 10 \mu\text{m}$.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP):

Pictograms and Signal Words



Danger

Hazard statements

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves and eye protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501	Dispose of contents/container in accordance with applicable regulations.

Contains

xylene
2-methylpropan-1-ol; iso-butanol

Dir. 2004/42/EC (VOC directive)

One-pack performance coatings
EU limit value for this product (cat. A/i): 500 g/l
This product contains max 0 g/l VOC.

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances
present in concentration $\geq 0.1\%$.

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: KERADECOR ZINKOVER

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb.	Classification	Registration Number
25-50 %	xylene	CAS:1330-20-7 EC:215-535-7 Index:601-022-00-9	Flam. Liq. 3, H226; Acute Tox. 4, H332; Acute Tox. 4, H312; Skin Irrit. 2, H315; STOT SE 3, H335; STOT RE 2, H373; Asp. Tox. 1, H304; Aquatic Chronic 3, H412; Eye Irrit. 2, H319, M-Chronic:1	01-2119488216-32
20-24,9 %	titanium dioxide	CAS:13463-67-7 EC:236-675-5 Index:022-006-00-2	Carc. 2, H351	
5-9,9 %	ethylbenzene	CAS:100-41-4 EC:202-849-4 Index:601-023-00-4	Flam. Liq. 2, H225; Acute Tox. 4, H332; STOT RE 2, H373; Asp. Tox. 1, H304; Aquatic Chronic 3, H412	01-2119489370-35
2,5-4,9 %	2-methylpropan-1-ol; iso-butanol	CAS:78-83-1 EC:201-148-0 Index:603-108-00-1	Flam. Liq. 3, H226; STOT SE 3, H335; Skin Irrit. 2, H315; Eye Dam. 1, H318, H336	
2,5-4,9 %	2-methoxy-1-methylethyl acetate	CAS:108-65-6 EC:203-603-9 Index:607-195-00-7	Flam. Liq. 3, H226	01-2119475791-29

< 0,3 %	toluene	CAS:108-88-3 EC:203-625-9 Index:601-021-00-3	Flam. Liq. 2, H225; Repr. 2, H361d; Asp. Tox. 1, H304; STOT RE 2, H373; Skin Irrit. 2, H315; STOT SE 3, H336	01-2116471310-51
< 0,1 %	n-butyl acetate	CAS:123-86-4 EC:204-658-1 Index:607-025-00-1	Flam. Liq. 3, H226; STOT SE 3, H336, EUH066	01-2119485493-29

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and label hazardous.

In case of Inhalation:

In case of inhalation, consult a doctor immediately and show him packing or label.

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

Eye irritation

Eye damages

Skin Irritation

Erythema

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

CO2 or Dry chemical fire extinguisher.

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove all sources of ignition.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand
Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.
Use localized ventilation system.
Do not eat or drink while working.
See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Store at below 20 °C. Keep away from unguarded flame and heat sources. Avoid direct exposure to sunlight.
Keep away from unguarded flame, sparks, and heat sources. Avoid direct exposure to sunlight.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

Component	OEL Type	Country	Ceiling	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Notes
xylene	EU	NNN		221	50	442	100	Skin
	NATIONAL	AUSTRIA		221.000	50.000	442.000	100.000	
	NATIONAL	BELGIUM		221.000	50.000	442.000	100.000	
	NATIONAL	CANADA			100.000		150.000	Ontario
	NATIONAL	CANADA		434.000	100.000	651.000	150.000	Québec
	NATIONAL	DENMARK		109.000	25.000	442.000	100.000	
	NATIONAL	FINLAND		220.000	50.000	440.000	100.000	
	NATIONAL	FRANCE		221.000	50.000	442.000	100.000	
	NATIONAL	GERMANY		440.000	100.000	880.000	200.000	AGS
	NATIONAL	GERMANY		440.000	100.000	880.000	200.000	DFG
	NATIONAL	HUNGARY		221.000		442.000		
	NATIONAL	IRELAND		221.000	50.000	442.000	100.000	
	NATIONAL	ISRAEL		434.000	100.000	442.000	100.000	
	NATIONAL	ITALY		221.000	50.000	442.000	100.000	
	NATIONAL	LATVIA		221.000	50.000	442.000	100.000	
	NATIONAL	NEW ZEALAND		217.000	50.000			
	NATIONAL	CHINA			50.000		100.000	
	NATIONAL	POLAND			100.000			
	NATIONAL	ROMANIA		221.000	50.000	442.000	100.000	
	NATIONAL	SINGAPORE		434.000	100.000	651.000	150.000	
	NATIONAL	KOREA, REPUBLIC OF		435.000	100.000	655.000	150.000	
	NATIONAL	SPAIN		221.000	50.000	442.000	100.000	
	NATIONAL	SWEDEN		221.000	50.000	442.000	100.000	
	NATIONAL	SWITZERLAND		435.000	100.000	870.000	200.000	

titanium dioxide	NATIONAL	NETHERLANDS	210.000		442.000		
	NATIONAL	TURKEY	221.000	50.000	442.000	100.000	
	NATIONAL	UNITED STATES OF AMERICA	435.000	100.000	655.000	150.000	NIOSH
	NATIONAL	UNITED STATES OF AMERICA	435.000	100.000			OSHA
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	220.000	50.000	441.000	100.000	
	NATIONAL	ARGENTINA		100.000		150.000	
	NATIONAL	BULGARIA	221.000	50.000	445.000	100.000	
	NATIONAL	CZECHIA	200.000		400.000		
	NATIONAL	CHILE	380.000	87.000	621.000	150.000	
	NATIONAL	CROATIA	221.000	50.000	442.000	100.000	
	NATIONAL	ESTONIA	200.000	50.000	450.000	100.000	
	NATIONAL	GREECE	435.000	100.000	650.000	150.000	
	NATIONAL	INDONESIA	434.000	100.000	651.000	150.000	
	NATIONAL	ICELAND	109.000	25.000	442.000	100.000	
	NATIONAL	LITHUANIA	221.000	50.000	442.000	100.000	
	NATIONAL	NORWAY	108.000	25.000			
	NATIONAL	PORTUGAL		100.000		150.000	
	NATIONAL	RUSSIAN FEDERATION	50.000		150.000		
	NATIONAL	SLOVAKIA	221.000	50.000	442.000	100.000	
	NATIONAL	SLOVENIA	221.000	50.000	442.000	100.000	
	NATIONAL	SOUTH AFRICA	218.000	50.000	435.000	100.000	
	NATIONAL	TAIWAN, PROVINCE OF CHINA	434.000	100.000			
	ACGIH	NNN		100.000		150.000	A4, BEI - URT and eye irr, CNS impair
	EU	NNN	221.000	50.000	442.000	100.000	Skin
	NATIONAL	AUSTRALIA	10				
	NATIONAL	BELGIUM	10.000				
	NATIONAL	CANADA	10.000				Ontario
	NATIONAL	CANADA	10.000				Quebec
	NATIONAL	DENMARK	6.000		12.000		Long term and short term: total dust
	NATIONAL	FRANCE	11.000				Inhalable aerosol
	NATIONAL	GERMANY	0.300		2.400		DFG; Long term and short term: excluding ultrafine particles; respirable fraction; multiplied by the material density;
	NATIONAL	IRELAND	10.000				Inhalable fraction
	NATIONAL	IRELAND	8.000				Respirable fraction
	NATIONAL	LATVIA	10.000				

ethylbenzene	NATIONAL	NEW ZEALAND	10000.000					The value for inhalable dust containing no asbestos and less than 1% free silica
	NATIONAL	CHINA	8.000					Inhalable fraction
	NATIONAL	POLAND	10.000		30.000			
	NATIONAL	ROMANIA	10.000		15.000			
	NATIONAL	SINGAPORE	10.000					
	NATIONAL	KOREA, REPUBLIC OF	10.000					
	NATIONAL	SPAIN	10.000					Inhalable aerosol
	NATIONAL	SWEDEN	5.000					Inhalable aerosol
	NATIONAL	SWITZERLAND	3.000					Respirable aerosol
	NATIONAL	UNITED STATES OF AMERICA	15.000					OSHA; total dust
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	10.000					Inhalable aerosol
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	4.000					Respirable aerosol
	NATIONAL	ARGENTINA	10.000					
	NATIONAL	AUSTRIA	5.000		10.000			
	NATIONAL	BULGARIA	10.000					
	NATIONAL	CROATIA	10.000					total dust
	NATIONAL	CROATIA	4.000					respirable dust
	NATIONAL	GREECE	10.000					
	NATIONAL	GREECE	50.000					
	NATIONAL	GREECE	5.000					
	NATIONAL	INDONESIA	10.000					
	NATIONAL	LITHUANIA	5.000					
	NATIONAL	NORWAY	5.000					
	NATIONAL	PORTUGAL	10.000					
	NATIONAL	RUSSIAN FEDERATION	10.000					
	NATIONAL	SLOVAKIA	5.000					
	NATIONAL	SLOVENIA	6.000					
	NATIONAL	SOUTH SUDAN	10.000					Inhalable fraction
	NATIONAL	SOUTH SUDAN	5.000					Respirable fraction
	NATIONAL	TAIWAN, PROVINCE OF CHINA	10.000					
	ACGIH	NNN	10.000					A4 - LRT irr
	EU	NNN	442	100	884	200		Skin
	NATIONAL	AUSTRIA	440.000	100.000	880.000	200.000		
	NATIONAL	BELGIUM	87.000	20.000	551.000	125.000		

NATIONAL	CANADA		20.000			Ontario
NATIONAL	CANADA	434.000	100.000	543.000	125.000	Québec
NATIONAL	DENMARK	217.000	50.000	543.000	125.000	
NATIONAL	FINLAND	220.000	50.000	880.000	200.000	
NATIONAL	FRANCE	88.400	20.000	442.000	100.000	
NATIONAL	GERMANY	88.000	20.000	176.000	40.000	AGS
NATIONAL	GERMANY	88.000	20.000	176.000	40.000	DFG
NATIONAL	HUNGARY	442.000		884.000		
NATIONAL	IRELAND	442.000	100.000	884.000	200.000	
NATIONAL	ITALY	442.000	100.000	884.000	200.000	Cute
NATIONAL	LATVIA	442.000	100.000	884.000	200.000	
NATIONAL	NEW ZEALAND	434.000	100.000	543.000	125.000	
NATIONAL	CHINA	100.000		150.000		
NATIONAL	POLAND	200.000		400.000		
NATIONAL	ROMANIA	442.000	100.000	884.000	200.000	
NATIONAL	SINGAPORE	434.000	100.000	543.000	125.000	
NATIONAL	KOREA, REPUBLIC OF	435.000	100.000	545.000	125.000	
NATIONAL	SPAIN	441.000	100.000	884.000	200.000	
NATIONAL	SWEDEN	220.000	50.000	884.000	200.000	
NATIONAL	SWITZERLAND	435.000	100.000	435.000	100.000	
NATIONAL	NETHERLANDS	215.000		430.000		
NATIONAL	TURKEY	442.000	100.000	884.000	200.000	
NATIONAL	UNITED STATES OF AMERICA	435.000	100.000	545.000	125.000	NIOSH
NATIONAL	UNITED STATES OF AMERICA	435.000	100.000			OSHA
NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	441.000	100.000	552.000	125.000	
NATIONAL	ARGENTINA		100.000		125.000	
NATIONAL	BULGARIA	435.000		545.000		
NATIONAL	CZECHIA	200.000		500.000		
NATIONAL	CHILE	380.000	87.000	543.000	125.000	
NATIONAL	ESTONIA	442.000	100.000	884.000	200.000	
NATIONAL	GREECE	435.000	100.000	545.000	200.000	
NATIONAL	INDONESIA		20.000			
NATIONAL	ICELAND	200.000	50.000	884.000	200.000	
NATIONAL	LITHUANIA	442.000	100.000	884.000	200.000	
NATIONAL	NORWAY	20.000	5.000			
NATIONAL	PORTUGAL		20.000			
NATIONAL	RUSSIAN FEDERATION	50.000		150.000		
NATIONAL	SLOVAKIA	442.000	100.000	884.000	200.000	
NATIONAL	SLOVENIA	442.000	100.000	884.000	200.000	

2-methylpropan-1-ol; iso-butanol	NATIONAL	SOUTH AFRICA	435.000	100.000	545.000	125.000	
	NATIONAL	TAIWAN, PROVINCE OF CHINA	434.000	100.000			
	ACGIH	NNN		20.000			A3, BEI - URT irr, kidney dam (nephropathy), cochlear impair
	EU	NNN	442.000	100.000	884.000	200.000	Skin
	NATIONAL	AUSTRIA	150.000	50.000	600.000	200.000	
	NATIONAL	BELGIUM	154.000	50.000			
	NATIONAL	CANADA		50.000			Ontario
	NATIONAL	CANADA	152.000	50.000			Quebec
	NATIONAL	DENMARK	150.000	50.000	150.000	50.000	
	NATIONAL	FRANCE	150.000	50.000			
	NATIONAL	GERMANY	310.000	100.000	310.000	100.000	AGS
	NATIONAL	GERMANY	310.000	100.000	310.000	100.000	DFG
	NATIONAL	IRELAND	150.000	50.000	225.000	75.000	
	NATIONAL	LATVIA		10.000			
	NATIONAL	NEW ZEALAND	152.000	50.000			
	NATIONAL	POLAND	100.000		200.000		
	NATIONAL	ROMANIA	100.000	33.000	200.000	66.000	
	NATIONAL	SINGAPORE	152.000	50.000			
	NATIONAL	KOREA, REPUBLIC OF	150.000	50.000			
	NATIONAL	SPAIN	154.000	50.000			
	NATIONAL	SWEDEN	150.000	50.000	250.000	75.000	
	NATIONAL	SWITZERLA ND	150.000	50.000	150.000	50.000	
	NATIONAL	UNITED STATES OF AMERICA	150.000	50.000			NIOSH
	NATIONAL	UNITED STATES OF AMERICA	150.000	50.000			OSHA
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	154.000	50.000	231.000	75.000	
	NATIONAL	CZECHIA	300.000		600.000		
	NATIONAL	CROATIA	154.000	50.000	231.000	75.000	
	NATIONAL	ESTONIA	150.000	50.000			
	NATIONAL	GREECE	300.000	100.000	300.000	100.000	
	NATIONAL	ICELAND			150.000	50.000	
	NATIONAL	LITHUANIA	10.000				
	NATIONAL	NORWAY C			75.000	25.000	
	NATIONAL	PORTUGAL		50.000			
	NATIONAL	SLOVAKIA	310.000	10.000			
	NATIONAL	SLOVENIA	310.000	10.000	30.000	10.000	
	NATIONAL	SOUTH AFRICA	150.000	50.000	225.000	75.000	
	NATIONAL	TAIWAN,	152.000	50.000			

		PROVINCE OF CHINA					
2-methoxy-1-methylethyl acetate	ACGIH	NNN		50.000			Skin and eye irr
	NATIONAL	AUSTRALIA	274.000	50.000	548.000	100.000	
	NATIONAL	AUSTRIA	275.000	50.000	550.000	100.000	
	NATIONAL	BELGIUM	275.000	50.000	550.000	100.000	
	NATIONAL	CANADA	270.000	50.000			Ontario
	NATIONAL	DENMARK	275.000	50.000	550.000	100.000	
	NATIONAL	FINLAND	270.000	50.000	550.000	100.000	
	NATIONAL	FRANCE	275.000	50.000	550.000	100.000	
	NATIONAL	GERMANY	270.000	50.000	270.000	100.000	AGS
	NATIONAL	GERMANY	270.000	50.000	270.000	100.000	DFG
	NATIONAL	HUNGARY	270.000		550.000		
	NATIONAL	IRELAND	275.000	50.000	550.000	100.000	
	NATIONAL	ISRAEL	270.000	50.000			
	NATIONAL	ITALY	275.000	50.000	550.000	100.000	Cute
	NATIONAL	LATVIA	275.000	50.000	550.000	100.000	
	NATIONAL	ROMANIA	275.000	50.000	550.000	100.000	
	NATIONAL	SPAIN	275.000	50.000	550.000	100.000	
	NATIONAL	SWEDEN	275.000	50.000	550.000	100.000	
	NATIONAL	SWITZERLAND	275.000	50.000	275.000	50.000	
	NATIONAL	NETHERLANDS	275.000				
	NATIONAL	TURKEY	275.000	50.000	550.000	100.000	
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	274.000	50.000	548.000	100.000	
	NATIONAL	BULGARIA	275.000	50.000	550.000	100.000	
	NATIONAL	CZECHIA	270.000		550.000		
	NATIONAL	CROATIA	275.000	50.000	550.000	100.000	
	NATIONAL	ESTONIA	275.000	50.000	550.000	100.000	
	NATIONAL	ICELAND	275.000	50.000	550.000	100.000	
	NATIONAL	LITHUANIA	250.000	50.000	400.000	75.000	
	NATIONAL	NORWAY	270.000	5.000			
	NATIONAL	POLAND	260.000		520.000		
	NATIONAL	PORTUGAL	275.000	50.000	550.000	100.000	
	NATIONAL	RUSSIAN FEDERATION				10.000	
	NATIONAL	SLOVAKIA	275.000	50.000	550.000	100.000	
	NATIONAL	SLOVENIA	275.000	50.000	550.000	100.000	
	NATIONAL	UNITED STATES OF AMERICA		50.000			
toluene	EU	NNN	275	50	550	100	Skin
	EU	NNN	192	50	384	100	Skin
	NATIONAL	AUSTRIA	190.000	50.000	380.000	100.000	
	NATIONAL	BELGIUM	77.000	20.000	384.000	100.000	
	NATIONAL	CANADA		20.000			Ontario
	NATIONAL	CANADA	188.000	50.000			Quebec

NATIONAL	DENMARK	94.000	25.000	188.000	50.000	
NATIONAL	FINLAND	81.000	25.000	380.000	100.000	
NATIONAL	FRANCE	76.800	20.000	384.000	100.000	
NATIONAL	GERMANY	190.000	50.000	760.000	200.000	AGS;
NATIONAL	GERMANY	190.000	50.000	760.000	200.000	DFG
NATIONAL	HUNGARY	190.000		380.000		
NATIONAL	IRELAND	192.000	50.000	384.000	100.000	
NATIONAL	ISRAEL	188.000	50.000			
NATIONAL	ITALY	192.000	50.000			Cute
NATIONAL	LATVIA	50.000	14.000	150.000	40.000	
NATIONAL	NEW ZEALAND	188.000	50.000			
NATIONAL	CHINA	50.000		100.000		
NATIONAL	POLAND	100.000		200.000		
NATIONAL	ROMANIA	192.000	50.000	384.000	100.000	
NATIONAL	SINGAPORE	188.000	50.000			
NATIONAL	KOREA, REPUBLIC OF	188.000	50.000	560.000	150.000	
NATIONAL	SPAIN	191.000	50.000	384.000	100.000	
NATIONAL	SWEDEN	192.000	50.000	384.000	100.000	
NATIONAL	SWITZERLAND	190.000	50.000	760.000	200.000	
NATIONAL	NETHERLANDS	150.000		384.000		
NATIONAL	TURKEY	192.000	50.000	384.000	100.000	
NATIONAL	UNITED STATES OF AMERICA	375.000	100.000	560.000	150.000	NIOSH
NATIONAL	UNITED STATES OF AMERICA	375.000	100.000	560.000	150.000	NIOSH
NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	191.000	50.000	384.000	100.000	
NATIONAL	ARGENTINA		50.000			
NATIONAL	BULGARIA	192.000	50.000	384.000	100.000	
NATIONAL	CZECHIA	200.000		500.000		
NATIONAL	CHILE	328.000	87.000	560.000	160.000	
NATIONAL	CROATIA	192.000	50.000	384.000	100.000	
NATIONAL	ESTONIA	192.000	50.000	384.000	100.000	
NATIONAL	GREECE	192.000	50.000	384.000	100.000	
NATIONAL	INDONESIA		20.000			
NATIONAL	ICELAND	94.000	25.000	188.000	50.000	
NATIONAL	LITHUANIA	192.000	50.000	384.000	100.000	
NATIONAL	NORWAY	94.000	25.000			
NATIONAL	PORTUGAL		20.000			
NATIONAL	RUSSIAN FEDERATION	50.000		150.000		
NATIONAL	SLOVAKIA	192.000	50.000	384.000	100.000	
NATIONAL	SLOVENIA	192.000	50.000	384.000	100.000	
NATIONAL	SOUTH	188.000	50.000	560.000	150.000	

n-butyl acetate		AFRICA					
	NATIONAL	SOUTH AFRICA	188.000	50.000	560.000	150.000	
	ACGIH	NNN		20.000			A4, BEI - Visual impair, female repro, pregnancy loss
	EU	NNN	192.000	50.000	384.000	100.000	Skin
	NATIONAL	AUSTRALIA	713.000	150.000	950.000	200.000	
	NATIONAL	AUSTRIA	480.000	100.000	480.000	100.000	
	NATIONAL	BELGIUM	238.000	50.000	712.000	150.000	
	NATIONAL	CANADA		150.000		200.000	Ontario
	NATIONAL	CANADA	713.000	150.000	950.000	200.000	Quebec
	NATIONAL	DENMARK	710.000	150.000	1420.000	300.000	
	NATIONAL	FINLAND	720.000	150.000	960.000	200.000	
	NATIONAL	FRANCE	710.000	150.000	940.000	200.000	
	NATIONAL	GERMANY	300.000	62.000	600.000	124.000	ASG
	NATIONAL	GERMANY	480.000	100.000	960.000	200.000	DFG
	NATIONAL	HUNGARY	950.000		950.000		
	NATIONAL	IRELAND	710.000	150.000	950.000	200.000	
	NATIONAL	ISRAEL	238.000	50.000	713.000	150.000	
	NATIONAL	LATVIA	200.000				
	NATIONAL	NEW ZEALAND	713.000	150.000	950.000	200.000	
	NATIONAL	CHINA	200.000		300.000		
	NATIONAL	POLAND	200.000		950.000		
	NATIONAL	ROMANIA	715.000	150.000	950.000	200.000	
	NATIONAL	SINGAPORE	713.000	150.000			
	NATIONAL	KOREA, REPUBLIC OF	710.000	150.000	950.000	200.000	
	NATIONAL	SPAIN	724.000	150.000	965.000	200.000	
	NATIONAL	SWEDEN	500.000	100.000	700.000	150.000	
	NATIONAL	SWITZERLAND	480.000	100.000	960.000	200.000	
	NATIONAL	UNITED STATES OF AMERICA	710.000	150.000	950.000	200.000	NIOSH
	NATIONAL	UNITED STATES OF AMERICA	710.000	150.000			OSHA
	NATIONAL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	724.000	150.000	966.000	200.000	
	NATIONAL	ITALY	241.000	50.000	723.000	150.000	
	NATIONAL	ARGENTINA		150.000		200.000	
	NATIONAL	BULGARIA	710.000		950.000		
	NATIONAL	CZECHIA	950.000		1200.000		
	NATIONAL	CHILE	624.000	131.000	950.000	200.000	
	NATIONAL	CROATIA	724.000	150.000	966.000	200.000	
	NATIONAL	GREECE	710.000	150.000	950.000	200.000	
	NATIONAL	INDONESIA		50.000		150.000	
	NATIONAL	ICELAND	700.000	150.000			
	NATIONAL	NORWAY	355.000	75.000			

NATIONAL	NETHERLANDS	480.000	100.000	480.000	100.000
NATIONAL	PORTUGAL		150.000		200.000
NATIONAL	RUSSIAN FEDERATION		50.000		200.000
NATIONAL	SLOVAKIA	500.000	100.000	700.000	150.000
NATIONAL	SLOVENIA	300.000	62.000	600.000	124.000
NATIONAL	SOUTH AFRICA	710.000	150.000	950.000	200.000
NATIONAL	TAIWAN, PROVINCE OF CHINA	712.000	50.000		
EU		241.000	50.000	723.000	150.000
ACGIH	NNN		50.000		150.000 Eye and URT irr

Biological limit values

CAS-No.	Component	Value	UoM	Medium	Biological Indicator	Sampling Period
1330-20-7	xylene	2000	mg/L	Urine	Methyl hippuric acid in urine	End of turn
108-88-3	toluene	600	µg/L	Blood	Toluene in blood	End of turn
		2	g/g	Urine	Hippuric acid in urine	End of turn; End of working week
		0,5	mg/L	Urine	o-Cresol in urine	End of turn; End of working week

Predicted No Effect Concentration (PNEC) values

Component	CAS-No.	PNEC Limit	Exposure Route	Exposure Frequency
xylene	1330-20-7	327.000 µg/l	Freshwater	
		327.000 µg/l	Intermittent releases (freshwater)	
		327.000 µg/l	Marine water	
		6.580 mg/l	Microorganisms in sewage treatments	
		12.460 mg/kg	Freshwater sediments	
		12.460 mg/kg	Marine water sediments	
		2.310 mg/kg	Soil	
titanium dioxide	13463-67-7	0.184 mg/l	Freshwater	
		0.018 mg/l	Marine water	
		1.000 mg/kg	Intermittent releases (freshwater)	
		100.000 mg/kg	Intermittent releases (marine water)	
		100.000 mg/kg	Microorganisms in sewage treatments	
ethylbenzene	100-41-4	100.000 µg/l	Freshwater	
		100.000 µg/l	Intermittent releases (freshwater)	
		55.000 µg/l	Marine water	
		9.600 mg/l	Microorganisms in sewage treatments	
		13.700 mg/kg	Freshwater sediments	
		1.370 mg/kg	Marine water sediments	
		2.680 mg/kg	Soil	
		20.000 mg/kg	Secondary poisoning	
2-methylpropan-1-ol; iso-butanol	78-83-1	400.000 µg/l	Freshwater	
		11.000 mg/l	Intermittent releases	

			(freshwater)
		40.000 µg/l	Marine water
		10.000 mg/l	Microorganisms in sewage treatments
		1.560 mg/kg	Freshwater sediments
		156.000 µg/kg	Marine water sediments
		76.500 µg/kg	Soil
2-methoxy-1-methylethyl acetate	108-65-6	635.000 µg/l	Freshwater
		6.350 mg/l	Intermittent releases (freshwater)
		63.500 µg/l	Marine water
		100.000 mg/l	Microorganisms in sewage treatments
		3.290 mg/kg	Freshwater sediments
		329.000 µg/kg	Marine water sediments
		290.000 µg/kg	Soil
toluene	108-88-3	680.000 µg/l	Freshwater
		680.000 µg/l	Intermittent releases (freshwater)
		680.000 µg/l	Marine water
		13.610 µg/l	Microorganisms in sewage treatments
		16.390 mg/kg	Freshwater sediments
		16.390 mg/kg	Marine water sediments
		2.890 mg/kg	Soil
n-butyl acetate	123-86-4	180.000 µg/l	Freshwater
		360.000 µg/l	Intermittent releases (freshwater)
		18.000 µg/l	Marine water
		35.600 mg/l	Microorganisms in sewage treatments
		981.000 µg/kg	Freshwater sediments
		98.100 µg/kg	Marine water sediments
		90.300 µg/kg	Soil

Derived No Effect Level (DNEL) values

Component	CAS-No.	Worker Industry	Worker Professional	Consumer	Exposure Route	Exposure Frequency
xylene	1330-20-7		221.000 mg/m ³	65.300 mg/m ³	Human Inhalation	Long Term, systemic effects
			442.000 mg/m ³	260.000 mg/m ³	Human Inhalation	Short Term, systemic effects
			221.000 mg/m ³	65.300 mg/m ³	Human Inhalation	Long Term, local effects
			442.000 mg/m ³	260.000 mg/m ³	Human Inhalation	Short Term, local effects
			212.000 mg/kg	125.000 mg/kg	Human Dermal	Long Term, systemic effects
				12.500 mg/kg	Human Oral	Long Term, systemic effects
titanium dioxide	13463-67-7		10.000 mg/m ³		Human Inhalation	Long Term, local effects
ethylbenzene	100-41-4		77.000 mg/m ³	15.000 mg/m ³	Human Inhalation	Long Term, systemic effects

2-methoxy-1-methylethyl acetate	108-65-6	293.000 mg/m ³		Human Inhalation	Short Term, local effects
		180.000 mg/kg		Human Dermal	Long Term, systemic effects
		1.600 mg/kg		Human Oral	Long Term, systemic effects
		275.000 mg/m ³	33.000 mg/m ³	Human Inhalation	Long Term, systemic effects
		550.000 mg/m ³		Human Inhalation	Short Term, systemic effects
			33.000 mg/m ³	Human Inhalation	Long Term, local effects
		796.000 mg/kg	320.000 mg/kg	Human Dermal	Long Term, systemic effects
			36.000 mg/kg	Human Oral	Long Term, systemic effects
		192.000 mg/m ³	56.500 mg/m ³	Human Inhalation	Long Term, systemic effects
		384.000 mg/m ³	226.000 mg/m ³	Human Inhalation	Short Term, systemic effects
toluene	108-88-3	192.000 mg/m ³	56.500 mg/m ³	Human Inhalation	Long Term, local effects
		384.000 mg/m ³	226.000 mg/m ³	Human Inhalation	Short Term, systemic effects
		192.000 mg/m ³	56.500 mg/m ³	Human Inhalation	Long Term, local effects
		384.000 mg/m ³	226.000 mg/m ³	Human Inhalation	Short Term, local effects
		384.000 mg/kg	226.000 mg/kg	Human Dermal	Long Term, systemic effects
			8.130 mg/kg	Human Oral	Long Term, systemic effects
		48.000 mg/m ³	12.000 mg/m ³	Human Inhalation	Long Term, systemic effects
		600.000 mg/m ³	300.000 mg/m ³	Human Inhalation	Short Term, systemic effects
		300.000 mg/m ³	35.700 mg/m ³	Human Inhalation	Long Term, local effects
		600.000 mg/m ³	300.000 mg/m ³	Human Inhalation	Short Term, local effects
n-butyl acetate	123-86-4	7.000 mg/kg	3.400 mg/kg	Human Dermal	Long Term, systemic effects
		11.000 mg/kg	6.000 mg/kg	Human Dermal	Short Term, systemic effects
			2.000 mg/kg	Human Oral	Long Term, systemic effects
			2.000 mg/kg	Human Oral	Short Term, systemic effects

8.2. Exposure controls

Eye protection:

Eye glasses with side protection.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Nitrile rubber .

Respiratory protection:

Gas filter type A .

Thermal Hazards:

N.A.

Environmental exposure controls:

N.A.

Hygienic and Technical measures

N.A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State Liquid

Color: White

Odour: Characteristic

Odour threshold: N.A.

pH: Not Relevant

Kinematic viscosity: > 20,5 mm²/sec (40 °C)

Melting point / freezing point: N.A.

Initial boiling point and boiling range: > 35.1 °C (95.2 °F)

Flash point: < 23°C

Upper/lower flammability or explosive limits: N.A.

Vapour density: N.A.

Vapour pressure: N.A.

Relative density: 1.28 g/cm³

Solubility in water: Insoluble

Solubility in oil: N.A.

Partition coefficient (n-octanol/water): N.A.

Auto-ignition temperature: N.A.

Decomposition temperature: N.A.

Flammability: The product is classified Flam. Liq. 2 H225

Volatile Organic compounds - VOCs = 38.04 % ; 486.90 g/l

Particle characteristics:

Particle size: N.A.

9.2. Other information

Miscibility: N.A.

Conductivity: N.A.

Evaporation rate: N.A. No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Data not available.

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

Avoid contact with combustible materials. The product could catch fire.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

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

Toxicological Information of the Preparation

a) acute toxicity	Not classified Based on available data, the classification criteria are not met
b) skin corrosion/irritation	The product is classified: Skin Irrit. 2(H315)
c) serious eye damage/irritation	The product is classified: Eye Irrit. 2(H319)
d) respiratory or skin sensitisation	Not classified Based on available data, the classification criteria are not met
e) germ cell mutagenicity	Not classified Based on available data, the classification criteria are not met

f) carcinogenicity	Not classified
	Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified
	Based on available data, the classification criteria are not met
h) STOT-single exposure	The product is classified: STOT SE 3(H335)
i) STOT-repeated exposure	The product is classified: STOT RE 2(H373)
j) aspiration hazard	Not classified
	Based on available data, the classification criteria are not met

Toxicological information on main components of the mixture:

xylene	a) acute toxicity	LD50 Oral Rat = 3523.00 ml/Kg LC50 Inhalation Vapour Rat = 29000.00 mg/m3 4h LD50 Skin Rabbit = 12126.00 mg/kg 24h	
	b) skin corrosion/irritation	Skin Corrosive Rabbit Negative 4h	
	c) serious eye damage/irritation	Eye Irritant Rabbit Yes 1h	
	f) carcinogenicity	Genotoxicity Negative	Mouse subcutaneous route
	g) reproductive toxicity	No Observed Adverse Effect Level Inhalation Rat = 2171.00 mg/kg	
titanium dioxide	a) acute toxicity	LD50 Oral Rat > 5000.00 mg/kg LC50 Inhalation > 6.82 mg/l	
	d) respiratory or skin sensitisation	Skin Sensitization Negative	
	i) STOT-repeated exposure	No Observed Adverse Effect Level 1000.00	
ethylbenzene	a) acute toxicity	LD50 Oral Rat = 3500.00 mg/kg LC50 Inhalation Mouse = 1432.00 Ppm LD50 Skin Rabbit = 17.80 ml/Kg	
	b) skin corrosion/irritation	Skin Irritant Rabbit Positive 24h	
	c) serious eye damage/irritation	Eye Irritant Rabbit Yes	
	f) carcinogenicity	Genotoxicity Negative 24h	Mouse oral route
	g) reproductive toxicity	No Observed Adverse Effect Level Inhalation Rat = 100.00	ppm
2-methylpropan-1-ol; iso-butanol	a) acute toxicity	LD50 Oral Rat > 2830.00 mg/kg LC50 Inhalation Vapour Rat > 18.18 mg/l 6h LD50 Skin Rabbit > 2000.00 mg/kg 24h	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative 24h	
	c) serious eye damage/irritation	Eye Corrosive Rabbit Positive	
	d) respiratory or skin sensitisation	Skin Sensitization Negative	
	f) carcinogenicity	Genotoxicity Negative	Mouse oral route
	g) reproductive toxicity	No Observed Adverse Effect Level Inhalation Rat >= 7.50	mg/l
2-methoxy-1-methylethyl acetate	a) acute toxicity	LD50 Oral Rat = 6190.00000 mg/kg LD50 Skin Rabbit > 5000.00000 mg/kg 24h	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative 4h	
	c) serious eye	Eye Irritant Rabbit No	

	damage/irritation		
	d) respiratory or skin sensitisation	Skin Sensitization Guinea pig Negative	
	g) reproductive toxicity	No Observed Effect Level Rat = 3.69000 mg/l	Inhalation route
toluene	a) acute toxicity	LD50 Oral Rat = 5580.00 mg/kg LC50 Inhalation of aerosol Rat > 20.00 mg/l 4h LD50 Skin Rabbit > 5000.00 mg/kg 24h	
	b) skin corrosion/irritation	Skin Irritant Rabbit Positive 4h	
	c) serious eye damage/irritation	Eye Irritant Rabbit Yes	
	d) respiratory or skin sensitisation	Skin Sensitization Guinea pig Negative	
	f) carcinogenicity	Genotoxicity Rat Negative	Intraperitoneal route
	g) reproductive toxicity	No Observed Adverse Effect Level Inhalation Rat = 2261.00 mg/m3	
n-butyl acetate	a) acute toxicity	LD50 Oral Rat = 10760.00000 mg/kg LC50 Inhalation of aerosol Rat = 0.74000 mg/l 4h LD50 Skin Rabbit > 16.00000 ml/Kg 24h	
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative	
	c) serious eye damage/irritation	Eye Irritant Rabbit No	
	d) respiratory or skin sensitisation	Skin Sensitization Negative	Mouse
	f) carcinogenicity	Genotoxicity Negative	Mouse oral route
	g) reproductive toxicity	No Observed Adverse Effect Level Inhalation Rat = 750.00000	ppm

11.2 Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration $\geq 0.1\%$

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

Harmful to aquatic life with long lasting effects.

List of Eco-Toxicological properties of the product

The product is classified: Aquatic Chronic 3(H412)

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
xylene	CAS: 1330-20-7 - EINECS: 215-535-7 - INDEX: 601-022-00-9	a) Aquatic acute toxicity : LC50 Fish freshwater fish = 2.60 mg/L 96h OECD 203 b) Aquatic chronic toxicity : NOEC Fish freshwater fish = 1.30 mg/L - 56days a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 1.00 mg/L 24h OECD 202 b) Aquatic chronic toxicity : NOEC Daphnia Ceriodaphnia dubia = 0.96 mg/L - 7days a) Aquatic acute toxicity : EC50 Algae freshwater algae = 1.30 mg/L 48h OECD 201 a) Aquatic acute toxicity : EC50 microorganisms = 96.00 mg/L OECD 301F d) Terrestrial toxicity : NOEC Worm earthworms = 16.00 mg/kg - 14days

titanium dioxide	CAS: 13463-67-7 - EINECS: 236-675-5 - INDEX: 022-006-00-2	e) Plant toxicity : LC50 terrestrial plants = 1.00 mg/kg - 14days
		a) Aquatic acute toxicity : LC50 Fish Pimephales promelas (Cavedano americano) > 1000.00 mg/L 96h
		a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata (alghe cloroficee) > 100.00 mg/L 72h
ethylbenzene	CAS: 100-41-4 - EINECS: 202-849-4 - INDEX: 601-023-00-4	a) Aquatic acute toxicity : NOEC Algae = 5600.00 mg/L
		a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna (Pulce d'acqua grande) > 100.00 mg/L 48h
		a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss = 4.20 mg/L 96h
		a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 1.80 mg/L 48h
		b) Aquatic chronic toxicity : NOEC Daphnia Ceriodaphnia dubia = 1.00 mg/L - 7days
2-methylpropan-1-ol; iso-butanol	CAS: 78-83-1 - EINECS: 201-148-0 - INDEX: 603-108-00-1	a) Aquatic acute toxicity : EC50 Algae Selenastrum capricornutum = 3.60 mg/L 96h
		c) Bacteria toxicity : EC50 > 96.00 mg/L 24h
		d) Terrestrial toxicity : LC50 Worm Eisenia fetida = 4.93 µg/L 48h OECD TG 207
		a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 1430.00 mg/L 96h
		a) Aquatic acute toxicity : EC50 Daphnia Daphnia pulex = 1100.00 mg/L 48h
2-methoxy-1-methylethyl acetate	CAS: 108-65-6 - EINECS: 203-603-9 - INDEX: 607-195-00-7	a) Aquatic acute toxicity : EC50 Algae Scenedesmus subspicatus = 1799.00 mg/L 72h OECD 201
		a) Aquatic acute toxicity : LC50 Fish Oncorhynchus mykiss = 130.00000 mg/L 96h OECD guideline 203
		b) Aquatic chronic toxicity : NOEC Fish Oryzias latipes = 47.50000 mg/L OECD guideline 204 - 14days
		a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 408.00000 mg/L 48h OECD guideline 202
		b) Aquatic chronic toxicity : NOEC Daphnia Daphnia magna > 100.00000 mg/L OECD guideline 211 - 24days
toluene	CAS: 108-88-3 - EINECS: 203-625-9 - INDEX: 601-021-00-3	a) Aquatic acute toxicity : NOEC Algae Selenastrum capricornutum >= 1000.00000 mg/L OECD guideline 201
		a) Aquatic acute toxicity : LC50 Fish Coho Salmon = 5.50 mg/L 96h
		b) Aquatic chronic toxicity : NOEC Fish Coho Salmon = 1.40 mg/L - 40days
		a) Aquatic acute toxicity : LC50 freshwater invertebrates = 3.78 mg/L 48h
		b) Aquatic chronic toxicity : NOEC freshwater invertebrates = 0.74 mg/L - 7days
n-butyl acetate	CAS: 123-86-4 - EINECS: 204-658-1 - INDEX: 607-025-00-1	a) Aquatic acute toxicity : EC50 Algae freshwater algae = 134.00 mg/L 3h
		a) Aquatic acute toxicity : NOEC Algae freshwater algae = 10.00 mg/L 72h
		c) Bacteria toxicity : EC50 microorganisms = 84.00 mg/L 24h
		d) Terrestrial toxicity : NOEC Worm Eisenia fetida = 32.50 mg/kg - 28days
		a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 18.00000 mg/L 96h similar to OECD 203

a) Aquatic acute toxicity : LC50 Daphnia Daphnia magna = 44.00000 mg/L 48h similar to OECD 202

b) Aquatic chronic toxicity : NOEC Daphnia Daphnia magna = 23.00000 mg/L OECD 211 - 21days

a) Aquatic acute toxicity : EC50 Algae Desmodesmus subspicatus = 397.00000 mg/L 72h OECD 201

a) Aquatic acute toxicity : EC50 Tetrahymena pyriformis = 356.00000 mg/L - 40h

12.2. Persistence and degradability

Component	Persitence/Degradability:	Test	Value	Notes
xylene	Readily biodegradable			
ethylbenzene	Readily biodegradable	CO2 production		
2-methylpropan-1-ol; iso-butanol	Readily biodegradable	Biochemical oxygen demand	80.000	28days
2-methoxy-1-methylethyl acetate	Readily biodegradable	Dissolved organic carbon		OECD GL 301E
toluene	Readily biodegradable			
n-butyl acetate	Readily biodegradable		83.000	%; OECD 301 D

12.3. Bioaccumulative potential

Component	Bioaccumulation	Test	Value	Notes
xylene	Bioaccumulative	BCF - Bioconcentration factor	25.900	
ethylbenzene	Bioaccumulative	BCF - Bioconcentration factor	110.000	L/kg ww
toluene	Bioaccumulative	BCF - Bioconcentration factor	90.000	3days
n-butyl acetate	Bioaccumulative	BCF - Bioconcentration factor		

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT/vPvB Ingredients are present

12.6 Endocrine disrupting properties

No endocrine disruptor substances present in concentration $\geq 0.1\%$

12.7 Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

A waste code according to European waste catalogue (EWC) cannot be specified, due to dependence on the usage. Contact an authorized waste disposal service.

Properties of waste which render it hazardous (Annex III, Directive 2008/98/EC):

HP 3: Flammable; HP 13: Sensitising; HP 4: Irritant — skin irritation and eye damage; HP 14: Ecotoxic

SECTION 14: Transport information

14.1. UN number or ID number

1263

14.2. UN proper shipping name

ADR-Shipping Name: PAINT

IATA-Technical name: PAINT

IMDG-Technical name: PAINT

14.3. Transport hazard class(es)

ADR-Class: 3

IATA-Class: 3

IMDG-Class: 3

14.4. Packing group

ADR-Packing Group: II

IATA-Packing group: II

IMDG-Packing group: II

14.5. Environmental hazards

Marine pollutant: No

Environmental Pollutant: No

IMDG-EMS: F-E, S-E

14.6. Special precautions for user

Road and Rail (ADR-RID) :

ADR-Label: 3

ADR - Hazard identification number: 33

ADR-Special Provisions: 163 367 640C 650

ADR-Transport category (Tunnel restriction code): 2 (D/E)

ADR Limited Quantities: 5 L

ADR Excepted Quantities: E2

Air (IATA) :

IATA-Passenger Aircraft: 353

IATA-Cargo Aircraft: 364

IATA-Label: 3

IATA-Subsidiary hazards: -

IATA-Erg: 3L

IATA-Special Provisioning: A3 A72 A192

Sea (IMDG) :

IMDG-Stowage Code: Category B

IMDG-Stowage Note: -

IMDG-Subsidiary hazards: -

IMDG-Special Provisioning: 163 367

14.7. Maritime transport in bulk according to IMO instruments

N.A.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Regulation (EU) n. 2018/669 (ATP 11 CLP)

Regulation (EU) n. 2018/1480 (ATP 13 CLP)

Regulation (EU) n. 2019/521 (ATP 12 CLP)

Regulation (EU) n. 2020/217 (ATP 14 CLP)

Regulation (EU) n. 2020/1182 (ATP 15 CLP)

Regulation (EU) n. 2021/643 (ATP 16 CLP)

Regulation (EU) n. 2020/878

Regulation (EC) nr 648/2004 (Detergents).

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 3, 40

Restrictions related to the substances contained: 48, 75

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

Product belongs to category: P5c 5000

50000

Regulation (EU) 649/2012 (PIC regulation):

No Substance Listed

German Water Hazard Class.

Class 2: hazardous for water.

SVHC Substances:

No data available

Dir. 2004/42/EC (VOC directive)

(ready to use)

Volatile Organic compounds - VOCs = 0.00 %

Volatile Organic compounds - VOCs = 0.00 g/L

KERADECOR ZINKOVER (not ready to use)

Volatile Organic compounds - VOCs = 38.04 %

Volatile Organic compounds - VOCs = 486.90 g/L

15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Code	Description
EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer if inhaled.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
2.6/2	Flam. Liq. 2	Flammable liquid, Category 2
2.6/3	Flam. Liq. 3	Flammable liquid, Category 3
3.1/4/Dermal	Acute Tox. 4	Acute toxicity (dermal), Category 4
3.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), Category 4
3.10/1	Asp. Tox. 1	Aspiration hazard, Category 1
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.6/2	Carc. 2	Carcinogenicity, Category 2
3.7/2	Repr. 2	Reproductive toxicity, Category 2
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3
3.9/2	STOT RE 2	Specific target organ toxicity — repeated exposure, Category 2
4.1/C3	Aquatic Chronic 3	Chronic (long term) aquatic hazard, category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008

[CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
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2.6/2	On basis of test data
3.2/2	Calculation method
3.3/2	Calculation method
3.8/3	Calculation method
3.9/2	Calculation method
4.1/C3	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COD: Chemical Oxygen Demand

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DMEL: Derived Minimal Effect Level

DNEL: Derived No Effect Level.

DPD: Dangerous Preparations Directive

DSD: Dangerous Substances Directive

EC50: Half Maximal Effective Concentration

ECHA: European Chemicals Agency

EINECS: European Inventory of Existing Commercial Chemical Substances.

ES: Exposure Scenario

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

IC50: half maximal inhibitory concentration

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).

IMDG: International Maritime Code for Dangerous Goods.

INCI: International Nomenclature of Cosmetic Ingredients.

IRCCS: Scientific Institute for Research, Hospitalization and Health Care

KAFH: Keep Away From Heat

KSt: Explosion coefficient.

LC50: Lethal concentration, for 50 percent of test population.

LD50: Lethal dose, for 50 percent of test population.

LDLo: Leathal Dose Low

N.A.: Not Applicable

N/A: Not Applicable

N/D: Not defined/ Not available

NA: Not available

NIOSH: National Institute for Occupational Safety and Health

NOAEL: No Observed Adverse Effect Level

OSHA: Occupational Safety and Health Administration.

PBT: Persistent, Bioaccumulative and Toxic

PGK: Packaging Instruction

PNEC: Predicted No Effect Concentration.

PSG: Passengers

RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.

STEL: Short Term Exposure limit.

STOT: Specific Target Organ Toxicity.

TLV: Threshold Limiting Value.

TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).

vPvB: Very Persistent, Very Bioaccumulative.

WGK: German Water Hazard Class.

Paragraphs modified from the previous revision:

- 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING
- 2. HAZARDS IDENTIFICATION
- 3. COMPOSITION/INFORMATION ON INGREDIENTS
- 7. HANDLING AND STORAGE
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 11. TOXICOLOGICAL INFORMATION
- 12. ECOLOGICAL INFORMATION
- 15. REGULATORY INFORMATION



Exposure Scenario

2-methoxy-1-methylethyl acetate

Exposure Scenario, 08/06/2021

Substance identity	
	2-methoxy-1-methylethyl acetate
CAS No.	108-65-6
INDEX No.	607-195-00-7
EINECS No.	203-603-9
Registration number	01-2119475791-29

Table of contents

1. ES 1

1. ES 1

1.1 TITLE SECTION

Exposure Scenario name	Professional application of coatings and inks by brush or roller
Date - Version	29/04/2021 - 1.0
Main user group	Professional uses
Sector(s) of use	Professional uses (SU22)
Product Categories	Coatings and paints, thinners, paint removers (PC9a)

Environment Contributing Scenario

CS1	ERC8a - ERC8d
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Worker Contributing Scenario

CS2 Large surfaces - Rolling, Brushing	PROC10
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1.2 Conditions of use affecting exposure

1.2. CS1: Environment Contributing Scenario (ERC8a, ERC8d)

Environmental release categories	Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor) (ERC8a, ERC8d)
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Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers concentrations up to 100 %

Amount used, frequency and duration of use (or from service life)

Amounts used:

Daily amount per site = 5000 kg

Release type: Continuous release

Emission days: 365 days per year

Conditions and measures related to sewage treatment plant

STP type:

Municipal Sewage Treatment Plant

Water - minimum efficiency of: = 87.3 %

Conditions and measures related to treatment of waste (including article waste)

Waste treatment

Contain and dispose of waste according to local regulations.

Other conditions affecting environmental exposure

Local marine water dilution factor: 100

Local freshwater dilution factor: 10

Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.

Additional Good Practice Advice:

Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases.

1.2. CS2: Worker Contributing Scenario: Large surfaces - Rolling, Brushing (PROC10)

Process Categories	Roller application or brushing (PROC10)
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Product (article) characteristics

Physical form of product:

Liquid

Concentration of substance in product:

Covers concentrations up to 100 %

Amount used, frequency and duration of use/exposure**Amounts used:**

Daily amount per site = 5000 kg

Duration:

Exposure duration = 8 h/day

Frequency:

Use frequency = 365 days per year

Technical and organisational conditions and measures**Technical and organisational measures**

Ensure control measures are regularly inspected and maintained.

Carry out in a vented booth or extracted enclosure.

Conditions and measures related to personal protection, hygiene and health evaluation**Personal protection**

Wear a respirator conforming to EN140.

Other conditions affecting worker exposure

Covers indoor and outdoor use

Temperature: Assumes use at not more than 20 °C above ambient temperature.

1.3 Exposure estimation and reference to its source

1.3. CS1: Environment Contributing Scenario (ERC8a, ERC8d)

protection target	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
freshwater	= 0.003 mg/L	ECETOC TRA environment v3	= 0.004
freshwater sediment	= 0.014 mg/kg KW	ECETOC TRA environment v3	= 0.004
marine water	= 0.0004 mg/L	ECETOC TRA environment v3	= 0.007
marine sediment	= 0.002 mg/kg KW	ECETOC TRA environment v3	= 0.007
soil	= 0.001 mg/kg KW	ECETOC TRA environment v3	= 0.004

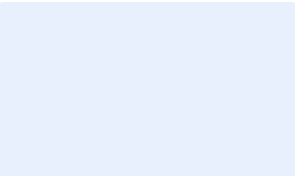
1.3. CS2: Worker Contributing Scenario: Large surfaces - Rolling, Brushing (PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, systemic, long-term	= 137.71 mg/m ³	ECETOC TRA worker v3	= 0.5
dermal, systemic, long-term	= 13.71 mg/kg bw/day	ECETOC TRA worker v3	0.18

1.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure Scenario

N-butyl acetate

Exposure Scenario, 13/07/2021

Substance identity	
	N-butyl acetate
CAS No.	123-86-4
INDEX No.	607-025-00-1
EINECS No.	204-658-1
Registration number	01-2119485493-29

Table of contents

1. **ES 1** Widespread use by professional workers; Coatings and paints, thinners, paint removers (PC9a)

1. ES 1		Widespread use by professional workers; Coatings and paints, thinners, paint removers (PC9a)	
1.1 TITLE SECTION			
Exposure Scenario name	Professional application of coatings and inks		
Date - Version	14/05/2021 - 1.0		
Life Cycle Stage	Widespread use by professional workers		
Main user group	Professional uses		
Sector(s) of use	Professional uses (SU22)		
Product Categories	Coatings and paints, thinners, paint removers (PC9a)		
Environment Contributing Scenario			
CS1	ERC8a		
Worker Contributing Scenario			
CS2 Equipment cleaning and maintenance - Roller, spreader, flow application	PROC11		
CS3 Equipment cleaning and maintenance - Rolling, Brushing - Material transfers	PROC8a - PROC10		
1.2 Conditions of use affecting exposure			
1.2. CS1: Environment Contributing Scenario (ERC8a)			
Environmental release categories	Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) (ERC8a)		
<i>Product (article) characteristics</i>			
Physical form of product: Liquid			
Concentration of substance in product: Covers percentage substance in the product up to 100 %.			
<i>Amount used, frequency and duration of use (or from service life)</i>			
Amounts used: Application rate = 4000 t(tonnes)/year			
<i>Conditions and measures related to sewage treatment plant</i>			
STP type: Municipal Sewage Treatment Plant Water - minimum efficiency of: = 89.1 %			
<i>Other conditions affecting environmental exposure</i>			
Local marine water dilution factor: 100 Local freshwater dilution factor: 10 Receiving surface water flow: 18000 m ³ /day Covers indoor and outdoor use			
1.2. CS2: Worker Contributing Scenario: Equipment cleaning and maintenance - Roller, spreader, flow application (PROC11)			
Process Categories	Non industrial spraying (PROC11)		
<i>Product (article) characteristics</i>			
Physical form of product: Liquid			
Vapour pressure: < 10000 Pa			

Concentration of substance in product:

Covers percentage substance in the product up to 100 %.

Amount used, frequency and duration of use/exposure**Duration:**

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures**Technical and organisational measures**

Closed systems

Open systems

Other conditions affecting worker exposure**Temperature:** Assumes use at not more than 20 °C above ambient temperature.***Additional good practice advice. Obligations according to Article 37(4) of REACH do not apply.*****Additional Good Practice Advice:**

Wear suitable respiratory protection.

1.2. CS3: Worker Contributing Scenario: Equipment cleaning and maintenance - Rolling, Brushing - Material transfers (PROC8a, PROC10)**Process Categories**Transfer of substance or mixture (charging and discharging) at non-dedicated facilities -
Roller application or brushing (PROC8a, PROC10)***Product (article) characteristics*****Physical form of product:**

Liquid

Vapour pressure:

< 10000 Pa

Concentration of substance in product:

Covers percentage substance in the product up to 25 %.

Amount used, frequency and duration of use/exposure**Duration:**

Covers daily exposures up to 8 hours

Technical and organisational conditions and measures**Technical and organisational measures**

Closed systems

Open systems

Other conditions affecting worker exposure**Temperature:** Assumes use at not more than 20 °C above ambient temperature.**1.3 Exposure estimation and reference to its source****1.3. CS1: Environment Contributing Scenario (ERC8a)**

Release route	Release rate	Release estimation method
N/A	N/A	ESVOC SPERC 8.3b.v1

1.3. CS2: Worker Contributing Scenario: Equipment cleaning and maintenance - Roller, spreader, flow application (PROC11)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	= 242 mg/m ³	ECETOC TRA worker v3	= 0.504

1.3. CS3: Worker Contributing Scenario: Equipment cleaning and maintenance - Rolling, Brushing - Material transfers (PROC8a, PROC10)

Exposure route, Health effect, Exposure indicator	Exposure level	Calculation method	Risk Characterization Ratio (RCR)
inhalative, long-term	= 290.4 mg/m ³	ECETOC TRA worker v3	= 0.605

1.4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Guidance to check compliance with the exposure scenario:

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.