

Trade name: Hesse PU Multicoat lacquer DE 42324-0003

Version: 36 / WORLD

Revision: 19.01.2021

Replaces Version: 35 / WORLD

Print date: 25.01.21

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

1.1. Product identifier

Hesse PU Multicoat lacquer DE 42324-0003

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

Use of the substance/preparation

Surface treatment of wood and other materials

Identified Uses

	REACHSET 1000
SU3	Industrial uses: Uses of substances as such or in preparations at industrial sites
ERC4	Industrial use of processing aids in processes and products, not becoming part of articles
ERC5	Industrial use resulting in inclusion into or onto a matrix
PROC7	Industrial spraying
	REACHSET 2001
SU22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
ERC8a	Wide dispersive indoor use of processing aids in open systems
ERC8c	Wide dispersive indoor use resulting in inclusion into or onto a matrix
PROC11	Non industrial spraying

1.3. Details of the supplier of the safety data sheet

Manufacturer

Hesse GmbH & Co. KG
Warendorfer Strasse 21
59075 Hamm
Telephone no. +49 (0) 2381 963-00
Fax no. +49 (0) 2381 963-849
E-mail address ps@hesse-lignal.de

1.4. Emergency telephone number

Germany: +49 (0) 2381 788-612

2. Hazards identification

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No. 1272/2008)

Classification (Regulation (EC) No. 1272/2008)

Flam. Liq. 2	H225
Eye Irrit. 2	H319
STOT SE 3	H336

The product is classified and labelled in accordance with Regulation (EC) No 1272/2008
For explanation of abbreviations see section 16.

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

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Hazard pictograms



Signal word

Danger

Hazard statements

H225 Highly flammable liquid and vapour.
 H319 Causes serious eye 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.
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308+P313 IF exposed or concerned: Get medical advice/ attention.

Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)

contains propan-2-ol; acetone; ethyl acetate; isobutyl acetate

Supplemental information

EUH066 Repeated exposure may cause skin dryness or cracking.

3. Composition/information on ingredients ***

Hazardous ingredients ***

n-butyl acetate

CAS No.	123-86-4			
EINECS no.	204-658-1			
Registration no.	01-2119485493-29			
Concentration	>= 25	<	50	%
Classification (Regulation (EC) No. 1272/2008)				
	Flam. Liq. 3		H226	
	STOT SE 3		H336	Nervous system
			EUH066	

isobutyl acetate

CAS No.	110-19-0			
EINECS no.	203-745-1			
Registration no.	01-2119488971-22			
Concentration	>= 20	<	25	%
Classification (Regulation (EC) No. 1272/2008)				
	Flam. Liq. 2		H225	
	STOT SE 3		H336	Nervous system
			EUH066	

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ethyl acetate

CAS No.	141-78-6		
EINECS no.	205-500-4		
Registration no.	01-2119475103-46		
Concentration	>= 1	< 10	%
Classification (Regulation (EC) No. 1272/2008)			
	Flam. Liq. 2	H225	
	Eye Irrit. 2	H319	
	STOT SE 3	H336	Nervous system
		EUH066	

xylene

CAS No.	1330-20-7		
EINECS no.	215-535-7		
Registration no.	01-2119488216-32		
Concentration	>= 1	< 8	%
Classification (Regulation (EC) No. 1272/2008)			
	Flam. Liq. 3	H226	
	Acute Tox. 4	H332	Route of exposure: Inhalation exposure
	Acute Tox. 4	H312	Route of exposure: Dermal exposure
	Skin Irrit. 2	H315	
	Asp. Tox. 1	H304	
	STOT SE 3	H335	Respiratory tract; Route of exposure: inhalative
	Eye Irrit. 2	H319	

acetone

CAS No.	67-64-1		
EINECS no.	200-662-2		
Registration no.	01-2119471330-49		
Concentration	>= 1	< 10	%
Classification (Regulation (EC) No. 1272/2008)			
	Flam. Liq. 2	H225	
	Eye Irrit. 2	H319	
	STOT SE 3	H336	Nervous system
		EUH066	

ethylbenzene

CAS No.	100-41-4		
EINECS no.	202-849-4		
Registration no.	01-2119489370-35		
Concentration	>= 1	< 5	%
Classification (Regulation (EC) No. 1272/2008)			
	Flam. Liq. 2	H225	
	Acute Tox. 4	H332	Route of exposure: Inhalation exposure
	STOT RE 2	H373	Ear
	Asp. Tox. 1	H304	

toluene

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CAS No. 108-88-3
 EINECS no. 203-625-9
 Registration no. 01-2119471310-51
 Concentration \geq 1 < 2 %
 Classification (Regulation (EC) No. 1272/2008)
 Flam. Liq. 2 H225
 Repr. 2 H361d
 Asp. Tox. 1 H304
 STOT RE 2 H373
 Skin Irrit. 2 H315
 STOT SE 3 H336 Nervous system

Hydrocarbons, C9, aromatics

EINECS no. 918-668-5
 Registration no. 01-2119455851-35
 Concentration \geq 1 < 3 %
 Classification (Regulation (EC) No. 1272/2008)
 Flam. Liq. 3 H226
 Asp. Tox. 1 H304
 Aquatic Chronic 2 H411
 STOT SE 3 H335 Respiratory tract
 STOT SE 3 H336 Nervous system
 EUH066

propan-2-ol

CAS No. 67-63-0
 EINECS no. 200-661-7
 Registration no. 01-2119457558-25
 Concentration \geq 1 < 10 %
 Classification (Regulation (EC) No. 1272/2008)
 Flam. Liq. 2 H225
 Eye Irrit. 2 H319
 STOT SE 3 H336 Nervous system

4-methylpentan-2-one

CAS No. 108-10-1
 EINECS no. 203-550-1
 Registration no. 01-2119473980-30
 Concentration \geq 1 < 3 %
 Classification (Regulation (EC) No. 1272/2008)
 Flam. Liq. 2 H225
 Acute Tox. 4 H332 Route of exposure: Inhalation exposure
 Eye Irrit. 2 H319
 STOT SE 3 H335 Respiratory tract
 EUH066

cellulose nitrate \leq 12.6 % N

CAS No. 9004-70-0
 Classification (Regulation (EC) No. 1272/2008)
 Expl. 1.1 H201

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Note

For explanation of abbreviations see section 16.
This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57) (if not listed in Section 3).

4. First aid measures**4.1. Description of first aid measures****General information**

If unconscious place in recovery position and seek medical advice. In all cases of doubt, or when symptoms persist, seek medical attention. First aider: Pay attention to self-protection! Remove affected person from danger area, lay him down.

After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. Keep warm, calm and covered up. In all cases of doubt, or when symptoms persist, seek medical attention.

After skin contact

Wash off immediately with soap and water. Do NOT use solvents or thinners. Consult a doctor if skin irritation persists.

After eye contact

Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice. Take medical treatment.

After ingestion

Do not induce vomiting. Take medical treatment.

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

Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. High concentration of vapours may cause irritation to eyes and respiratory system and produce narcotic effects.

4.3. Indication of any immediate medical attention and special treatment needed**Hints for the physician / treatment**

Treat symptomatically.

5. Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Recommended: alcohol resistant foam, CO₂, powders, water spray/mist

Non suitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Fire will produce dense black smoke. In a fire, hazardous decomposition products may be produced. Exposure to decomposition products may cause a health hazard. Vapours can form an explosive mixture with air.

5.3. Advice for firefighters**Special protective equipment for fire-fighting**

In case of combustion evolution of dangerous gases possible. Use self-contained breathing apparatus.

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Other information

Cool closed containers exposed to fire with water. Do not allow run-off from fire fighting to enter drains or water courses. Standard procedure for chemical fires.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Eliminate all ignition sources if safe to do so. Ensure adequate ventilation. Do not inhale vapours. Do not inhale gases. Do not inhale mist.

6.2. Environmental precautions

Do not allow to enter drains or waterways. Do not allow to enter soil, waterways or waste water canal. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13). Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Do NOT use solvents or thinners. Send in suitable containers for recovery or disposal.

6.4. Reference to other sections

Refer to protective measures listed in Sections 7 and 8.

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Keep container tightly closed and dry in a cool, well-ventilated place. Use only with adequate ventilation/personal protection. Ensure adequate ventilation. Provide for sufficient ventilation. This can be achieved by local exhaust or general exhaust air collection. Wear a suitable respirator if the ventilation is not sufficient to keep the solvent vapour concentration below the occupational limit values. Avoid contact with skin and eyes. Avoid inhalation of vapour and spray mist. Do not eat, drink or smoke when using this product. Use personal protective clothing. For personal protection see Section 8.

Advice on protection against fire and explosion

Vapours can form an explosive mixture with air. Vapours are heavier than air and may spread along floors. In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Mixture may charge electrostatically: always use earthing leads when transferring from one container to another. Take measures to prevent the build up of electrostatic charge. Wear shoes with conductive soles. No sparking tools should be used. Fight fire with normal precautions from a reasonable distance.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Provide solvent-resistant and impermeable floor. Keep only in the original container in a cool, well ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Hints on storage assembly

Store away from oxidising agents, from strongly alkaline and strongly acid materials.

Storage classes

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Storage class according to TRGS 510 3

Flammable liquid

Further information on storage conditions

Protect from frost. Protect from heat and direct sunlight. Keep away from sources of ignition - No smoking. Store in accordance with the particular national regulations.

7.3. Specific end use(s)

See exposure scenario, if available.

8. Exposure controls/personal protection

8.1. Control parameters

Other information

-

Derived No/Minimal Effect Levels (DNEL/DMEL)

isobutyl acetate

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	10	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	300	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	300	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	5	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	35,7	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	

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Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	35,7	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	300	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	300	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	600	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	600	mg/m ³

n-butyl acetate

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	11	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	600	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Local effects	

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Concentration	600	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	300	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	300	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	6	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Oral exposure	
Mode of action	Systemic effects	
Concentration	2	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	300	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	300	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	35,7	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	

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Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	35,7	mg/m ³

Hydrocarbons, C9, aromatics

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Oral exposure	
Mode of action	Systemic effects	
Concentration	11	mg/kg

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	25	mg/kg

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	11	mg/kg

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	150	mg/kg

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	32	mg/kg

xylene

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	108	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	

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Mode of action	Systemic effects	
Concentration	180	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	14,8	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	174	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	174	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	77	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	77	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	289	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	289	mg/m ³
Type of value	Derived No Effect Level (DNEL)	

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Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Oral exposure	
Mode of action	Systemic effects	
Concentration	1,6	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	Dermal exposure	
Mode of action	Local effects	
Concentration	174	mg/kg/d

4-methylpentan-2-one

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	208	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	208	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	83	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	83	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	11,8	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	inhalative	

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Mode of action Systemic effects
Concentration 14,7 mg/m³

Type of value Derived No Effect Level (DNEL)

Reference group Consumer

Duration of exposure Long-term

Route of exposure inhalative

Mode of action Local effects

Concentration 14,7 mg/m³

Type of value Derived No Effect Level (DNEL)

Reference group Consumer

Duration of exposure Short-term

Route of exposure inhalative

Mode of action Systemic effects

Concentration 155,2 mg/m³

Type of value Derived No Effect Level (DNEL)

Reference group Consumer

Duration of exposure Short-term

Route of exposure inhalative

Mode of action Local effects

Concentration 155,2 mg/m³

Type of value Derived No Effect Level (DNEL)

Reference group Consumer

Duration of exposure Long-term

Route of exposure Dermal exposure

Mode of action Systemic effects

Concentration 4,2 mg/kg/d

Type of value Derived No Effect Level (DNEL)

Reference group Consumer

Duration of exposure Long-term

Route of exposure Oral exposure

Mode of action Systemic effects

Concentration 4,2 mg/kg/d

propan-2-ol

Type of value Derived No Effect Level (DNEL)

Reference group Workers (professional)

Duration of exposure Long-term

Route of exposure Dermal exposure

Mode of action Chronic effects

Concentration 888 mg/kg/d

Type of value Derived No Effect Level (DNEL)

Reference group Workers (professional)

Duration of exposure Long-term

Route of exposure inhalative

Mode of action Chronic effects

Concentration 500 mg/m³

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Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Chronic effects	
Concentration	89	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Oral exposure	
Mode of action	Chronic effects	
Concentration	26	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	319	mg/kg/d
acetone		
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	1210	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	186	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	2420	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	1210	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	

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Route of exposure	Oral exposure	
Mode of action	Systemic effects	
Concentration	62	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	62	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	200	mg/m ³

ethyl acetate

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	63	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	734	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	734	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	1468	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	1468	mg/m ³

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Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	734	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	734	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	37	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	367	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Oral exposure	
Mode of action	Systemic effects	
Concentration	4,5	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	367	mg/m ³
toluene		
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	343	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	

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Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	384	mg/kg
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	192	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	192	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	384	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	226	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	226	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	56,5	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	226	mg/kg/d

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Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Oral exposure	
Mode of action	Systemic effects	
Concentration	8,13	mg/kg/d

ethylbenzene

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	289	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	77	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	289	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	77	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	18	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	174	mg/m ³

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	

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Duration of exposure	Short-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	174	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	14,8	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	108	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Oral exposure	
Mode of action	Systemic effects	
Concentration	1,6	mg/kg/d

Predicted No Effect Concentration (PNEC)

isobutyl acetate

Type of value	PNEC	
Type	Freshwater	
Concentration	0,17	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	0,017	mg/l
Type of value	PNEC	
Type	Water	
Conditions	sporadic release	
Concentration	0,34	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	200	mg/l
Type of value	PNEC	
Type	Fresh water sediment	
Concentration	0,877	mg/kg
Type of value	PNEC	
Type	saltwater sediment	
Concentration	0,0877	mg/kg

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Type of value	PNEC	
Type	Soil	
Concentration	0,0755	mg/kg

n-butyl acetate

Type of value	PNEC	
Type	Freshwater	
Concentration	0,18	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	0,018	mg/l

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	35,6	mg/l

Type of value	PNEC	
Type	Water	
Conditions	sporadic release	
Concentration	0,36	mg/l

Type of value	PNEC	
Type	Fresh water sediment	
Concentration	0,981	mg/kg

Type of value	PNEC	
Type	saltwater sediment	
Concentration	0,0981	mg/l

Type of value	PNEC	
Type	Soil	
Concentration	0,0903	mg/kg

4-methylpentan-2-one

Type of value	PNEC	
Type	Freshwater	
Concentration	0,6	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	0,06	mg/l

Type of value	PNEC	
Conditions	sporadic release	
Concentration	1,5	mg/l

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	27,5	mg/l

Type of value	PNEC	
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Type	Fresh water sediment	
Concentration	8,27	mg/kg

Type of value	PNEC	
Type	saltwater sediment	
Concentration	0,83	mg/kg

Type of value	PNEC	
Type	Soil	
Concentration	1,3	mg/kg

propan-2-ol

Type of value	PNEC	
Type	Freshwater	
Concentration	140,9	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	140,9	mg/l

Type of value	PNEC	
Conditions	sporadic release	
Concentration	140,9	mg/l

Type of value	PNEC	
Type	Fresh water sediment	
Concentration	552	mg/kg

Type of value	PNEC	
Type	saltwater sediment	
Concentration	552	mg/kg

Type of value	PNEC	
Type	Soil	
Concentration	28	mg/kg

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	2251	mg/l

acetone

Type of value	PNEC	
Type	Freshwater	
Concentration	10,6	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	1,06	mg/l

Type of value	PNEC	
Type	Fresh water sediment	
Concentration	30,4	mg/kg

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Type of value	PNEC	
Type	saltwater sediment	
Concentration	3,04	mg/kg

Type of value	PNEC	
Type	Soil	
Concentration	29,5	mg/kg

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	100	mg/l

Type of value	PNEC	
Conditions	sporadic release	
Concentration	21	mg/l

ethyl acetate

Type of value	PNEC	
Type	Saltwater	
Concentration	0,026	mg/l

Type of value	PNEC	
Type	Freshwater	
Concentration	0,26	mg/l

Type of value	PNEC	
Type	Soil	
Concentration	0,24	mg/kg

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	650	mg/l

Type of value	PNEC	
Type	saltwater sediment	
Concentration	0,125	mg/kg

Type of value	PNEC	
Type	Fresh water sediment	
Concentration	1,25	mg/kg

Type of value	PNEC	
Conditions	sporadic release	
Concentration	1,65	mg/l

toluene

Type of value	PNEC	
Type	Freshwater	
Concentration	0,68	mg/l

Type of value	PNEC	
Type	Fresh water sediment	
Concentration	16,39	mg/kg

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Type of value	PNEC	
Type	Soil	
Concentration	2,89	mg/kg

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	13,61	mg/l

xylene

Type of value	PNEC	
Type	Freshwater	
Concentration	0,327	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	0,327	mg/l

Type of value	PNEC	
Type	Fresh water sediment	
Concentration	12,46	mg/kg

Type of value	PNEC	
Type	saltwater sediment	
Concentration	12,46	mg/kg

Type of value	PNEC	
Type	Soil	
Concentration	2,31	mg/kg

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	6,58	mg/l

ethylbenzene

Type of value	PNEC	
Type	Freshwater	
Concentration	0,327	mg/l

Type of value	PNEC	
Type	Fresh water sediment	
Concentration	12,46	mg/kg

Type of value	PNEC	
Type	Soil	
Concentration	2,31	mg/kg

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	6,58	mg/l

8.2. Exposure controls

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Exposure controls

Users are advised to consider national Occupational Exposure Limits or other equivalent values. Provide for sufficient ventilation. This can be achieved by local exhaust or general exhaust air collection. Wear a suitable respirator if the ventilation is not sufficient to keep the solvent vapour concentration below the occupational limit values.

Respiratory protection

Avoid inhalation of vapour and spray mist. Use breathing apparatus if exposed to vapours/dust/aerosol. Recommended Filter type: Respiratory protection mask with combination filter A/P2

Hand protection

Protective gloves complying with EN 374.

Glove material

Multilayer gloves made from

Appropriate Material Fluorinated rubber / butyl-rubber

Material thickness \geq 0,7 mm

Breakthrough time \geq 30 min

This recommendation is valid only for the product named in this safety data sheet supplied by us, and only for the indicated intended use purposes.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

The breakthrough time must be greater than the end use time of the product.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

The performance or effectiveness of the glove may be reduced by physical/ chemical damage and poor maintenance.

Eye protection

Wear eye glasses with side protection according to EN 166.

Body protection

Wear suitable protective clothing. Remove contaminated clothing and wash it before reuse. Wash hands before breaks and after work.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	liquid
Colour	colourless
Odour	solvent-like
Odour threshold	
Remarks	not determined
Melting point	
Remarks	not determined
Freezing point	
Remarks	not determined
Initial boiling point and boiling range	
Value	55,8 to 200 °C
Flash point	
Value	2 °C

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Evaporation rate

Remarks not determined

Flammability (solid, gas)

not determined

Upper/lower flammability or explosive limits

Remarks not determined

Vapour pressure

Remarks not determined

Vapour density

Remarks not determined

Density

Value	appr. 0,917			kg/l
Temperature	20	°C		

Solubility in water

Remarks not determined

Solubility(ies)

Remarks not determined

Partition coefficient: n-octanol/water

Remarks not determined

Ignition temperature

Remarks not determined

Decomposition temperature

Remarks not determined

Viscosity

Remarks not determined

Efflux time

Value	27	to	33	s
Temperature	20	°C		
Method	DIN 53211 4 mm			

Explosive properties

evaluation not determined

Oxidising properties

Remarks not determined

9.2. Other information**Non-volatile content**

Value	18,6	%
Method	calculated value	

Other information

This information is not available.

10. Stability and reactivity**10.1. Reactivity**

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Stable under recommended storage and handling conditions (see section 7).

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

To avoid thermal decomposition, do not overheat.

10.4. Conditions to avoid

Isolate from sources of heat, sparks and open flame.

10.5. Incompatible materials

Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

10.6. Hazardous decomposition products

Carbon monoxide and carbon dioxide, nitrous oxides (NO_x), dense black smoke, No decomposition if used as prescribed.

11. Toxicological information**11.1. Information on toxicological effects****Acute oral toxicity**

Method	Calculation method (Regulation (EC) No. 1272/2008)
Remarks	Based on available data, the classification criteria are not met.

Acute dermal toxicity

ATE	> 10.000	mg/kg
Method	calculated value (Regulation (EC) No. 1272/2008)	
Remarks	Based on available data, the classification criteria are not met.	

Acute dermal toxicity (Components)**xylene**

ATE	2000	mg/kg
Source	alle Daten über 2000 mg/kg	

Acute inhalational toxicity

ATE	> 20	mg/l
Administration/Form	Dust/Mist	
Method	calculated value (Regulation (EC) No. 1272/2008)	
Remarks	Based on available data, the classification criteria are not met.	

Acute inhalative toxicity (Components)**4-methylpentan-2-one**

Species	rat	
LC50	2,9	mg/l
Duration of exposure	4	h
Administration/Form	Dust/Mist	
Source	2 (reliable with restrictions)	

xylene

ATE	5	mg/l
Duration of exposure	4	h
Administration/Form	Dust/Mist	
Source	alle Werte über 5 mg/l	

ethylbenzene

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ATE	1,5	mg/l
Duration of exposure	4	h
Administration/Form	Dust/Mist	
Method	conversion value	
Remarks	Mist	

Skin corrosion/irritation

Method	Calculation method (Regulation (EC) No. 1272/2008)
Remarks	Based on available data, the classification criteria are not met.

Skin corrosion/irritation (Components)**toluene**

Species	rabbit	
Duration of exposure	4	h
Observation Period	7	d
evaluation	Irritating to skin.	
Method	EEC 84/449, B.4	
Source	1 (reliable without restriction)	

xylene

Species	rabbit	
Observation Period	72	h
evaluation	Irritating to skin.	
Source	2 (reliable with restrictions)	

Serious eye damage/irritation

evaluation	irritant
Method	Calculation method (Regulation (EC) No. 1272/2008)
Remarks	The classification criteria are met.

Serious eye damage/irritation (Components)**4-methylpentan-2-one**

Species	rabbit	
Observation Period	72	h
evaluation	Irritating to eyes and respiratory system.	
Source	1 (reliable without restriction)	

propan-2-ol

Species	rabbit	
Observation Period	14	d
evaluation	Irritating to eyes.	
Source	1 (reliable without restriction)	

acetone

Species	rabbit	
Observation Period	24	h
evaluation	Irritating to eyes.	
Source	1 (reliable without restriction)	

ethyl acetate

Species	rabbit	
Observation Period	24	h
evaluation	Irritating to eyes.	
Source	2 (reliable with restrictions)	

xylene

Species	rabbit	
evaluation	Irritating to eyes.	

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Source 2 (reliable with restrictions)

Sensitization

Method Calculation method (Regulation (EC) No. 1272/2008)
 Remarks Based on available data, the classification criteria are not met.

Mutagenicity

Method Calculation method (Regulation (EC) No. 1272/2008)
 Remarks Based on available data, the classification criteria are not met.

Reproductive toxicity

Method Calculation method (Regulation (EC) No. 1272/2008)
 Remarks Based on available data, the classification criteria are not met.

Reproduction toxicity (Components)**toluene**

evaluation Reproductive toxicity, Category 2

Carcinogenicity

Method Calculation method (Regulation (EC) No. 1272/2008)
 Remarks Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity (STOT)**Single exposure**

Method Calculation method (Regulation (EC) No. 1272/2008)
 Remarks The classification criteria are met.
 evaluation May cause drowsiness or dizziness.

Repeated exposure

Remarks Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) (Components)**4-methylpentan-2-one**

evaluation May cause respiratory irritation.
 Route of exposure Inhalation exposure
 Organs: Nose, respiratory system, eyes
 Remarks May cause respiratory irritation.

propan-2-ol**Specific target organ toxicity - single exposure**

Remarks Organs: Nervous system
 Possible narcotic effects (drowsiness, dizziness).

acetone**Specific target organ toxicity - repeated exposure**

Remarks Organs: Nervous system
 Possible narcotic effects (drowsiness, dizziness).

ethyl acetate**Specific target organ toxicity - single exposure**

Remarks Organs: Nervous system
 Possible narcotic effects (drowsiness, dizziness).

isobutyl acetate**Specific target organ toxicity - repeated exposure**

Remarks Organs: Nervous system
 Possible narcotic effects (drowsiness, dizziness).

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n-butyl acetate**Specific target organ toxicity - repeated exposure**

Remarks
 Organs: Nervous system
 Possible narcotic effects (drowsiness, dizziness).

toluene**Specific target organ toxicity - single exposure**

Remarks
 Organs: Liver
 May cause damage to organs through prolonged or repeated exposure:

toluene**Specific target organ toxicity - repeated exposure**

Remarks
 Organs: Nervous system
 Possible narcotic effects (drowsiness, dizziness).

xylene**Specific target organ toxicity - single exposure**

Remarks
 Route of exposure inhalative
 Organs: Respiratory tract
 May cause respiratory irritation.

Hydrocarbons, C9, aromatics**Specific target organ toxicity - single exposure**

Remarks
 Route of exposure inhalative
 Possible narcotic effects (drowsiness, dizziness).

Hydrocarbons, C9, aromatics**Specific target organ toxicity - single exposure**

Remarks
 Possible narcotic effects (drowsiness, dizziness).

Aspiration hazard

Based on available data, the classification criteria are not met.

Other information

No toxicological data are available.

12. Ecological information**12.1. Toxicity****General information**

For this subsection there is no ecotoxicological data available on the product as such.

Fish toxicity (Components)**Hydrocarbons, C9, aromatics**

Species	Oncorhynchus mykiss (rainbow trout)		
LC50	9,2		mg/l
Duration of exposure	96	h	

Daphnia toxicity (Components)**Hydrocarbons, C9, aromatics**

Species	Daphnia magna (Water flea)		
EC50	3,2		mg/l
Duration of exposure	48	h	

Hydrocarbons, C9, aromatics

Species	Daphnia magna (Water flea)		
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NOEC	2,14			mg/l
Duration of exposure	21	d		

Algae toxicity (Components)**Hydrocarbons, C9, aromatics**

Species	Pseudokirchneriella subcapitata (green algae)			
EC50	2,6	to	2,9	mg/l
Duration of exposure	72	h		

12.2. Persistence and degradability**General information**

For this subsection there is no ecotoxicological data available on the product as such.

Biodegradability (Components)**Hydrocarbons, C9, aromatics**

evaluation	Readily biodegradable.
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12.3. Bioaccumulative potential**General information**

For this subsection there is no ecotoxicological data available on the product as such.

Partition coefficient: n-octanol/water

Remarks	not determined
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12.4. Mobility in soil**General information**

For this subsection there is no ecotoxicological data available on the product as such.

Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment**General information**

For this subsection there is no ecotoxicological data available on the product as such.

12.6. Other adverse effects**General information**

For this subsection there is no ecotoxicological data available on the product as such.

General information / ecology

For this subsection there is no ecotoxicological data available on the product as such.

13. Disposal considerations**13.1. Waste treatment methods****Disposal recommendations for the product**

Where possible recycling is preferred to disposal or incineration.
Do not allow to enter drains or waterways.

Disposal recommendations for packaging

Completely emptied packagings can be given for recycling.

14. Transport information




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	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
Tunnel restriction code	D/E		
14.1. UN number	1263	1263	1263
14.2. UN proper shipping name	PAINT	PAINT	PAINT
14.3. Transport hazard class(es)	3	3	3
Label			
14.4. Packing group	II	II	II
Special provision	640D		
Limited Quantity	5 l		
Transport category	2		

15. Regulatory information ***

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

VOC ***

VOC (EU) 81,1 % 744 g/l

Other information

All components are contained in the TSCA inventory or exempted.

15.2. Chemical safety assessment

For this substance / mixture a chemical safety assessment was not carried out.

16. Other information

Hazard statements listed in Chapter 3

EUH066	Repeated exposure may cause skin dryness or cracking.
H201	Explosive; mass explosion hazard.
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.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

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H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

CLP categories listed in Chapter 3

Acute Tox. 4	Acute toxicity, Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
Expl. 1.1	Explosive, Division 1.1
Eye Irrit. 2	Eye irritation, Category 2
Flam. Liq. 2	Flammable liquid, Category 2
Flam. Liq. 3	Flammable liquid, Category 3
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin irritation, Category 2
STOT RE 2	Specific target organ toxicity - repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity - single exposure, Category 3

Abbreviations

Flam. Liq - Flammable liquids
 RID - Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 IMDG - International Maritime Code for Dangerous Goods
 IATA - International Air Transport Association
 IATA-DGR - Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 ICAO-TI - Technical Instructions by the "International Civil Aviation Organization" (ICAO)
 GHS - Globally Harmonized System of Classification and Labelling of Chemicals
 EINECS - European Inventory of Existing Commercial Chemical Substances
 CAS - Chemical Abstracts Service (division of the American Chemical Society)
 GefStoffV - Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
 LOAEL - Lowest Observed Adverse Effect Level
 LOEL - Lowest Observed Effect Level
 NOAEL - No Observed Adverse Effect Level
 NOEC - No Observed Effect Concentration
 NOEL - No Observed Effect Level
 OECD - Organisation for Economic Cooperation and Development
 VOC - Volatile Organic Compounds

Changes since the last version are highlighted in the margin (***). This version replaces all previous versions.

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification.

The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

The information contained herein is based on the present state of our knowledge and does therefore not guarantee certain properties.

Annex to the extended Safety Data Sheet (eSDS)**Short title of the exposure scenario**

ES001 - Industrial applications: industrial spraying (inside)

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Use of the substance/preparation

Surface treatment of wood and other materials

Use

SU3	Industrial uses: Uses of substances as such or in preparations at industrial sites
ERC4	Industrial use of processing aids in processes and products, not becoming part of articles
ERC5	Industrial use resulting in inclusion into or onto a matrix
PROC7	Industrial spraying

Contributing exposure scenario controlling environmental exposure**Use**

ERC4	Industrial use of processing aids in processes and products, not becoming part of articles
ERC5	Industrial use resulting in inclusion into or onto a matrix

Physical form

liquid

Maximum amount used per time or activity

Emission days per site: <= 300

Other relevant operational conditions

Use: Room temperature
Drying and through-curing takes place at ambient temperature or at higher temperatures.
Where possible recycling is preferred to disposal or incineration.
Do not allow to enter soil, waterways or waste water canal.
Dispose of rinse water in accordance with local and national regulations.

Waste water

Do not discharge into the drains/surface waters/groundwater. Spray cabin waters are to be conducted after mechanical pretreatment into a wastewater treatment facility.

Exhaust air

Keep container closed. Avoid release to the environment.

Soil

Floors should be impervious, resistant to liquids and easy to clean.

Disposal recommendations for the product

Where possible recycling is preferred to disposal or incineration.
Do not allow to enter drains or waterways.

Disposal recommendations for packaging

Completely emptied packagings can be given for recycling.

Contributing exposure scenario controlling worker exposure**Use**

SU3	Industrial uses: Uses of substances as such or in preparations at industrial sites
PROC7	Industrial spraying

Physical form

liquid

Maximum amount used per time or activity

Duration of exposure	<=	8	h/d
Frequency of exposure	<=	220	d/a

Other relevant operational conditions

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Use: Room temperature
Drying and through-curing takes place at ambient temperature or at higher temperatures.
Read attached instructions before use.

Product substance and product safety related measures

Mainly used in closed systems. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Provide for sufficient ventilation. This can be achieved by local exhaust or general exhaust air collection. Wear a suitable respirator if the ventilation is not sufficient to keep the solvent vapour concentration below the occupational limit values.

Respiratory protection

Avoid inhalation of vapour and spray mist. Use breathing apparatus if exposed to vapours/dust/aerosol.
Recommended Filter type: Respiratory protection mask with combination filter A/P2

Hand protection

Protective gloves complying with EN 374.

Glove material

Multilayer gloves made from

Appropriate Material Fluorinated rubber / butyl-rubber

Material thickness >= 0,7

Breakthrough time >= 30

This recommendation is valid only for the product named in this safety data sheet supplied by us, and only for the indicated intended use purposes.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

The breakthrough time must be greater than the end use time of the product.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

The performance or effectiveness of the glove may be reduced by physical/ chemical damage and poor maintenance.

Eye protection

Wear eye glasses with side protection according to EN 166.

Body protection

Wear suitable protective clothing. Remove contaminated clothing and wash it before reuse. Wash hands before breaks and after work.

Exposure estimation and reference to its source

Workers (industrial)

PROC	PROC7
Assessment method	inhalation, long-term - local and systemic
	Indoor use
Exposure assessment	60,5 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,126
Lead substance	isobutyl acetate

Workers (industrial)

PROC	PROC10
Assessment method	inhalation, long-term - local and systemic
	Indoor use
Exposure assessment	242 mg/m ³
Exposure assessment (method)	ECETOC TRA

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Risk characterisation ratio (RCR)	0,504
Lead substance	isobutyl acetate
Workers (industrial)	
PROC	PROC13
Assessment method	inhalation, long-term - local and systemic Indoor use
Exposure assessment	242 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,504
Lead substance	isobutyl acetate
Workers (industrial)	
PROC	PROC7
Assessment method	inhalation, long-term - local and systemic Indoor use
Exposure assessment	60,5 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,126
Lead substance	n-butyl acetate
Workers (industrial)	
PROC	PROC10
Assessment method	inhalation, long-term - systemic Indoor use
Exposure assessment	242 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,504
Lead substance	n-butyl acetate
Workers (industrial)	
PROC	PROC10
Assessment method	inhalation, long-term - systemic Outdoor use
Exposure assessment	242 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,504
Lead substance	n-butyl acetate
Workers (industrial)	
PROC	PROC13
Assessment method	inhalation, long-term - systemic Indoor use
Exposure assessment	242 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,504
Lead substance	n-butyl acetate
Workers (industrial)	
PROC	PROC13
Assessment method	inhalation, long-term - systemic Outdoor use
Exposure assessment	242 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,504
Lead substance	n-butyl acetate

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Workers (industrial)

SU	SU3
PROC	PROC7
Assessment method	inhalation, long-term - systemic
	Indoor use
Exposure assessment	200 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,05
Lead substance	acetone

Workers (industrial)

SU	SU3
PROC	PROC7
Assessment method	dermal, long-term - systemic
	Indoor use
Exposure assessment	62 mg/kg/d
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,01
Lead substance	acetone

Workers (industrial)

SU	SU3
PROC	PROC10
Assessment method	inhalation, long-term - systemic
	Indoor use
Exposure assessment	200 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,5
Lead substance	acetone

Workers (industrial)

SU	SU3
PROC	PROC10
Assessment method	dermal, long-term - systemic
	Indoor use
Exposure assessment	62 mg/kg/d
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,15
Lead substance	acetone

Workers (industrial)

SU	SU3
PROC	PROC13
Assessment method	inhalation, long-term - systemic
	Indoor use
Exposure assessment	200 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,5
Lead substance	acetone

Workers (industrial)

SU	SU3
PROC	PROC13
Assessment method	dermal, long-term - systemic
	Indoor use
Exposure assessment	61 mg/kg/d

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Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,074
Lead substance	acetone
Workers (industrial)	
SU	SU3
PROC	PROC7
Assessment method	inhalation, long-term - systemic
	Indoor use
Risk characterisation ratio (RCR)	0,75
Lead substance	4-methylpentan-2-one
Workers (industrial)	
SU	SU3
PROC	PROC7
Assessment method	dermal, long-term - systemic
	Indoor use
Risk characterisation ratio (RCR)	0,5
Lead substance	4-methylpentan-2-one
Workers (industrial)	
SU	SU3
PROC	PROC10
Assessment method	inhalation, long-term - systemic
	Indoor use
Risk characterisation ratio (RCR)	0,5
Lead substance	4-methylpentan-2-one
Workers (industrial)	
SU	SU3
PROC	PROC10
Assessment method	dermal, long-term - systemic
Risk characterisation ratio (RCR)	0,5
Lead substance	4-methylpentan-2-one
Workers (industrial)	
SU	SU3
PROC	PROC13
Assessment method	inhalation, long-term - systemic
Risk characterisation ratio (RCR)	0,5
Lead substance	4-methylpentan-2-one
Workers (industrial)	
SU	SU3
PROC	PROC13
Assessment method	dermal, long-term - systemic
Risk characterisation ratio (RCR)	0,5
Lead substance	4-methylpentan-2-one
Workers (i)	
SU	SU3
PROC	PROC7
Assessment method	dermal, long-term - systemic
Exposure assessment	63 mg/kg/d
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,034
Lead substance	ethyl acetate

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Workers (industrial)

SU	SU3
PROC	PROC7
Assessment method	inhalation, long-term - local
Exposure assessment	734 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,075
Lead substance	ethyl acetate

Workers (industrial)

SU	SU3
PROC	PROC10
Assessment method	dermal, long-term - systemic
Exposure assessment	63 mg/kg/d
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,011
Lead substance	ethyl acetate

Workers (industrial)

SU	SU3
PROC	PROC10
Assessment method	inhalation, long-term - local
Exposure assessment	734 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,075
Lead substance	ethyl acetate

Workers (industrial)

SU	SU3
PROC	PROC7
Assessment method	inhalative Indoor use
Exposure assessment	0,1 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,34
Lead substance	xylene

Workers (industrial)

SU	SU3
PROC	PROC10
Assessment method	inhalative Indoor use
Exposure assessment	0,05 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,172
Lead substance	xylene

Workers (industrial)

SU	SU3
PROC	PROC13
Assessment method	inhalative Indoor use
Exposure assessment	0,1 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,34
Lead substance	xylene

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Information on estimated exposure and downstream-user guidance

Guidance for Downstream Users

The downstream user can evaluate whether he operates within the conditions set in the exposure scenario on the basis of the information supplied. This evaluation can be conducted by an expert or using the risk assessment tools recommended by ECHA.

Annex to the extended Safety Data Sheet (eSDS)

Short title of the exposure scenario

ES003 - Professional uses: Non industrial spraying (inside)

Use of the substance/preparation

Surface treatment of wood and other materials

Use

SU22	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
ERC8a	Wide dispersive indoor use of processing aids in open systems
ERC8c	Wide dispersive indoor use resulting in inclusion into or onto a matrix
PROC11	Non industrial spraying

Contributing exposure scenario controlling environmental exposure

Use

ERC8a	Wide dispersive indoor use of processing aids in open systems
ERC8c	Wide dispersive indoor use resulting in inclusion into or onto a matrix

Physical form

liquid

Maximum amount used per time or activity

Emission days per site: <= 250

Other relevant operational conditions

Use: Room temperature
Drying and through-curing takes place at ambient temperature or at higher temperatures.
Volatile organic substances will volatilise into the atmospheric air inside.
Where possible recycling is preferred to disposal or incineration.
Do not allow to enter soil, waterways or waste water canal.
Dispose of rinse water in accordance with local and national regulations.

Waste water

Do not discharge into the drains/surface waters/groundwater. Spray cabin waters are to be conducted after mechanical pretreatment into a wastewater treatment facility.

Exhaust air

Keep container closed. Avoid release to the environment.

Soil

Floors should be impervious, resistant to liquids and easy to clean.

Disposal recommendations for the product

Where possible recycling is preferred to disposal or incineration.
Do not allow to enter drains or waterways.

Disposal recommendations for packaging

Completely emptied packagings can be given for recycling.

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Contributing exposure scenario controlling worker exposure (professional)

Short title of the exposure scenario

Substance number:CES006

Use

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
 PROC11 Non industrial spraying

Physical form

liquid

Maximum amount used per time or activity

Duration of exposure	<=	8	h/d
Frequency of exposure	<=	220	d/a

Other relevant operational conditions

Use: Room temperature
 Drying and through-curing takes place at ambient temperature or at higher temperatures.
 Volatile organic substances will volatilise into the atmospheric air inside.
 Read attached instructions before use.

Product substance and product safety related measures

Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Provide for sufficient ventilation. This can be achieved by local exhaust or general exhaust air collection. Wear a suitable respirator if the ventilation is not sufficient to keep the solvent vapour concentration below the occupational limit values.

Respiratory protection

Avoid inhalation of vapour and spray mist. Use breathing apparatus if exposed to vapours/dust/aerosol. Recommended Filter type: Respiratory protection mask with combination filter A/P2

Hand protection

Protective gloves complying with EN 374.

Glove material

Multilayer gloves made from

Appropriate Material Fluorinated rubber / butyl-rubber

Material thickness >= 0,7

Breakthrough time >= 30

This recommendation is valid only for the product named in this safety data sheet supplied by us, and only for the indicated intended use purposes.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

The breakthrough time must be greater than the end use time of the product.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

The performance or effectiveness of the glove may be reduced by physical/ chemical damage and poor maintenance.

Eye protection

Wear eye glasses with side protection according to EN 166.

Body protection

Wear suitable protective clothing. Remove contaminated clothing and wash it before reuse. Wash hands

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before breaks and after work.

Exposure estimation and reference to its source

Workers (professional)

SU	SU22
PROC	PROC11
Assessment method	inhalation, long-term - local and systemic
	Indoor use
Exposure assessment	242 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,504
Lead substance	isobutyl acetate

Workers (professional)

SU	SU22
PROC	PROC11
Assessment method	inhalation, long-term - local and systemic
	Outdoor use
Exposure assessment	242 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,504
Lead substance	isobutyl acetate

Workers (professional)

SU	SU22
PROC	PROC11
Assessment method	Long-term inhalative
Exposure assessment	242 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,504
Lead substance	n-butyl acetate

Workers (professional)

SU	SU22
PROC	PROC10
Assessment method	inhalation, long-term - systemic
Exposure assessment	200 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,6
Lead substance	acetone

Workers (professional)

SU	SU22
PROC	PROC10
Assessment method	dermal, long-term - systemic
Exposure assessment	62 mg/kg/d
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,15
Lead substance	acetone

Workers (professional)

SU	SU22
PROC	PROC11
Assessment method	inhalation, long-term - systemic
Exposure assessment	200 mg/m ³

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Exposure assessment (method) ECETOC TRA
 Risk characterisation ratio (RCR) 0,4
 Lead substance acetone

Workers (professional)

SU SU22
 PROC PROC11
 Assessment method dermal, long-term - systemic
 Exposure assessment 62 mg/kg/d
 Exposure assessment (method) ECETOC TRA
 Risk characterisation ratio (RCR) 0,01
 Lead substance acetone

Workers (professional)

SU SU22
 PROC PROC13
 Assessment method inhalation, long-term - systemic
 Exposure assessment 200 mg/m³
 Exposure assessment (method) ECETOC TRA
 Risk characterisation ratio (RCR) 0,5
 Lead substance acetone

Workers (professional)

SU SU22
 PROC PROC13
 Assessment method dermal, long-term - systemic
 Exposure assessment 62 mg/kg/d
 Exposure assessment (method) ECETOC TRA
 Risk characterisation ratio (RCR) 0,07
 Lead substance acetone

Workers (professional)

SU SU22
 PROC PROC10
 Assessment method inhalation, long-term - systemic
 Risk characterisation ratio (RCR) 0,5
 Lead substance 4-methylpentan-2-one

Workers (professional)

SU SU22
 PROC PROC10
 Assessment method dermal, long-term - systemic
 Risk characterisation ratio (RCR) 0,1
 Lead substance 4-methylpentan-2-one

Workers (professional)

SU SU22
 PROC PROC11
 Assessment method inhalation, long-term - systemic
 Risk characterisation ratio (RCR) 0,5
 Lead substance 4-methylpentan-2-one

Workers (professional)

SU SU22
 PROC PROC11
 Assessment method dermal, long-term - systemic
 Risk characterisation ratio (RCR) 0,5

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Lead substance	4-methylpentan-2-one
Workers (professional)	
SU	SU22
PROC	PROC13
Assessment method	inhalation, long-term - systemic
Risk characterisation ratio (RCR)	0,75
Lead substance	4-methylpentan-2-one
Workers (professional)	
SU	SU22
PROC	PROC13
Assessment method	dermal, long-term - systemic
Risk characterisation ratio (RCR)	0,5
Lead substance	4-methylpentan-2-one
Workers (professional)	
SU	SU22
PROC	PROC10
Assessment method	dermal, long-term - systemic
Exposure assessment	63 mg/kg/d
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,022
Lead substance	ethyl acetate
Workers (professional)	
SU	SU22
PROC	PROC10
Assessment method	inhalation, long-term - local
Exposure assessment	734 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,018
Lead substance	ethyl acetate
Workers (professional)	
SU	SU22
PROC	PROC11
Assessment method	dermal, long-term - systemic
Exposure assessment	63 mg/kg/d
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,034
Lead substance	ethyl acetate
Workers (professional)	
SU	SU22
PROC	PROC11
Assessment method	inhalation, long-term - local
Exposure assessment	734 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,018
Lead substance	ethyl acetate
Workers (professional)	
SU	SU22
PROC	PROC10
Assessment method	inhalative
	Indoor use

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Exposure assessment	0,05	mg/m ³
Exposure assessment (method)	ECETOC TRA	
Risk characterisation ratio (RCR)	0,172	
Lead substance	xylene	

Workers (professional)

SU	SU22	
PROC	PROC11	
Assessment method	inhalative	
	Indoor use	

Exposure assessment	0,1	mg/m ³
Exposure assessment (method)	ECETOC TRA	
Risk characterisation ratio (RCR)	0,34	
Lead substance	xylene	

Workers (professional)

SU	SU22	
PROC	PROC13	
Assessment method	inhalative	
	Indoor use	

Exposure assessment	0,05	mg/m ³
Exposure assessment (method)	ECETOC TRA	
Risk characterisation ratio (RCR)	0,172	
Lead substance	xylene	

Information on estimated exposure and downstream-user guidance**Guidance for Downstream Users**

The downstream user can evaluate whether he operates within the conditions set in the exposure scenario on the basis of the information supplied. This evaluation can be conducted by an expert or using the risk assessment tools recommended by ECHA.