

Trade name: Hesse PU Multicoat lacquer, matt DE 412

Version: 23 / WORLD

Revision: 05.11.2020

Replaces Version: 22 / WORLD

Print date: 13.09.21

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

### 1.1. Product identifier

Hesse PU Multicoat lacquer, matt DE 412

### 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
STOT SE 3	H336
Eye Irrit. 2	H319

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.  
 H336 May cause drowsiness or dizziness.  
 H319 Causes serious eye irritation.

**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 acetone; isobutyl acetate; n-butyl acetate; propan-2-ol  
 EUH208 Contains octabenzene, methyl methacrylate, 12-hydroxy-N-[6-(12-hydroxyoctadecanamido)hexyl]octadecanamide, May produce an allergic reaction.

**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

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EUH066

**xylene**

CAS No.	1330-20-7			
EINECS no.	215-535-7			
Registration no.	01-2119488216-32			
Concentration	>= 1	<	10	%
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	<	9	%
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	

**diacetone alcohol**

CAS No.	123-42-2			
EINECS no.	204-626-7			
Registration no.	01-2119473975-21			
Concentration	>= 1	<	3	%
Classification (Regulation (EC) No. 1272/2008)				
	STOT SE 3		H335	Respiratory tract
	Eye Irrit. 2		H319	
	Repr. 2		H361d	

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Concentration limits (Regulation (EC) No. 1272/2008)

Eye Irrit. 2 H319 10 %

**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

**12-hydroxy-N-[6-(12-hydroxyoctadecanamido)hexyl]octadecanamide**

EINECS no. 434-430-9

Registration no. 01-0000018057-71

Concentration  $\geq$  0,1 < 1 %

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

Skin Sens. 1 H317

Aquatic Chronic 4 H413

**methyl methacrylate**

CAS No. 80-62-6

EINECS no. 201-297-1

Registration no. 01-2119452498-28

Concentration  $\geq$  0,1 < 1 %

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

Flam. Liq. 2 H225

STOT SE 3 H335

Skin Irrit. 2 H315

Skin Sens. 1 H317

Respiratory tract

**octabenzene**

CAS No. 1843-05-6

EINECS no. 217-421-2

Registration no. 01-2119557833-30

Concentration  $\geq$  0,1 < 1 %

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

Skin Sens. 1 H317

**cellulose nitrate  $\leq$  12.6 % N**

CAS No. 9004-70-0

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

Expl. 1.1 H201

**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**

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#### 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, CO<sub>2</sub>, 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.

###### 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

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### 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

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)

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See exposure scenario, if available.

## 8. Exposure controls/personal protection

### 8.1. Control parameters

#### Other information

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#### 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 <sup>3</sup>

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 <sup>3</sup>

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 <sup>3</sup>

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	35,7	mg/m <sup>3</sup>

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

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 <sup>3</sup>

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 <sup>3</sup>

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 <sup>3</sup>

**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 <sup>3</sup>

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 <sup>3</sup>

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



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Mode of action	Local effects	
Concentration	300	mg/m <sup>3</sup>
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 <sup>3</sup>
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 <sup>3</sup>
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 <sup>3</sup>
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 <sup>3</sup>
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	35,7	mg/m <sup>3</sup>

**diacetone alcohol**

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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	32,6	mg/m <sup>3</sup>
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	467	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	5,8	mg/m <sup>3</sup>
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	1,67	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	167	mg/kg/d
<b>acetone</b>		
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 <sup>3</sup>
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	

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Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	2420	mg/m <sup>3</sup>
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 <sup>3</sup>
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	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 <sup>3</sup>
<b>xylene</b>		
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	
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 <sup>3</sup>

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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	174	mg/m <sup>3</sup>
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 <sup>3</sup>
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 <sup>3</sup>
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 <sup>3</sup>
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 <sup>3</sup>
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 <sup>3</sup>
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
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Short-term	

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Route of exposure	Dermal exposure	
Mode of action	Local effects	
Concentration	174	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 <sup>3</sup>

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 <sup>3</sup>

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 <sup>3</sup>

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 <sup>3</sup>

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 <sup>3</sup>

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 <sup>3</sup>

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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	Systemic effects	
Concentration	14,8	mg/m <sup>3</sup>
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
<b>propan-2-ol</b>		
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/m <sup>3</sup>
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 <sup>3</sup>
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	

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Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	319	mg/kg/d

**octabenzone**

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	6,6	mg/m <sup>3</sup>

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	1,87	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	0,9	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	0,9	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	1,6	mg/m <sup>3</sup>

**methyl methacrylate**

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (industrial)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	210	mg/m <sup>3</sup>

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

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Mode of action	Systemic effects	
Concentration	210	mg/m <sup>3</sup>
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (industrial)	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Local effects	
Concentration	1,5	mg/cm <sup>2</sup>
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (industrial)	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Systemic effects	
Concentration	13,67	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (industrial)	
Duration of exposure	Short-term	
Route of exposure	Dermal exposure	
Mode of action	Local effects	
Concentration	1,5	mg/cm <sup>2</sup>
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	105	mg/m <sup>3</sup>
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	74,3	mg/m <sup>3</sup>
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Mode of action	Local effects	
Concentration	1,5	mg/cm <sup>2</sup>
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	8,2	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	



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Reference group	Consumer	
Duration of exposure	Short-term	
Route of exposure	Dermal exposure	
Mode of action	Local effects	
Concentration	1,5	mg/cm <sup>2</sup>

**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

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	

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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
<b>diacetone alcohol</b>		
Type of value	PNEC	
Type	Freshwater	
Concentration	2	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	0,2	mg/l
Type of value	PNEC	
Conditions	sporadic release	
Concentration	1	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	10	mg/l
Type of value	PNEC	
Type	Fresh water sediment	
Concentration	7,4	mg/kg/d
Type of value	PNEC	
Type	saltwater sediment	
Concentration	0,74	mg/kg/d
Type of value	PNEC	
Type	Soil	
Concentration	0,31	mg/kg/d
<b>acetone</b>		
Type of value	PNEC	
Type	Freshwater	
Concentration	10,6	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	1,06	mg/l

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

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

**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

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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

**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

**octabenzene**

Type of value	PNEC		
Type	Freshwater		
Concentration	0,052		mg/l

Type of value	PNEC		
Type	Saltwater		
Concentration	0,0052		mg/l

Type of value	PNEC		
Conditions	sporadic release		
Concentration	0,52		mg/l

Type of value	PNEC		
Type	Sewage treatment plant (STP)		

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Concentration	1	mg/l
Type of value	PNEC	
Type	Fresh water sediment	
Concentration	331	mg/kg
Type of value	PNEC	
Type	saltwater sediment	
Concentration	33,2	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	66,1	mg/kg
<b>methyl methacrylate</b>		
Type of value	PNEC	
Type	Freshwater	
Concentration	0,94	mg/l
Type of value	PNEC	
Type	marine water	
Concentration	0,094	mg/l
Type of value	PNEC	
Type	Soil	
Concentration	1,47	mg/kg

## 8.2. Exposure controls

### 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.

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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**

<b>Form</b>	liquid
<b>Colour</b>	colourless
<b>Odour</b>	solvent-like
<b>Odour threshold</b>	
Remarks	not determined
<b>Melting point</b>	
Remarks	not determined
<b>Freezing point</b>	
Remarks	not determined
<b>Initial boiling point and boiling range</b>	
Value	55,8 to 200 °C
<b>Flash point</b>	
Value	11 °C
<b>Evaporation rate</b>	
Remarks	not determined
<b>Flammability (solid, gas)</b>	
not determined	
<b>Upper/lower flammability or explosive limits</b>	
Remarks	not determined
<b>Vapour pressure</b>	
Remarks	not determined
<b>Vapour density</b>	
Remarks	not determined
<b>Density</b>	
Value	appr. 0,956 kg/l
Temperature	20 °C
<b>Solubility in water</b>	
Remarks	not determined
<b>Solubility(ies)</b>	
Remarks	not determined
<b>Partition coefficient: n-octanol/water</b>	
Remarks	not determined
<b>Ignition temperature</b>	

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Remarks not determined

**Decomposition temperature**

Remarks not determined

**Viscosity**

Remarks not determined

**Efflux time**

Value	29	to	35	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	27,7	%
Method	calculated value	

**Other information**

This information is not available.

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

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<sub>x</sub>), 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**

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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)****xylene**

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

**ethylbenzene**

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)****xylene**

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

**methyl methacrylate**

evaluation		Irritating to skin.	
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**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)****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



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evaluation  
Source  
Irritating to eyes.  
1 (reliable without restriction)

**xylene**

Species  
evaluation  
Source  
rabbit  
Irritating to eyes.  
2 (reliable with restrictions)

**diacetone alcohol**

Species  
evaluation  
Source  
rabbit  
Irritating to eyes.  
2 (reliable with restrictions)

**Sensitization**

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

**Sensitization (Components)****octabenzene**

Species  
evaluation  
Method  
guinea pig  
May cause sensitization by skin contact.  
OECD Test Guideline 406

**methyl methacrylate**

Species  
evaluation  
mouse  
May cause sensitization by skin contact.

**12-hydroxy-N-[6-(12-hydroxyoctadecanamido)hexyl]octadecanamide**

evaluation  
May cause sensitization by skin contact.

**Mutagenicity**

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

**Reproductive toxicity**

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

**Reproduction toxicity (Components)****diacetone alcohol**

Species  
evaluation  
Method  
Remarks  
Source  
rat  
Reproductive toxicity, Category 2  
OECD 422  
Suspected of damaging the unborn child.  
2 (reliable with restrictions)

**Carcinogenicity**

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

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

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

**Repeated exposure**

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

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**Specific Target Organ Toxicity (STOT) (Components)****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).

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

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

**n-butyl acetate****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.

**diacetone alcohol****Specific target organ toxicity - single exposure**

Remarks  
 Organs: Respiratory tract  
 May cause respiratory irritation.

**methyl methacrylate****Specific target organ toxicity - single exposure**

Remarks  
 Organs: Respiratory tract  
 May cause respiratory irritation.

**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)****methyl methacrylate**

Species	Pimephales promelas (fathead minnow)		
LC50	130		mg/l
Duration of exposure	96	h	



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**Daphnia toxicity (Components)****octabenzone**

Species	Daphnia magna (Water flea)			
EC50	52			mg/l
Duration of exposure	24	h		

**12.2. Persistence and degradability****General information**

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

**Biodegradability (Components)****octabenzone**

Value	5	to	6	%
Duration of test evaluation	28	d		
	Not readily biodegradable.			

**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

**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) 72,3 % 692 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.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

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H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H413	May cause long lasting harmful effects to aquatic life.

**CLP categories listed in Chapter 3**

Acute Tox. 4	Acute toxicity, Category 4
Aquatic Chronic 4	Hazardous to the aquatic environment, chronic, Category 4
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
Skin Sens. 1	Skin sensitization, Category 1
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)**

Trade name: Hesse PU Multicoat lacquer, matt DE 412

Version: 23 / WORLD

Revision: 05.11.2020

Replaces Version: 22 / WORLD

Print date: 13.09.21

**Short title of the exposure scenario**

ES001 - Industrial applications: industrial spraying (inside)

**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: &lt;= 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 &lt;= 8 h/d

Trade name: Hesse PU Multicoat lacquer, matt DE 412

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Frequency of exposure &lt;= 220 d/a

**Other relevant operational conditions**

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 &gt;= 0,7

Breakthrough time &gt;= 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

Assessment method

PROC7

inhalation, long-term - local and systemic

Indoor use

Exposure assessment

60,5 mg/m<sup>3</sup>

Exposure assessment (method)

ECETOC TRA

Risk characterisation ratio (RCR)

0,126

Lead substance

isobutyl acetate

**Workers (industrial)**

PROC

Assessment method

PROC10

inhalation, long-term - local and systemic

Trade name: Hesse PU Multicoat lacquer, matt DE 412

Version: 23 / WORLD

Revision: 05.11.2020

Replaces Version: 22 / WORLD

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



Trade name: Hesse PU Multicoat lacquer, matt DE 412

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Risk characterisation ratio (RCR)	0,504
Lead substance	n-butyl acetate
<b>Workers (industrial)</b>	
SU	SU3
PROC	PROC7
Assessment method	inhalative
	Long-term
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,5
Lead substance	diacetone alcohol
<b>Workers (industrial)</b>	
SU	SU3
PROC	PROC7
Assessment method	dermal
	Long-term
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,9
Lead substance	diacetone alcohol
<b>Workers (industrial)</b>	
SU	SU22
PROC	PROC10
Assessment method	inhalative
	Long-term
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,75
Lead substance	diacetone alcohol
<b>Workers (industrial)</b>	
SU	SU3
PROC	PROC10
Assessment method	dermal
	Long-term
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,5
Lead substance	diacetone alcohol
<b>Workers (industrial)</b>	
SU	SU3
PROC	PROC13
Assessment method	inhalative
	Long-term
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,5
Lead substance	diacetone alcohol
<b>Workers (industrial)</b>	
SU	SU3
PROC	PROC13
Assessment method	dermal
	Long-term
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,5
Lead substance	diacetone alcohol

Trade name: Hesse PU Multicoat lacquer, matt DE 412

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**Workers (industrial)**

SU	SU3
PROC	PROC7
Assessment method	inhalation, long-term - systemic
	Indoor use
Exposure assessment	200 mg/m <sup>3</sup>
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 <sup>3</sup>
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 <sup>3</sup>
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

Trade name: Hesse PU Multicoat lacquer, matt DE 412

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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	inhalative
	Indoor use
Exposure assessment	0,1 mg/m <sup>3</sup>
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 <sup>3</sup>
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 <sup>3</sup>
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,34
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.

**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

Trade name: Hesse PU Multicoat lacquer, matt DE 412

Version: 23 / WORLD

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Replaces Version: 22 / WORLD

Print date: 13.09.21

## **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.

## **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**

Trade name: Hesse PU Multicoat lacquer, matt DE 412

Version: 23 / WORLD

Revision: 05.11.2020

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Print date: 13.09.21

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  $\geq$  0,7

Breakthrough time  $\geq$  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 (professional)

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

Trade name: Hesse PU Multicoat lacquer, matt DE 412

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**Workers (professional)**

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

**Workers (professional)**

SU	SU22
PROC	PROC11
Assessment method	inhalative Long-term
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,5
Lead substance	diacetone alcohol

**Workers (professional)**

SU	SU22
PROC	PROC13
Assessment method	inhalative Long-term
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,5
Lead substance	diacetone alcohol

**Workers (professional)**

SU	SU22
PROC	PROC10
Assessment method	inhalative Long-term
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,75
Lead substance	diacetone alcohol

**Workers (professional)**

SU	SU22
PROC	PROC10
Assessment method	dermal Long-term
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,5
Lead substance	diacetone alcohol

**Workers (professional)**

SU	SU22
PROC	PROC13
Assessment method	dermal Long-term
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,5
Lead substance	diacetone alcohol

**Workers (professional)**

Trade name: Hesse PU Multicoat lacquer, matt DE 412

Version: 23 / WORLD

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SU	SU22
PROC	PROC11
Assessment method	dermal
	Long-term
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,75
Lead substance	diacetone alcohol

**Workers (professional)**

SU	SU22
PROC	PROC10
Assessment method	inhalation, long-term - systemic
Exposure assessment	200 mg/m <sup>3</sup>
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 <sup>3</sup>
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/m <sup>3</sup>
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

Trade name: Hesse PU Multicoat lacquer, matt DE 412

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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	inhalative	
	Indoor use	

Exposure assessment	0,05	mg/m <sup>3</sup>
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 <sup>3</sup>
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 <sup>3</sup>
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.