

Trade name: Hesse PU Sun-Blocker DE 42954

Version: 37 / GB

Revision: 25.01.2021

Replaces Version: 36 / GB

Print date: 31.01.21

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

1.1. Product identifier

Hesse PU Sun-Blocker DE 42954

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
Aquatic Chronic 3	H412

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

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Labelling according to regulation (EC) No 1272/2008

Hazard pictograms



Signal word

Danger

Hazard statements

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.

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.
P273	Avoid release to the environment.
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.

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

contains	butanone; isobutyl acetate; n-butyl acetate; 2-methoxy-1-methylethyl acetate
EUH208 Contains	Hydroxyphenylbenzotriazole derivates reaction mass of α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -hydroxypoly(oxyethylene) and α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene), octabenzone, May produce an allergic reaction.

Supplemental information

EUH066	Repeated exposure may cause skin dryness or cracking.
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2.3. Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB) (if not listed in Section 3).

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	>= 20	<	25	%
Classification (Regulation (EC) No. 1272/2008)	Flam. Liq. 3	H226		
	STOT SE 3	H336		Nervous system

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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		

butanone

CAS No.	78-93-3			
EINECS no.	201-159-0			
Registration no.	01-2119457290-43			
Concentration	>= 10	< 20		%
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	< 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		

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

EINECS no.	920-750-0			
Registration no.	01-2119473851-33			
Concentration	>= 3	< 10		%
Classification (Regulation (EC) No. 1272/2008)	Flam. Liq. 2	H225		
	Asp. Tox. 1	H304		
	Aquatic Chronic 2	H411		
	STOT SE 3	H336		Nervous system

4-methylpentan-2-one

CAS No.	108-10-1
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EINECS no. 203-550-1
 Registration no. 01-2119473980-30
 Concentration ≥ 1 < 5 %
 Classification (Regulation (EC) No. 1272/2008)
 Flam. Liq. 2 H225
 Acute Tox. 4 H332
 Eye Irrit. 2 H319
 STOT SE 3 H335
 EUH066

Route of exposure: Inhalation exposure
 Respiratory tract

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
 STOT RE 2 H373
 Asp. Tox. 1 H304

Route of exposure: Inhalation exposure
 Ear

Hydrocarbons, C9, aromatics

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

Respiratory tract
 Nervous system

2-methoxy-1-methylethyl acetate

CAS No. 108-65-6
 EINECS no. 203-603-9
 Registration no. 01-2119475791-29
 Concentration ≥ 1 < 10 %
 Classification (Regulation (EC) No. 1272/2008)
 Flam. Liq. 3 H226
 STOT SE 3 H336

Hydroxyphenylbenzotriazole derivatives reaction mass of α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -hydroxypoly(oxyethylene) and α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene)

EINECS no. 400-830-7
 Registration no. 01-0000015075-76
 Concentration $\geq 0,1$ < 1 %
 Classification (Regulation (EC) No. 1272/2008)

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Skin Sens. 1	H317
Aquatic Chronic 2	H411

octabenzone

CAS No.	1843-05-6
EINECS no.	217-421-2
Registration no.	01-2119557833-30
Concentration	>= 0,1 < 1 %
Classification (Regulation (EC) No. 1272/2008)	Skin Sens. 1 H317

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

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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**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

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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)

See exposure scenario, if available.

8. Exposure controls/personal protection

8.1. Control parameters

Exposure limit values

2-methoxy-1-methylethyl acetate

List	Directive 2017/164 EG			
Value	275	mg/m ³	50	ppm(V)
Short term exposure limit	550	mg/m ³	100	ppm(V)
Status:	12/2009			

2-methoxy-1-methylethyl acetate

List	EH40			
Value	274	mg/m ³	50	ppm(V)
Short term exposure limit	548	mg/m ³	100	ppm(V)
Skin resorption / sensibilisation:	Sk; Status: 01/2020			

4-methylpentan-2-one

List	Directive 2017/164 EG			
Value	83	mg/m ³	20	ppm(V)
Short term exposure limit	208	mg/m ³	50	ppm(V)
Status:	12/2009			

4-methylpentan-2-one

List	EH40			
Value	208	mg/m ³	50	ppm(V)
Short term exposure limit	416	mg/m ³	100	ppm(V)
Skin resorption / sensibilisation:	Sk; Status: 01/2020			

butanone

List	Directive 2017/164 EG			
Value	600	mg/m ³	200	ppm(V)
Short term exposure limit	900	mg/m ³	300	ppm(V)
Status:	12/2009			

butanone

List	EH40			
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Value	600	mg/m ³	200	ppm(V)
Short term exposure limit	899	mg/m ³	300	ppm(V)
Skin resorption / sensibilisation: Sk; Status: 01/2020				

isobutyl acetate

List	EH40			
Value	724	mg/m ³	150	ppm(V)
Short term exposure limit	903	mg/m ³	187	ppm(V)
Status: 01/2020				

isobutyl acetate

List	Directive 2017/164 EG			
Value	241	mg/m ³	50	ppm(V)
Short term exposure limit	723	mg/m ³	150	ppm(V)
Status: 10/2019				

n-butyl acetate

List	EH40			
Value	724	mg/m ³	150	ppm(V)
Short term exposure limit	966	mg/m ³	200	ppm(V)
Status: 01/2020				

n-butyl acetate

List	Directive 2017/164 EG			
Value	241	mg/m ³	50	ppm(V)
Short term exposure limit	723	mg/m ³	150	ppm(V)
Status: 10/2019				

xylene

List	Directive 2017/164 EG			
Value	221	mg/m ³	50	ppm(V)
Short term exposure limit	442	mg/m ³	100	ppm(V)
Skin resorption / sensibilisation: H; Status: 12/2009				

xylene

List	EH40			
Value	220	mg/m ³	50	ppm(V)
Short term exposure limit	441	mg/m ³	100	ppm(V)
Skin resorption / sensibilisation: Sk; Status: 01/2020				

Hydrocarbons, C9, aromatics

List	EH40			
Value	500	mg/m ³		
Status: 01/2020				

ethylbenzene

List	Directive 2017/164 EG			
Value	442	mg/m ³	100	ppm(V)
Short term exposure limit	884	mg/m ³	200	ppm(V)
Status: 12/2009				

ethylbenzene

List	EH40			
Value	441	mg/m ³	100	ppm(V)
Short term exposure limit	552	mg/m ³	125	ppm(V)
Skin resorption / sensibilisation: Sk; Status: 01/2020				

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

List	EH40			
Value	1200	mg/m ³		
Status: 01/2020				

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Other information

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Derived No/Minimal Effect Levels (DNEL/DMEL)**2-methoxy-1-methylethyl acetate**

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	275	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	153,5	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	1,67	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	33	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	54,8	mg/kg

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	

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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	
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)	

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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	
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	

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Concentration	2	mg/kg/d
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Type of value	Derived No Effect Level (DNEL)	
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Reference group	Consumer	
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Duration of exposure	Short-term	
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Route of exposure	inhalative	
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Mode of action	Systemic effects	
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Concentration	300	mg/m ³
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Type of value	Derived No Effect Level (DNEL)	
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Reference group	Consumer	
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Duration of exposure	Short-term	
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Route of exposure	inhalative	
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Mode of action	Local effects	
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Concentration	300	mg/m ³
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Type of value	Derived No Effect Level (DNEL)	
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Reference group	Consumer	
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Duration of exposure	Long-term	
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Route of exposure	inhalative	
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Mode of action	Systemic effects	
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Concentration	35,7	mg/m ³
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Type of value	Derived No Effect Level (DNEL)	
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Reference group	Consumer	
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Duration of exposure	Long-term	
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Route of exposure	inhalative	
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Mode of action	Local effects	
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Concentration	35,7	mg/m ³
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Hydrocarbons, C9, aromatics

Type of value	Derived No Effect Level (DNEL)	
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Reference group	Consumer	
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Duration of exposure	Long-term	
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Route of exposure	Oral exposure	
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Mode of action	Systemic effects	
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Concentration	11	mg/kg
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Type of value	Derived No Effect Level (DNEL)	
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Reference group	Workers (professional)	
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Duration of exposure	Long-term	
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Route of exposure	Dermal exposure	
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Mode of action	Systemic effects	
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Concentration	25	mg/kg
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Type of value	Derived No Effect Level (DNEL)	
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Reference group	Consumer	
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Duration of exposure	Long-term	
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Route of exposure	Dermal exposure	
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Mode of action	Systemic effects	
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Concentration	11	mg/kg
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Type of value	Derived No Effect Level (DNEL)	
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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

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

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	699	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	773	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	699	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	2035	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	608	mg/kg/d

4-methylpentan-2-one

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	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	
Mode of action	Systemic effects	
Concentration	14,7	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	Local effects	
Concentration	14,7	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	155,2	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	Local effects	
Concentration	155,2	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	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
butanone		
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (industrial)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Concentration	600	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (industrial)	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Concentration	1161	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (professional)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
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	Dermal exposure	
Concentration	1161	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Concentration	106	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	
Concentration	31	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long-term	
Route of exposure	Dermal exposure	
Concentration	412	mg/kg/d

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	
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

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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	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)	
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

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)	

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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	
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

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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 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	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 ³

Hydroxyphenylbenzotriazole derivatives reaction mass of α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -hydroxypoly(oxyethylene) and α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene)

Type of value	Derived No Effect Level (DNEL)	
Reference group	Workers (industrial)	
Duration of exposure	Long-term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	0,35	mg/m ³
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	

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Concentration	0,5	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	0,085	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	0,25	mg/kg
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	0,025	mg/kg/d

Predicted No Effect Concentration (PNEC)**2-methoxy-1-methylethyl acetate**

Type of value	PNEC	
Type	Freshwater	
Concentration	0,635	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	0,0635	mg/l
Type of value	PNEC	
Conditions	sporadic release	
Concentration	6,35	mg/l
Type of value	PNEC	
Type	Fresh water sediment	
Concentration	3,29	mg/kg
Type of value	PNEC	
Type	saltwater sediment	
Concentration	0,329	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	0,29	mg/kg
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	100	mg/l

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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	
Conditions	sporadic release	
Concentration	0,36	mg/l
Type of value	PNEC	
Type	Fresh water sediment	
Concentration	0,981	mg/kg

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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		
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
butanone			
Type of value	PNEC		
Type	Freshwater		
Concentration	55,8		mg/l
Type of value	PNEC		
Type	Saltwater		
Concentration	55,8		mg/l
Type of value	PNEC		
Type	Fresh water sediment		
Concentration	284,74		mg/kg
Type of value	PNEC		
Type	saltwater sediment		
Concentration	287,7		mg/kg

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Type of value	PNEC	
Type	Soil	
Concentration	22,5	mg/kg

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

octabenzene

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

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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)	
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

Hydroxyphenylbenzotriazole derivates reaction mass of α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -hydroxypoly(oxyethylene) and α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene)

Type of value	PNEC	
Type	Freshwater	
Concentration	0,0023	mg/l
Type of value	PNEC	
Type	marine water	
Concentration	0,00023	mg/l
Type of value	PNEC	
Conditions	sporadic release	
Concentration	0,028	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	10	mg/l
Type of value	PNEC	
Type	Fresh water sediment	
Concentration	3,06	mg/kg
Type of value	PNEC	
Type	saltwater sediment	
Concentration	0,306	mg/kg
Type of value	PNEC	

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Type	Soil		
Concentration		2	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.

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

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Initial boiling point and boiling range

Value 79 to 200 °C

Flash point

Value 7 °C

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

DensityValue appr. 0,911 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 timeValue 25 to 31 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 23,6 %
Method calculated value**Other information**

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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 (NOx), 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	18,5512	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

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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)

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)

butanone

Species	rabbit
Observation Period	7 d
evaluation	Severe eye irritation
Source	2 (reliable with restrictions)

xylene

Species	rabbit
evaluation	Irritating to eyes.
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.

Sensitization (Components)**octabenzene**

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

Hydroxyphenylbenzotriazole derivatives reaction mass of α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -hydroxypoly(oxyethylene) and α -3-(3-(2H-benzotriazol-2-yl)-5-tert-

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butyl-4-hydroxyphenyl)propionyl- ω -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene)

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

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.

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.

butanone
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).

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.

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

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

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

Remarks Possible narcotic effects (drowsiness, dizziness).

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics**Specific target organ toxicity - single exposure**

evaluation May cause drowsiness or dizziness.

Organs: Nervous system

Remarks Possible narcotic effects (drowsiness, dizziness).

2-methoxy-1-methylethyl acetate**Specific target organ toxicity - repeated exposure**

evaluation May cause drowsiness or dizziness.

Organs: Nervous system

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)		
NOEC	2,14		mg/l
Duration of exposure	21	d	

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

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

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Species	Daphnia magna (Water flea)		
NOEC	0,17		mg/l
Duration of exposure	21	d	

octabenzene

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

Hydroxyphenylbenzotriazole derivatives reaction mass of α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -hydroxypoly(oxyethylene) and α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene)

Species	Daphnia magna (Water flea)	
EC50	4	mg/l
Method	OECD Test Guideline 202	

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

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

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

Species	Pseudokirchneriella subcapitata (green algae)		
EC50	10	mg/l	
Duration of exposure	72	h	
Method	OECD 201		

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.

Hydrocarbons, C7-C9, n-alkanes, isoalkanes, cyclics

evaluation Readily biodegradable.

octabenzene

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

Hydroxyphenylbenzotriazole derivatives reaction mass of α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -hydroxypoly(oxyethylene) and α -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyl- ω -3-(3-(2H-benzotriazol-2-yl)-5-tert-butyl-4-hydroxyphenyl)propionyloxypoly(oxyethylene)

evaluation 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.

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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

EWC waste code	080111 - waste paint and varnish containing organic solvents or other dangerous substances
EWC waste code	200127 - paint, inks, adhesives and resins containing dangerous substances

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

modified product

EWC waste code	080113 - sludges from paint or varnish containing organic solvents or other dangerous substances
EWC waste code	080115 - aqueous sludges containing paint or varnish containing organic solvents or other dangerous substances

Dried residues

EWC waste code	080112 - waste lacquers and waste paint except those falling under 080111
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Disposal recommendations for packaging

EWC waste code	150110 - packaging containing residues of or contaminated by dangerous substances
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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) 76,4 % 696 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.
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.
H335	May cause respiratory irritation.

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H336	May cause drowsiness or dizziness.
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
Eye Irrit. 2	Eye irritation, Category 2
Flam. Liq. 2	Flammable liquid, Category 2
Flam. Liq. 3	Flammable liquid, Category 3
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)**Short title of the exposure scenario**

ES001 - Industrial applications: industrial spraying (inside)

Use of the substance/preparation

Surface treatment of wood and other materials

Trade name: Hesse PU Sun-Blocker DE 42954

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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

EWC waste code	080111 - waste paint and varnish containing organic solvents or other dangerous substances
	200127 - paint, inks, adhesives and resins containing dangerous substances

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

modified product

EWC waste code	080113 - sludges from paint or varnish containing organic solvents or other dangerous substances
	080115 - aqueous sludges containing paint or varnish containing organic solvents or other dangerous substances

Dried residues

EWC waste code	080112 - waste lacquers and waste paint except those falling under 080111
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Disposal recommendations for packaging

EWC waste code	150110 - packaging containing residues of or contaminated by dangerous substances
----------------	---

Completely emptied packagings can be given for recycling.

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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

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)

SU

SU3

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PROC	PROC7
Assessment method	inhalation, long-term - local and systemic
Exposure assessment	27,54 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,1
Lead substance	2-methoxy-1-methylethyl acetate

Workers (industrial)

SU	SU3
PROC	PROC7
Assessment method	dermal, long-term - local and systemic
Exposure assessment	2,14 mg/kg/d
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,01
Lead substance	2-methoxy-1-methylethyl acetate

Workers (industrial)

SU	SU3
PROC	PROC10
Assessment method	inhalation, long-term - local and systemic
Exposure assessment	55,08 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,2
Lead substance	2-methoxy-1-methylethyl acetate

Workers (industrial)

SU	SU3
PROC	PROC10
Assessment method	dermal, long-term - local and systemic
Exposure assessment	27,43 mg/kg/d
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,18
Lead substance	2-methoxy-1-methylethyl acetate

Workers (industrial)

SU	SU3
PROC	PROC13
Assessment method	inhalation, long-term - local and systemic
Exposure assessment	55,08 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,2
Lead substance	2-methoxy-1-methylethyl acetate

Workers (industrial)

SU	SU3
PROC	PROC13
Assessment method	dermal, long-term - local and systemic
Exposure assessment	13,71 mg/kg/d
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,09
Lead substance	2-methoxy-1-methylethyl acetate

Workers (industrial)

PROC	PROC7
Assessment method	inhalation, long-term - local and systemic
Exposure assessment	Indoor use 60,5 mg/m ³

Trade name: Hesse PU Sun-Blocker DE 42954

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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/m³
 Exposure assessment (method) ECETOC TRA
 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/m³
 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/m³
 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/m³
 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/m³
 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/m³
 Exposure assessment (method) ECETOC TRA
 Risk characterisation ratio (RCR) 0,504
 Lead substance n-butyl acetate

Trade name: Hesse PU Sun-Blocker DE 42954

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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

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 (industrial)

SU	SU3
PROC	PROC7

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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

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

Trade name: Hesse PU Sun-Blocker DE 42954

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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

EWC waste code 080111 - waste paint and varnish containing organic solvents or other dangerous substances
 200127 - paint, inks, adhesives and resins containing dangerous substances

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

modified product

EWC waste code 080113 - sludges from paint or varnish containing organic solvents or other dangerous substances
 080115 - aqueous sludges containing paint or varnish containing organic solvents or other dangerous substances

Dried residues

EWC waste code 080112 - waste lacquers and waste paint except those falling under 080111

Disposal recommendations for packaging

EWC waste code 150110 - packaging containing residues of or contaminated by dangerous substances

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

Trade name: Hesse PU Sun-Blocker DE 42954

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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 before breaks and after work.

Exposure estimation and reference to its source**Workers (professional)**

SU	SU22
PROC	PROC13
Assessment method	inhalation, long-term - local and systemic
Exposure assessment	55,08 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,2
Lead substance	2-methoxy-1-methylethyl acetate

Workers (professional)

SU	SU22
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PROC	PROC13
Assessment method	dermal, long-term - local and systemic
Exposure assessment	13,71 mg/kg/d
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,09
Lead substance	2-methoxy-1-methylethyl acetate
Workers (professional)	
SU	SU22
PROC	PROC10
Assessment method	inhalation, long-term - local and systemic
Exposure assessment	137,71 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,5
Lead substance	2-methoxy-1-methylethyl acetate
Workers (professional)	
SU	SU22
PROC	PROC10
Assessment method	dermal, long-term - local and systemic
Exposure assessment	27,43 mg/kg/d
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,18
Lead substance	2-methoxy-1-methylethyl acetate
Workers (professional)	
SU	SU22
PROC	PROC11
Assessment method	inhalation, long-term - local and systemic Indoor use
Exposure assessment	27,54 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,1
Lead substance	2-methoxy-1-methylethyl acetate
Workers (professional)	
SU	SU22
PROC	PROC11
Assessment method	dermal, long-term - local and systemic Indoor use
Exposure assessment	2,14 mg/kg/d
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,01
Lead substance	2-methoxy-1-methylethyl acetate
Workers (professional)	
SU	SU22
PROC	PROC11
Assessment method	inhalation, long-term - local and systemic Outdoor use
Exposure assessment	55,08 mg/m ³
Exposure assessment (method)	ECETOC TRA
Risk characterisation ratio (RCR)	0,2
Lead substance	2-methoxy-1-methylethyl acetate
Workers (professional)	
SU	SU22

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PROC	PROC11
Assessment method	dermal, long-term - local and systemic
Exposure assessment	Outdoor use
Exposure assessment (method)	107,14 mg/kg/d
Risk characterisation ratio (RCR)	ECETOC TRA
Lead substance	0,7
SU	2-methoxy-1-methylethyl acetate
Assessment method	SU21
Exposure assessment	dermal, long-term - systemic
Exposure assessment (method)	Indoor use
Risk characterisation ratio (RCR)	6 mg/kg/d
Lead substance	ConsExpo v4.1
SU	0,11
Assessment method	2-methoxy-1-methylethyl acetate
Exposure assessment	SU21
Exposure assessment (method)	inhalation, long-term - systemic
Risk characterisation ratio (RCR)	Indoor use
Lead substance	6,83 mg/m ³
SU	ConsExpo v4.1
Assessment method	0,6
Exposure assessment	2-methoxy-1-methylethyl acetate
Exposure assessment (method)	
Risk characterisation ratio (RCR)	
Lead substance	
Workers (professional)	
SU	SU22
PROC	PROC11
Assessment method	inhalation, long-term - local and systemic
Exposure assessment	Indoor use
Exposure assessment (method)	242 mg/m ³
Risk characterisation ratio (RCR)	ECETOC TRA
Lead substance	0,504
Workers (professional)	isobutyl acetate
SU	SU22
PROC	PROC11
Assessment method	inhalation, long-term - local and systemic
Exposure assessment	Outdoor use
Exposure assessment (method)	242 mg/m ³
Risk characterisation ratio (RCR)	ECETOC TRA
Lead substance	0,504
Workers (professional)	isobutyl acetate
SU	SU22
PROC	PROC11
Assessment method	Long-term
Exposure assessment	inhalative
Exposure assessment (method)	242 mg/m ³
Risk characterisation ratio (RCR)	ECETOC TRA
Lead substance	0,504
Workers (professional)	n-butyl acetate
SU	SU22
PROC	PROC10

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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
 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 inhalative
 Indoor use
 Exposure assessment 0,05 mg/m³
 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/m³
 Exposure assessment (method) ECETOC TRA
 Risk characterisation ratio (RCR) 0,34

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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.