



## Safety Data Sheet according to (EC) No 1907/2006 as amended

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TEROSON SB 2140 known as Macroplast B 2140

SDS No. : 44302

V013.1

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

#### 1.1. Product identifier

TEROSON SB 2140 known as Macroplast B 2140

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

Intended use:

Contact adhesive

#### 1.3. Details of the supplier of the safety data sheet

Henkel AG & Co. KGaA

Henkelstr. 67

40589 Düsseldorf

Germany

Phone: +49 211 797 0

For Safety Data Sheet updates please visit our website <https://mysds.henkel.com/index.html#/appSelection> or [www.henkel-adhesives.com](http://www.henkel-adhesives.com).

[SDSinfo.Adhesive@henkel.com](mailto:SDSinfo.Adhesive@henkel.com)

#### 1.4. Emergency telephone number

The Henkel information service also provides an around-the-clock telephone service on phone no. +49-(0)211-797-3350 for exceptional cases.

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (CLP):

Flammable liquids	Category 2
H225 Highly flammable liquid and vapour.	
Skin irritation	Category 2
H315 Causes skin irritation.	
Serious eye irritation	Category 2
H319 Causes serious eye irritation.	
Specific target organ toxicity - single exposure	Category 3
H336 May cause drowsiness or dizziness.	
Target organ: Central nervous system	
Chronic hazards to the aquatic environment	Category 2
H411 Toxic to aquatic life with long lasting effects.	

#### 2.2. Label elements

##### Label elements (CLP):

**Hazard pictogram:****Contains**

acetone

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Ethyl acetate

cyclohexane

**Signal word:**

Danger

**Hazard statement:**

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

**Supplemental information**

Contains: rosin; Disulfiram May produce an allergic reaction.

**Precautionary statement:  
Prevention**P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.  
No smoking.

P261 Avoid breathing vapors.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Precautionary statement:  
Response**P370+P378 In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction.**Precautionary statement:  
Storage**

P403+P235 Store in a well-ventilated place. Keep cool.

**2.3. Other hazards**

Solvents contained in the product evaporate during processing and their vapors can form explosive/highly inflammable air/vapor mixtures.

The solvent vapors are heavier than air and may collect in high concentrations at floor level.

Following substances are present in a concentration  $\geq$  the concentration limit for depiction in Section 3 and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):

This mixture does not contain any substances in a concentration  $\geq$  the concentration limit for depiction in Section 3 that are assessed to be a PBT, vPvB or ED.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures**

**Declaration of the ingredients according to CLP (EC) No 1272/2008:**

<b>Hazardous components CAS-No. EC Number REACH-Reg No.</b>	<b>Concentration</b>	<b>Classification</b>	<b>Specific Conc. Limits, M-factors and ATEs</b>	<b>Add. Information</b>
acetone 67-64-1 200-662-2 01-2119471330-49	20- 40 %	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336		EU OEL EUEXPL2D
Ethyl acetate 141-78-6 205-500-4 01-2119475103-46	10- 20 %	Flam. Liq. 2, H225 STOT SE 3, H336 Eye Irrit. 2, H319		EU OEL
cyclohexane 110-82-7 203-806-2 01-2119463273-41	10- 20 %	Asp. Tox. 1, H304 STOT SE 3, H336 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Flam. Liq. 2, H225 Skin Irrit. 2, H315	M acute = 1 M chronic = 1	EU OEL
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics 64742-49-0 927-510-4 01-2119475515-33	5- < 10 %	Aquatic Chronic 2, H411 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Flam. Liq. 2, H225 STOT SE 3, H336	inhalation:ATE = 23,31 mg/l;vapour	
Butanone 78-93-3 201-159-0 01-2119457290-43	5- < 10 %	STOT SE 3, H336 Eye Irrit. 2, H319 Flam. Liq. 2, H225		EU OEL
Hydrocarbons, C6, isoalkanes, < 5% n-hexane 64742-49-0 931-254-9 01-2119484651-34	1- < 5 %	Skin Irrit. 2, H315 Flam. Liq. 2, H225 Asp. Tox. 1, H304 STOT SE 3, H336 Aquatic Chronic 2, H411		
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n- hexane 92128-66-0 926-605-8 01-2119486291-36	0,25- < 2,5 %	Flam. Liq. 2, H225 Asp. Tox. 1, H304 STOT SE 3, H336 Aquatic Chronic 2, H411		
rosin 8050-09-7 232-475-7 01-2119480418-32	0,1- < 1 %	Skin Sens. 1, H317		
zinc oxide 1314-13-2 215-222-5 01-2119463881-32	0,25- < 2,5 %	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M acute = 1 M chronic = 1	
Bis(2-hydroxy-3-tert-butyl-5- methylphenyl)methane 119-47-1 204-327-1 01-2119496065-33	0,1- < 1 %	Repr. 1B, H360F		SVHC
Disulfiram 97-77-8 202-607-8	0,025- < 0,25 %	Acute Tox. 4, Oral, H302 Acute Tox. 4, Inhalation, H332 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 STOT RE 2, H373	M acute = 10 M chronic = 10 ===== oral:ATE = 1.861 mg/kg	

**For full text of the H - statements and other abbreviations see section 16 "Other information".**  
**Substances without classification may have community workplace exposure limits available.**

**SECTION 4: First aid measures****4.1. Description of first aid measures**

Inhalation:

Move to fresh air, consult doctor if complaint persists.

Skin contact:

IF ON SKIN: Wash with plenty of soap and water.

In case of adverse health effects seek medical advice.

Eye contact:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion:

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

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

EYE: Irritation, conjunctivitis.

Vapors may cause drowsiness and dizziness.

SKIN: Redness, inflammation.

An allergic reaction cannot be excluded after repeated skin contact.

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

See section: Description of first aid measures

**SECTION 5: Firefighting measures****5.1. Extinguishing media**

**Suitable extinguishing media:**

Carbon dioxide, foam, powder

**Extinguishing media which must not be used for safety reasons:**

Water jet (solvent-containing product).

**5.2. Special hazards arising from the substance or mixture**

In case of fire toxic gases can be released.

**5.3. Advice for firefighters**

Wear self-contained breathing apparatus.

Wear protective equipment.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Wear protective equipment.

Avoid contact with skin and eyes.

Keep unprotected persons away.

Danger of slipping on spilled product.

**6.2. Environmental precautions**

Do not empty into drains / surface water / ground water.

Inform authorities in the event of product spillage to water courses or sewage systems.

**6.3. Methods and material for containment and cleaning up**

Remove with liquid-absorbing material (sand, peat, sawdust).

Dispose of contaminated material as waste according to Section 13.

**6.4. Reference to other sections**

See advice in section 8

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

- Avoid open flames and sources of ignition.
- Ground/bond container and receiving equipment.
- Use explosion proof electric equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.

**Hygiene measures:**

- Do not eat, drink or smoke while working.
- Wash hands before work breaks and after finishing work.
- Take off contaminated clothing and wash before reuse.

**7.2. Conditions for safe storage, including any incompatibilities**

- Ensure good ventilation/extraction.
- Store in sealed original container protected against moisture and light.
- Store in a cool, dry place.
- Storage at 5 to 25°C is recommended.
- Do not store together with food or other consumables (coffee, tea, tobacco, etc.).

**7.3. Specific end use(s)**

Contact adhesive

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational Exposure Limits

Valid for  
Germany

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
Acetone 67-64-1 [ACETONE]	500	1.210	Time Weighted Average (TWA):	Indicative	ECTLV
Acetone 67-64-1	500	1.200	Exposure limit(s):	2 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
Acetone 67-64-1			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages.	TRGS 900
Ethyl acetate 141-78-6 [ETHYL ACETATE]	200	734	Time Weighted Average (TWA):	Indicative	ECTLV
Ethyl acetate 141-78-6 [ETHYL ACETATE]	400	1.468	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Ethyl acetate 141-78-6			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages.	TRGS 900
Ethyl acetate 141-78-6	200	730	Exposure limit(s):	2 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
Cyclohexane 110-82-7 [CYCLOHEXANE]	200	700	Time Weighted Average (TWA):	Indicative	ECTLV
Cyclohexane 110-82-7	200	700	Exposure limit(s):	4	TRGS 900
Cyclohexane 110-82-7			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Butanone 78-93-3 [BUTANONE]	200	600	Time Weighted Average (TWA):	Indicative	ECTLV
Butanone 78-93-3 [BUTANONE]	300	900	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Butanone 78-93-3			Skin designation:	Can be absorbed through the skin.	TRGS 900
Butanone 78-93-3	200	600	Exposure limit(s):	1 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
Butanone 78-93-3			Short Term Exposure Classification:	Category I: substances for which the localized effect has an assigned OEL or for substances with a sensitizing effect in respiratory passages.	TRGS 900
Zinc oxide 1314-13-2			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Zinc oxide 1314-13-2		1,25	Exposure limit(s):	If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see	TRGS 900

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				Number 2.7).	
Zinc oxide 1314-13-2		10	Exposure limit(s):	2 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
Disulfiram 97-77-8		2	Exposure limit(s):	8	TRGS 900
Disulfiram 97-77-8			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900

**Predicted No-Effect Concentration (PNEC):**

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
acetone 67-64-1	aqua (intermittent releases)		21 mg/l				
acetone 67-64-1	sewage treatment plant (STP)		100 mg/l				
acetone 67-64-1	sediment (freshwater)				30,4 mg/kg		
acetone 67-64-1	sediment (marine water)				3,04 mg/kg		
acetone 67-64-1	Soil				29,5 mg/kg		
acetone 67-64-1	aqua (freshwater)		10,6 mg/l				
acetone 67-64-1	aqua (marine water)		1,06 mg/l				
Ethyl acetate 141-78-6	aqua (freshwater)		0,24 mg/l				
Ethyl acetate 141-78-6	aqua (marine water)		0,024 mg/l				
Ethyl acetate 141-78-6	aqua (intermittent releases)		1,65 mg/l				
Ethyl acetate 141-78-6	sewage treatment plant (STP)		650 mg/l				
Ethyl acetate 141-78-6	sediment (freshwater)				1,15 mg/kg		
Ethyl acetate 141-78-6	sediment (marine water)				0,115 mg/kg		
Ethyl acetate 141-78-6	Air						no hazard identified
Ethyl acetate 141-78-6	Soil				0,148 mg/kg		
Ethyl acetate 141-78-6	oral				200 mg/kg		
cyclohexane 110-82-7	aqua (freshwater)		0,207 mg/l				
cyclohexane 110-82-7	aqua (marine water)		0,207 mg/l				
cyclohexane 110-82-7	aqua (intermittent releases)		0,207 mg/l				
cyclohexane 110-82-7	sediment (freshwater)				16,68 mg/kg		
cyclohexane 110-82-7	sediment (marine water)				16,68 mg/kg		
cyclohexane 110-82-7	Soil				3,38 mg/kg		
cyclohexane 110-82-7	sewage treatment plant (STP)		3,24 mg/l				
cyclohexane 110-82-7	Air						
cyclohexane 110-82-7	Predator						no potential for bioaccumulation
Butanone 78-93-3	aqua (freshwater)		55,8 mg/l				
Butanone 78-93-3	aqua (marine water)		55,8 mg/l				
Butanone 78-93-3	aqua (intermittent releases)		55,8 mg/l				
Butanone 78-93-3	sewage treatment plant (STP)		709 mg/l				
Butanone 78-93-3	sediment (freshwater)				284,74 mg/kg		
Butanone	sediment				284,7		



78-93-3	(marine water)				mg/kg		
Butanone 78-93-3	Soil				22,5 mg/kg		
Butanone 78-93-3	oral				1000 mg/kg		
rosin 8050-09-7	aqua (freshwater)		0,002 mg/l				
rosin 8050-09-7	aqua (marine water)		0,0002 mg/l				
rosin 8050-09-7	sediment (freshwater)				0,007 mg/kg		
rosin 8050-09-7	sediment (marine water)				0,001 mg/kg		
rosin 8050-09-7	Soil				0 mg/kg		
rosin 8050-09-7	sewage treatment plant (STP)		1000 mg/l				
rosin 8050-09-7	aqua (intermittent releases)		0,016 mg/l				
zinc oxide 1314-13-2	aqua (freshwater)		14,4 µg/l				
zinc oxide 1314-13-2	aqua (marine water)		7,2 µg/l				
zinc oxide 1314-13-2	sewage treatment plant (STP)		100 µg/l				
zinc oxide 1314-13-2	sediment (freshwater)				146,9 mg/kg		
zinc oxide 1314-13-2	sediment (marine water)				162,2 mg/kg		
zinc oxide 1314-13-2	Soil				83,1 mg/kg		
Bis(2-hydroxy-3-tert-butyl-5- methylphenyl)methane 119-47-1	oral				10 mg/kg		

**Derived No-Effect Level (DNEL):**

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
acetone 67-64-1	Workers	Inhalation	Acute/short term exposure - local effects		2420 mg/m3	
acetone 67-64-1	Workers	dermal	Long term exposure - systemic effects		186 mg/kg	
acetone 67-64-1	Workers	Inhalation	Long term exposure - systemic effects		1210 mg/m3	
acetone 67-64-1	General population	dermal	Long term exposure - systemic effects		62 mg/kg	
acetone 67-64-1	General population	Inhalation	Long term exposure - systemic effects		200 mg/m3	
acetone 67-64-1	General population	oral	Long term exposure - systemic effects		62 mg/kg	
Ethyl acetate 141-78-6	Workers	inhalation	Acute/short term exposure - systemic effects		1468 mg/m3	no hazard identified
Ethyl acetate 141-78-6	Workers	inhalation	Acute/short term exposure - local effects		1468 mg/m3	no hazard identified
Ethyl acetate 141-78-6	Workers	dermal	Long term exposure - systemic effects		63 mg/kg	no hazard identified
Ethyl acetate 141-78-6	Workers	inhalation	Long term exposure - systemic effects		734 mg/m3	no hazard identified
Ethyl acetate 141-78-6	Workers	inhalation	Long term exposure - local effects		734 mg/m3	no hazard identified
Ethyl acetate 141-78-6	General population	Inhalation	Acute/short term exposure - systemic effects		734 mg/m3	no hazard identified
Ethyl acetate 141-78-6	General population	inhalation	Acute/short term exposure - local effects		734 mg/m3	no hazard identified
Ethyl acetate 141-78-6	General population	dermal	Long term exposure - systemic effects		37 mg/kg	no hazard identified
Ethyl acetate 141-78-6	General population	inhalation	Long term exposure - systemic effects		367 mg/m3	no hazard identified
Ethyl acetate 141-78-6	General population	oral	Long term exposure - systemic effects		4,5 mg/kg	no hazard identified
Ethyl acetate 141-78-6	General population	inhalation	Long term exposure - local effects		367 mg/m3	no hazard identified
cyclohexane 110-82-7	Workers	inhalation	Acute/short term exposure - local effects		700 mg/m3	no potential for bioaccumulation
cyclohexane 110-82-7	Workers	inhalation	Acute/short term exposure - systemic effects		700 mg/m3	no potential for bioaccumulation
cyclohexane 110-82-7	Workers	inhalation	Long term exposure - systemic effects		700 mg/m3	no potential for bioaccumulation
cyclohexane 110-82-7	Workers	inhalation	Long term exposure - local effects		700 mg/m3	no potential for bioaccumulation
cyclohexane 110-82-7	Workers	dermal	Long term exposure - systemic effects		2016 mg/kg	no potential for bioaccumulation
cyclohexane 110-82-7	General population	inhalation	Acute/short term exposure - systemic effects		412 mg/m3	no potential for bioaccumulation
cyclohexane 110-82-7	General population	inhalation	Acute/short term exposure - local effects		412 mg/m3	no potential for bioaccumulation

			effects			
cyclohexane 110-82-7	General population	dermal	Long term exposure - systemic effects		1186 mg/kg	no potential for bioaccumulation
cyclohexane 110-82-7	General population	oral	Long term exposure - systemic effects		59,4 mg/kg	no potential for bioaccumulation
cyclohexane 110-82-7	General population	inhalation	Long term exposure - systemic effects		206 mg/m3	no potential for bioaccumulation
cyclohexane 110-82-7	General population	inhalation	Long term exposure - local effects		206 mg/m3	no potential for bioaccumulation
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics 64742-49-0	Workers	dermal	Long term exposure - systemic effects		300 mg/kg	
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics 64742-49-0	Workers	inhalation	Long term exposure - systemic effects		2085 mg/m3	
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics 64742-49-0	General population	dermal	Long term exposure - systemic effects		149 mg/kg	
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics 64742-49-0	General population	inhalation	Long term exposure - systemic effects		447 mg/m3	
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics 64742-49-0	General population	oral	Long term exposure - systemic effects		149 mg/kg	
Butanone 78-93-3	Workers	dermal	Long term exposure - systemic effects		1161 mg/kg	
Butanone 78-93-3	Workers	inhalation	Long term exposure - systemic effects		600 mg/m3	
Butanone 78-93-3	General population	dermal	Long term exposure - systemic effects		412 mg/kg	
Butanone 78-93-3	General population	inhalation	Long term exposure - systemic effects		106 mg/m3	
Butanone 78-93-3	General population	oral	Long term exposure - systemic effects		31 mg/kg	
Hydrocarbons, C6, isoalkanes, < 5% n-hexane 64742-49-0	Workers	inhalation	Long term exposure - systemic effects		5306 mg/m3	
Hydrocarbons, C6, isoalkanes, < 5% n-hexane 64742-49-0	Workers	dermal	Long term exposure - systemic effects		13964 mg/kg	
Hydrocarbons, C6, isoalkanes, < 5% n-hexane 64742-49-0	General population	inhalation	Long term exposure - systemic effects		1131 mg/m3	
Hydrocarbons, C6, isoalkanes, < 5% n-hexane 64742-49-0	General population	dermal	Long term exposure - systemic effects		1377 mg/kg	
Hydrocarbons, C6, isoalkanes, < 5% n-hexane 64742-49-0	General population	oral	Long term exposure - systemic effects		1301 mg/kg	
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane 92128-66-0	Workers	dermal	Long term exposure - systemic effects		13964 mg/kg	
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane 92128-66-0	Workers	inhalation	Long term exposure - systemic effects		5306 mg/m3	
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane 92128-66-0	General population	dermal	Long term exposure - systemic effects		1377 mg/kg	
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane 92128-66-0	General population	inhalation	Long term exposure - systemic effects		1131 mg/m3	
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane 92128-66-0	General population	oral	Long term exposure - systemic effects		1301 mg/kg	
rosin 8050-09-7	Workers	inhalation	Long term exposure - local effects		10 mg/m3	

rosin 8050-09-7	Workers	dermal	Long term exposure - systemic effects		2,131 mg/kg	
rosin 8050-09-7	General population	dermal	Long term exposure - systemic effects		1,065 mg/kg	
rosin 8050-09-7	General population	oral	Long term exposure - systemic effects		1,065 mg/kg	
zinc oxide 1314-13-2	Workers	Inhalation	Long term exposure - systemic effects		5 mg/m3	
zinc oxide 1314-13-2	Workers	dermal	Long term exposure - systemic effects		83 mg/kg	
zinc oxide 1314-13-2	Workers	inhalation	Long term exposure - local effects		0,5 mg/m3	
zinc oxide 1314-13-2	General population	Inhalation	Long term exposure - systemic effects		2,5 mg/m3	
zinc oxide 1314-13-2	General population	dermal	Long term exposure - systemic effects		83 mg/kg	
zinc oxide 1314-13-2	General population	oral	Long term exposure - systemic effects		0,83 mg/kg	
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	Workers	inhalation	Long term exposure - systemic effects		1,25 mg/m3	
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	Workers	inhalation	Acute/short term exposure - systemic effects		6,25 mg/m3	
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	Workers	dermal	Long term exposure - systemic effects		0,36 mg/kg	
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	Workers	dermal	Acute/short term exposure - systemic effects		1,8 mg/kg	
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	General population	inhalation	Long term exposure - systemic effects		0,22 mg/m3	
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	General population	inhalation	Acute/short term exposure - systemic effects		1,1 mg/m3	
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	General population	dermal	Long term exposure - systemic effects		0,13 mg/kg	
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	General population	dermal	Acute/short term exposure - systemic effects		0,65 mg/kg	
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	General population	oral	Long term exposure - systemic effects		0,13 mg/kg	
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	General population	oral	Acute/short term exposure - systemic effects		0,65 mg/kg	

**Biological Exposure Indices:**

Ingredient [Regulated substance]	Parameters	Biological specimen	Sampling time	Conc.	Basis of biol. exposure index	Remark	Additional Information
Acetone 67-64-1	acetone	Urine	Sampling time: End of shift.	80 mg/l	DE BGW		
Cyclohexane 110-82-7	1,2-Cyclohexane diol, with hydrolysis	Creatinine in urine	Sampling time period is for long-term exposures, at the end of the shift after several preceding ones./ Sampling time period is at end of exposure or at end of shift.	150 mg/g	DE BGW		
Butanone 78-93-3 [2-Butanone; Methyl ethyl ketone]	2-butanone	Urine	Sampling time: End of shift.	2 mg/l	DE BGW		

**8.2. Exposure controls:**

Engineering controls:

Use only in well ventilated areas.

Respiratory protection:

In case of aerosol formation, we recommend wearing of appropriate respiratory protection equipment with ABEK P2 filter (EN 14387).

This recommendation should be matched to local conditions.

Hand protection:

Chemical-resistant protective gloves (EN 374). Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374): Isobutylene-isoprene rubber (IIR;  $\geq 0.7$  mm thickness) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Isobutylene-isoprene rubber (IIR;  $\geq 0.7$  mm thickness) This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:

Goggles which can be tightly sealed.

Protective eye equipment should conform to EN166.

Skin protection:

Wear protective equipment.

Protective clothing that covers arms and legs.

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

Use only personal protection that's CE-labelled according to Directive 89/686/EEC (Europe) or to Regulation No. 819 of 19 August 1994 (Norway), or equivalent.

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions.

Personal protective equipment should conform to the relevant EN standard.

## SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties**

Delivery form	liquid
Colour	beige
Odor	of solvent
Physical state	liquid
Melting point	Not applicable, Product is a liquid
Solidification temperature	< 5 °C (< 41 °F)
Initial boiling point	60 °C (140 °F)
Flammability	Flammable liquid
Explosive limits	
lower	0,83 %(V);

Flash point	Upper explosion limit not applicable for safe processing practices. < 0 °C (< 32 °F)
Auto-ignition temperature	> 200 °C (> 392 °F)
Decomposition temperature	Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use
pH	Not applicable, Product is non-soluble (in water).
Viscosity (kinematic) (40 °C (104 °F); )	320 mm <sup>2</sup> /s
Viscosity, dynamic (Drage-Epprecht (rotary viscosity); 20 °C (68 °F); Rotary measuring system: MK2; Conc.: 100 % product)	140 - 300 mPa.s CP06; Viscosity by Epprecht
Flow cup viscosity (23 °C (73.4 °F); Type of cup: ISO cup; Nozzle: 3 mm; Conc.: 100 % product DIN EN ISO 2431; QP2017.1, QP1580.0; Running out time with flow cups)	> 3 min DIN EN ISO 2431 Running out time with flow cups
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Not miscible or difficult to mix
Partition coefficient: n-octanol/water	Not applicable
Vapour pressure (20 °C (68 °F))	Mixture 220 hPa
Vapour pressure (50 °C (122 °F))	720 hPa
Density (20 °C (68 °F))	0,84 g/cm <sup>3</sup>
Relative vapour density: (20 °C)	> 1
Particle characteristics	Not applicable Product is a liquid

## 9.2. Other information

Other information not applicable for this product

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Oxidizers.

### 10.2. Chemical stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

See section reactivity

### 10.4. Conditions to avoid

Heat, flames, sparks and other sources of ignition.

### 10.5. Incompatible materials

See section reactivity.

### 10.6. Hazardous decomposition products

No decomposition if used according to specifications.

## SECTION 11: Toxicological information

### General toxicological information:

An allergic reaction cannot be excluded after repeated skin contact.

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

#### Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
acetone 67-64-1	LD50	5.800 mg/kg	rat	not specified
Ethyl acetate 141-78-6	LD50	6.100 mg/kg	rat	not specified
cyclohexane 110-82-7	LD50	> 5.000 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics 64742-49-0	LD50	> 5.840 mg/kg	rat	not specified
Butanone 78-93-3	LD50	2.737 mg/kg	rat	not specified
Hydrocarbons, C6, isoalkanes, < 5% n-hexane 64742-49-0	LD50	> 16.750 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane 92128-66-0	LD50	> 16.750 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
rosin 8050-09-7	LD50	2.800 mg/kg	rat	not specified
zinc oxide 1314-13-2	LD50	> 5.000 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	LD50	> 10.000 mg/kg	rat	not specified
Disulfiram 97-77-8	LD50	> 1.860 mg/kg	rat	not specified
Disulfiram 97-77-8	Acute toxicity estimate (ATE)	1.861 mg/kg		Expert judgement

**Acute dermal toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

<b>Hazardous substances CAS-No.</b>	<b>Value type</b>	<b>Value</b>	<b>Species</b>	<b>Method</b>
acetone 67-64-1	LD50	> 15.688 mg/kg	rabbit	Draize Test
Ethyl acetate 141-78-6	LD50	> 20.000 mg/kg	rabbit	Draize Test
cyclohexane 110-82-7	LD50	> 2.000 mg/kg	rabbit	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics 64742-49-0	LD50	> 2.800 mg/kg	rat	other guideline:
Butanone 78-93-3	LD50	> 6.400 mg/kg	rabbit	not specified
Hydrocarbons, C6, isoalkanes, < 5% n-hexane 64742-49-0	LD50	> 3.350 mg/kg	rabbit	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane 92128-66-0	LD50	> 3.350 mg/kg	rabbit	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
rosin 8050-09-7	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
zinc oxide 1314-13-2	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	LD50	> 10.000 mg/kg	rat	not specified
Disulfiram 97-77-8	LD50	> 2.000 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)



**Acute inhalative toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Test atmosphere	Exposure time	Species	Method
acetone 67-64-1	LC50	76 mg/l	vapour	4 h	rat	not specified
Ethyl acetate 141-78-6	LC0	> 22,5 mg/l	dust/mist	6 h	rat	other guideline:
Ethyl acetate 141-78-6	LC50	> 22,5 mg/l	dust/mist	6 h	rat	other guideline:
cyclohexane 110-82-7	LC50	> 32,880 mg/l	vapour	4 h	rat	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
Hydrocarbons, C7, n- alkanes, isoalkanes, cyclics 64742-49-0	LC50	> 23,3 mg/l	vapour	4 h	rat	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
Hydrocarbons, C7, n- alkanes, isoalkanes, cyclics 64742-49-0	Acute toxicity estimate (ATE)	23,31 mg/l	vapour			Expert judgement
Butanone 78-93-3	LC50	34,5 mg/l	vapour	4 h	rat	not specified
Hydrocarbons, C6, isoalkanes, < 5% n- hexane 64742-49-0	LC50	259,354 mg/l	vapour	4 h	rat	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane 92128-66-0	LC50	259,354 mg/l	vapour	4 h	rat	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
zinc oxide 1314-13-2	LC50	> 5,7 mg/l	dust/mist	4 h	rat	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
Disulfiram 97-77-8	LC50	3,464 mg/l	dust/mist	4 h	rat	EPA OPP 81-3 (Acute inhalation toxicity)

**Skin corrosion/irritation:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
acetone 67-64-1	not irritating		guinea pig	not specified
Ethyl acetate 141-78-6	slightly irritating	24 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Hydrocarbons, C7, n- alkanes, isoalkanes, cyclics 64742-49-0	irritating	4 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Butanone 78-93-3	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane 92128-66-0	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
rosin 8050-09-7	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
zinc oxide 1314-13-2	not irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

**Serious eye damage/irritation:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
acetone 67-64-1	irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Ethyl acetate 141-78-6	slightly irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
cyclohexane 110-82-7	slightly irritating		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Hydrocarbons, C7, n- alkanes, isoalkanes, cyclics 64742-49-0	not irritating		rabbit	FDA Guideline
Butanone 78-93-3	irritating		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Hydrocarbons, C6, isoalkanes, < 5% n- hexane 64742-49-0	not irritating		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane 92128-66-0	not irritating		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
rosin 8050-09-7	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
zinc oxide 1314-13-2	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

**Respiratory or skin sensitization:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
acetone 67-64-1	not sensitising	Guinea pig maximisation test	guinea pig	not specified
Ethyl acetate 141-78-6	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
cyclohexane 110-82-7	not sensitising	Buehler test	guinea pig	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
Hydrocarbons, C7, n- alkanes, isoalkanes, cyclics 64742-49-0	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Butanone 78-93-3	not sensitising	Buehler test	guinea pig	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
Hydrocarbons, C6, isoalkanes, < 5% n- hexane 64742-49-0	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane 92128-66-0	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
zinc oxide 1314-13-2	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

**Germ cell mutagenicity:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

<b>Hazardous substances CAS-No.</b>	<b>Result</b>	<b>Type of study / Route of administration</b>	<b>Metabolic activation / Exposure time</b>	<b>Species</b>	<b>Method</b>
acetone 67-64-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
acetone 67-64-1	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
acetone 67-64-1	negative	mammalian cell gene mutation assay	without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Ethyl acetate 141-78-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Ethyl acetate 141-78-6	negative	in vitro mammalian chromosome aberration test	with and without		equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
cyclohexane 110-82-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
cyclohexane 110-82-7	negative	mammalian cell gene mutation assay	with and without		equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Butanone 78-93-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Butanone 78-93-3	negative	in vitro mammalian chromosome aberration test	not applicable		equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Butanone 78-93-3	negative	mammalian cell gene mutation assay	with and without		equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Hydrocarbons, C6, isoalkanes, < 5% n- hexane 64742-49-0	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Hydrocarbons, C6, isoalkanes, < 5% n- hexane 64742-49-0	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Hydrocarbons, C6, isoalkanes, < 5% n- hexane 64742-49-0	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
rosin 8050-09-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
zinc oxide 1314-13-2	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
zinc oxide 1314-13-2	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
zinc oxide 1314-13-2	ambiguous	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Bis(2-hydroxy-3-tert- butyl-5- methylphenyl)methane 119-47-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)

**Carcinogenicity**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
acetone 67-64-1	not carcinogenic	dermal	424 d 3 times per week	mouse	female	not specified
Hydrocarbons, C6, isoalkanes, < 5% n- hexane 64742-49-0	not carcinogenic	inhalation: vapour	2 years 6 h/d, 5d/week	rat	male/female	equivalent or similar OECD Guideline 451 (Carcinogenicity Studies)
zinc oxide 1314-13-2	not carcinogenic	oral: drinking water	1 y daily	mouse	male/female	not specified

**Reproductive toxicity:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
Ethyl acetate 141-78-6	NOAEL P 1500 ppm	other:	inhalation	rat	other guideline:
cyclohexane 110-82-7	NOAEL F1 7000 ppm	two- generation study	inhalation: vapour	rat	equivalent or similar to OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
Butanone 78-93-3	NOAEL P 10.000 mg/l NOAEL F1 10.000 mg/l	two- generation study	oral: drinking water	rat	equivalent or similar to OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
zinc oxide 1314-13-2	NOAEL P 7,5 mg/kg NOAEL F1 15 mg/kg	Two generation study	oral: gavage	rat	equivalent or similar to OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
Bis(2-hydroxy-3-tert- butyl-5- methylphenyl)methane 119-47-1	NOAEL P 12,5 mg/kg	screening	oral: gavage	rat	OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)

**STOT-single exposure:**

No data available.

**STOT-repeated exposure:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
acetone 67-64-1	NOAEL 900 mg/kg	oral: drinking water	13 w daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Ethyl acetate 141-78-6	NOAEL 900 mg/kg	oral: gavage	90 d daily	rat	EPA OTS 795.2600 (Subchronic Oral Toxicity Test)
cyclohexane 110-82-7		inhalation: vapour	13-14 w 6 h/d, 5 d/w	mouse	EPA OPPTS 870.3465 (90-Day Inhalation Toxicity)
Butanone 78-93-3	NOAEL 2500 ppm	inhalation	90 days 6 hours/day, 5 days/week	rat	not specified
Hydrocarbons, C6, isoalkanes, < 5% n- hexane 64742-49-0	NOAEL 10,504 mg/l	inhalation: vapour	13 weeks 6 h/d, 5 d/week	rat	equivalent or similar to OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
zinc oxide 1314-13-2	NOAEL 31,52 mg/kg	oral: feed	13 w daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
zinc oxide 1314-13-2	NOAEL 1.5 mg/m <sup>3</sup>	inhalation	3 m 6 h/d, 5 d/w	rat	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
Disulfiram 97-77-8	NOAEL 0,84 mg/kg	oral: feed	52 weeks daily	dog	EPA OPP 83-1 (Chronic Toxicity)

**Aspiration hazard:**

The mixture is classified based on Viscosity data.

Hazardous substances CAS-No.	Viscosity (kinematic) Value	Temperature	Method	Remarks
cyclohexane 110-82-7	0,41 mm <sup>2</sup> /s	40 °C	not specified	
Butanone 78-93-3	0,51 mm <sup>2</sup> /s	20 °C	ASTM Standard D7042	

**11.2 Information on other hazards**

not applicable

## SECTION 12: Ecological information

### General ecological information:

Do not empty into drains, soil or bodies of water.

### 12.1. Toxicity

#### Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
acetone 67-64-1	LC50	8.120 mg/l	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
Ethyl acetate 141-78-6	LC50	220 mg/l	96 h	Pimephales promelas	other guideline:
cyclohexane 110-82-7	LC50	4,53 mg/l	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics 64742-49-0	LL50	8,2 mg/l	96 h	Pimephales promelas	EPA-660 (Methods for Acute Toxicity Tests with Fish, Macroinvertebrates and Amphibians)
Butanone 78-93-3	LC50	3.220 mg/l	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hydrocarbons, C6, isoalkanes, < 5% n-hexane 64742-49-0	LL50	18,27 mg/l	96 h	Oncorhynchus mykiss	QSAR (Quantitative Structure Activity Relationship)
Hydrocarbons, C6, isoalkanes, < 5% n-hexane 64742-49-0	NOELR	4,089 mg/l	28 d	Oncorhynchus mykiss	QSAR (Quantitative Structure Activity Relationship)
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane 92128-66-0	LL50	12 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
rosin 8050-09-7	LC50	Toxicity > Water solubility	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
zinc oxide 1314-13-2	LC50	0,142 mg/l	96 h	Thymallus arcticus	OECD Guideline 203 (Fish, Acute Toxicity Test)
zinc oxide 1314-13-2	NOEC	0,44 mg/l	72 d	Oncorhynchus mykiss	other guideline:
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	LC50	Toxicity > Water solubility	96 h	Oryzias latipes	OECD Guideline 203 (Fish, Acute Toxicity Test)
Disulfiram 97-77-8	NOEC	0,0032 mg/l	10 d	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 210 (fish early life stage toxicity test)
Disulfiram 97-77-8	LC50	0,067 mg/l	96 h	Lepomis macrochirus	

#### Toxicity (aquatic invertebrates):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
acetone 67-64-1	EC50	8.800 mg/l	48 h	Daphnia pulex	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Ethyl acetate 141-78-6	EC50	164 mg/l	48 h	Daphnia cucullata	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
cyclohexane 110-82-7	EC50	0,9 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics 64742-49-0	EL50	4,5 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Butanone	EC50	5.091 mg/l	48 h	Daphnia magna	OECD Guideline 202

78-93-3					(Daphnia sp. Acute Immobilisation Test)
Hydrocarbons, C6, isoalkanes, < 5% n-hexane 64742-49-0	EL50	31,9 mg/l	48 h	Daphnia magna	QSAR (Quantitative Structure Activity Relationship)
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane 92128-66-0	EL50	3 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
rosin 8050-09-7	EL50	Toxicity > Water solubility	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
zinc oxide 1314-13-2	EC50	1 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	EC50	Toxicity > Water solubility	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Disulfiram 97-77-8	EC50	0,24 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

**Chronic toxicity (aquatic invertebrates):**

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
acetone 67-64-1	NOEC	2.212 mg/l	28 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Ethyl acetate 141-78-6	NOEC	2,4 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics 64742-49-0	NOELR	2,6 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Hydrocarbons, C6, isoalkanes, < 5% n-hexane 64742-49-0	NOELR	7,138 mg/l	21 d	Daphnia magna	QSAR (Quantitative Structure Activity Relationship)
zinc oxide 1314-13-2	NOEC	0,058 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	NOEC	Toxicity > Water solubility	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

**Toxicity (Algae):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
acetone 67-64-1	NOEC	530 mg/l	8 d	Microcystis aeruginosa	DIN 38412-09
Ethyl acetate 141-78-6	EC50	> 2.000 mg/l	96 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Ethyl acetate 141-78-6	NOEC	2.000 mg/l	96 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
cyclohexane 110-82-7	EC50	9,317 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
cyclohexane 110-82-7	NOEC	0,95 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics 64742-49-0	EL50	3,1 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics 64742-49-0	NOELR	0,5 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Butanone 78-93-3	EC50	1.240 mg/l	96 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Butanone 78-93-3	EC10	1.010 mg/l	96 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydrocarbons, C6, isoalkanes, < 5% n-hexane 64742-49-0	NOELR	3,034 mg/l	72 h	Scenedesmus capricornutum	QSAR (Quantitative Structure Activity Relationship)
Hydrocarbons, C6, isoalkanes, < 5% n-hexane 64742-49-0	EL50	13,56 mg/l	72 h	Scenedesmus capricornutum	QSAR (Quantitative Structure Activity Relationship)
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane 92128-66-0	EL50	55 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane 92128-66-0	NOEL	30 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
rosin 8050-09-7	EL50	Toxicity > Water solubility	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
rosin 8050-09-7	NOELR	Toxicity > Water solubility	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
zinc oxide 1314-13-2	NOEC	0,017 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
zinc oxide 1314-13-2	EC50	0,17 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	EC50	Toxicity > Water solubility	72 h	Pseudokirchneriella subcapitata (reported as Selenastrum capricornutum)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	NOEC	Toxicity > Water solubility	72 h	Pseudokirchneriella subcapitata (reported as Selenastrum capricornutum)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Disulfiram 97-77-8	EC50	1,8 mg/l	96 h	Chlorella pyrenoidosa	OECD Guideline 201 (Alga, Growth Inhibition Test)

#### Toxicity (microorganisms):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
acetone 67-64-1	EC10	1.000 mg/l	30 min	Pseudomonas putida	DIN 38412, part 27 (Bacterial oxygen consumption test)
Ethyl acetate	EC10	2.900 mg/l	18 h	Pseudomonas putida	DIN 38412, part 8



141-78-6					(Pseudomonas Zellvermehrungshemm-Test)
cyclohexane 110-82-7	IC50	29 mg/l	15 h	other:	not specified
Butanone 78-93-3	EC50	1.150 mg/l	16 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm-Test)
Hydrocarbons, C6, isoalkanes, < 5% n-hexane 64742-49-0	NOEC	15,81 mg/l	48 h	Ciliate (Tetrahymena pyriformis)	QSAR (Quantitative Structure Activity Relationship)
rosin 8050-09-7	EC20	Toxicity > Water solubility	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
zinc oxide 1314-13-2	IC50	5,2 mg/l	3 h	not specified	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	EC50	Toxicity > Water solubility	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

## 12.2. Persistence and degradability

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
acetone 67-64-1	readily biodegradable	aerobic	81 - 92 %	30 d	EU Method C.4-E (Determination of the "Ready" Biodegradability Closed Bottle Test)
Ethyl acetate 141-78-6	readily biodegradable	aerobic	100 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
cyclohexane 110-82-7	readily biodegradable	aerobic	77 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics 64742-49-0	readily biodegradable	aerobic	77,05 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Butanone 78-93-3	readily biodegradable	aerobic	98 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Hydrocarbons, C6, isoalkanes, < 5% n-hexane 64742-49-0	readily biodegradable	aerobic	98 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane 92128-66-0	readily biodegradable	aerobic	98 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
rosin 8050-09-7	readily biodegradable	aerobic	71 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	under test conditions no biodegradation observed	aerobic	0 %	28 d	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
Disulfiram 97-77-8		aerobic	20 - 40 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

## 12.3. Bioaccumulative potential

The table below presents the data of the classified substances present in the mixture.

<b>Hazardous substances CAS-No.</b>	<b>Bioconcentration factor (BCF)</b>	<b>Exposure time</b>	<b>Temperature</b>	<b>Species</b>	<b>Method</b>
Ethyl acetate 141-78-6	30	3 d	22,5 °C	Leuciscus idus melanotus	other guideline:
cyclohexane 110-82-7	167			Pimephales promelas	QSAR (Quantitative Structure Activity Relationship)
Hydrocarbons, C6, isoalkanes, < 5% n-hexane 64742-49-0	501			Pimephales promelas	QSAR (Quantitative Structure Activity Relationship)
Bis(2-hydroxy-3-tert-butyl-5- methylphenyl)methane 119-47-1	320 - 780	60 d		Cyprinus carpio	OECD Guideline 305 E (Bioaccumulation: Flow-through Fish Test)

**12.4. Mobility in soil**

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	LogPow	Temperature	Method
acetone 67-64-1	-0,24		OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Ethyl acetate 141-78-6	0,68	25 °C	EPA OPPTS 830.7560 (Partition Coefficient, n-octanol / H <sub>2</sub> O, Generator Column Method)
cyclohexane 110-82-7	3,44	25 °C	QSAR (Quantitative Structure Activity Relationship)
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics 64742-49-0	4,66		EU Method A.8 (Partition Coefficient)
Butanone 78-93-3	0,3	40 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Hydrocarbons, C6, isoalkanes, < 5% n-hexane 64742-49-0	3,6	20 °C	other guideline:
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane 92128-66-0	3,6	20 °C	other guideline:
rosin 8050-09-7	> 3 - 6,2		OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	6,25	20 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Disulfiram 97-77-8	3,88		not specified

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

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	PBT / vPvB
acetone 67-64-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Ethyl acetate 141-78-6	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
cyclohexane 110-82-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics 64742-49-0	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Butanone 78-93-3	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Hydrocarbons, C6, isoalkanes, < 5% n-hexane 64742-49-0	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane 92128-66-0	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
rosin 8050-09-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
zinc oxide 1314-13-2	According to Annex XIII of regulation (EC) 1907/2006 a PBT and vPvB assessment shall not be conducted for inorganic substances.
Bis(2-hydroxy-3-tert-butyl-5-methylphenyl)methane 119-47-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

**12.6. Endocrine disrupting properties**

not applicable

**12.7. Other adverse effects**

No data available.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

Product disposal:

In consultation with the responsible local authority, must be subjected to special treatment.

Waste code

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

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## SECTION 14: Transport information

### 14.1. UN number or ID number

ADR	1133
RID	1133
ADN	1133
IMDG	1133
IATA	1133

### 14.2. UN proper shipping name

ADR	ADHESIVES
RID	ADHESIVES
ADN	ADHESIVES
IMDG	ADHESIVES (Cyclohexane)
IATA	Adhesives

### 14.3. Transport hazard class(es)

ADR	3
RID	3
ADN	3
IMDG	3
IATA	3

### 14.4. Packing group

ADR	II
RID	II
ADN	II
IMDG	II
IATA	II

### 14.5. Environmental hazards

ADR	Environmentally Hazardous
RID	Environmentally Hazardous
ADN	Environmentally Hazardous
IMDG	Marine pollutant
IATA	not applicable

### 14.6. Special precautions for user

ADR	Special provision 640D Tunnelcode: (D/E)
RID	Special provision 640D
ADN	Special provision 640D
IMDG	not applicable
IATA	not applicable

### 14.7. Maritime transport in bulk according to IMO instruments

not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009):	Not applicable
Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):	Not applicable
Persistent organic pollutants (Regulation (EU) 2019/1021):	Not applicable
VOC content (2010/75/EU)	82,9 %

This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point. Please see [https://ec.europa.eu/home-affairs/what-we-do/policies/counter-terrorism/protection/implementation-explosives-precursors-legislation\\_en](https://ec.europa.eu/home-affairs/what-we-do/policies/counter-terrorism/protection/implementation-explosives-precursors-legislation_en).

**15.2. Chemical safety assessment**

A chemical safety assessment has not been carried out.

**National regulations/information (Germany):**

WGK: WGK 2: significantly water endangering (Ordinance on facilities for handling substances that are hazardous to water (AwSV) )  
Classification according to AwSV, Annex 1 (5.2)

BG regulations, rules, infos:

BG data sheet: BGI 621 Solvents

Storage class according to TRGS 510: 3

**SECTION 16: Other information**

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H225 Highly flammable liquid and vapour.  
H302 Harmful if swallowed.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H336 May cause drowsiness or dizziness.  
H360F May damage fertility.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H411 Toxic to aquatic life with long lasting effects.

ED:	Substance identified as having endocrine disrupting properties
EU OEL:	Substance with a Union workplace exposure limit
EU EXPLD 1:	Substance listed in Annex I, Reg (EC) No. 2019/1148
EU EXPLD 2	Substance listed in Annex II, Reg (EC) No. 2019/1148
SVHC:	Substance of very high concern (REACH Candidate List)
PBT:	Substance fulfilling persistent, bioaccumulative and toxic criteria
PBT/vPvB:	Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria
vPvB:	Substance fulfilling very persistent and very bioaccumulative criteria

**Further information:**

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