



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

Page 1 of 30

BONDERITE S-OT 310B JC4KGENT AN

SDS No. : 326023
V008.1

Revision: 06.03.2023

printing date: 25.04.2024

Replaces version from: 21.08.2019

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

1.1. Product identifier

BONDERITE S-OT 310B JC4KGENT AN

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

Intended use:

Dry film lubricant

1.3. Details of the supplier of the safety data sheet

Henkel Ltd

Adhesives

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000

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

SDSinfo.Adhesive@henkel.com

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 0 8701 906777 - For further general health & safety, technical and practical advice on this product, please call +44 (0) 1606 593933 or write to: Technical Services; Henkel Limited; Road 5; Winsford Industrial Estate; Winsford; Cheshire; CW7 3QY- Email: technical.services@henkel.co.uk

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 damage	Category 1
H318 Causes serious eye damage.	
Germ cell mutagenicity	Category 2
H341 Suspected of causing genetic defects.	
Toxic to reproduction	Category 2
H361d Suspected of damaging the unborn child.	
Specific target organ toxicity - single exposure	Category 3
H336 May cause drowsiness or dizziness.	
Target organ: Central nervous system	
Specific target organ toxicity - single exposure	Category 3
H335 May cause respiratory irritation.	
Target organ: respiratory tract irritation	
Specific target organ toxicity - repeated exposure	Category 2
H373 May cause damage to organs through prolonged or repeated exposure.	
Chronic hazards to the aquatic environment	Category 3
H412 Harmful to aquatic life with long lasting effects.	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Contains

- Toluene

- 2-methoxy-1-methylethyl acetate

- butan-1-ol

- phenol

Signal word:

Danger

Hazard statement:

- H225 Highly flammable liquid and vapour.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H341 Suspected of causing genetic defects.
- H361d Suspected of damaging the unborn child.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H412 Harmful to aquatic life with long lasting effects.

Supplemental information	Contains: Formaldehyde May produce an allergic reaction.
Precautionary statement: Prevention	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P260 Do not breathe mist/vapours. P280 Wear protective gloves/eye protection.
Precautionary statement: Response	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER or doctor. P308+P313 IF exposed or concerned: Get medical advice/attention. P370+P378 In case of fire: Use CO ₂ , dry chemical, or foam for extinction.
Precautionary statement: Storage	P403+P235 Store in a well-ventilated place. Keep cool.

2.3. Other hazards

None if used properly.

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:

Hazardous components CAS-No. EC Number REACH-Reg No.	Concentration	Classification	Specific Conc. Limits, M-factors and ATEs	Add. Information
Toluene 108-88-3 203-625-9 01-2119471310-51	20- 40 %	Flam. Liq. 2, H225 Repr. 2, H361d Asp. Tox. 1, H304 STOT RE 2, Inhalation, H373 Skin Irrit. 2, H315 STOT SE 3, Inhalation, H336 Aquatic Chronic 3, H412		EU OEL
2-methoxy-1-methylethyl acetate 108-65-6 203-603-9 01-2119475791-29	20- 40 %	Flam. Liq. 3, H226 STOT SE 3, H336		EU OEL
butan-1-ol 71-36-3 200-751-6 01-2119484630-38	10- < 22 %	Flam. Liq. 3, H226 Acute Tox. 4, Oral, H302 STOT SE 3, H335 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H336		
Ethanol 64-17-5 200-578-6 01-2119457610-43	5- < 10 %	Eye Irrit. 2, H319 Flam. Liq. 2, H225	Eye Irrit. 2; H319; C >= 50 %	
pentyl acetate 628-63-7 211-047-3	1- < 5 %	Flam. Liq. 3, H226		EU OEL
phenol 108-95-2 203-632-7 01-2119471329-32	0,25- < 2,5 %	Muta. 2, H341 STOT RE 2, H373 Skin Corr. 1B, H314 Acute Tox. 3, Dermal, H311 Acute Tox. 3, Oral, H301 Acute Tox. 3, Inhalation, H331 Aquatic Chronic 2, H411	Skin Corr. 1B; H314; C >= 3 % Skin Irrit. 2; H315; C 1 - < 3 % Eye Irrit. 2; H319; C 1 - < 3 % ===== oral:ATE = 140 mg/kg inhalation:ATE = 1 mg/l;dust/mist	EU OEL
methanol 67-56-1 200-659-6 01-2119433307-44	0,1- < 1 %	Flam. Liq. 2, H225 Acute Tox. 3, Inhalation, H331 Acute Tox. 3, Dermal, H311 Acute Tox. 3, Oral, H301 STOT SE 1, H370	STOT SE 1; H370; C >= 10 % STOT SE 2; H371; C 3 - < 10 % ===== oral:ATE = 300 mg/kg	EU OEL
Formaldehyde 50-00-0 200-001-8 01-2119488953-20	0,02- < 0,1 %	Carc. 1B, H350 Muta. 2, H341 Acute Tox. 3, Dermal, H311 Acute Tox. 3, Inhalation, H331 Acute Tox. 3, Oral, H301 Skin Corr. 1B, H314 Skin Sens. 1, H317	Eye Irrit. 2; H319; C 5 - < 25 % Skin Sens. 1; H317; C >= 0,2 % STOT SE 3; H335; C >= 5 % Skin Corr. 1B; H314; C >= 25 % Skin Irrit. 2; H315; C 5 - < 25 % ===== oral:ATE = 100 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:

Fresh air, oxygen supply, warmth; seek specialist medical attention.

Skin contact:

IF ON SKIN: Wash with plenty of soap and water.
In case of adverse health effects seek medical advice.

Eye contact:

Immediately flush eyes with soft jet of water or eye rinse solution for at least 5 minutes. If pains remain (intensive smarting, sensitivity to light, visual disturbance) continue flushing and contact/seek doctor or hospital.

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

SKIN: Rash, Urticaria.

SKIN: Redness, inflammation.

Vapors may cause drowsiness and dizziness.

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

After eye contact: Corrosive, may cause permanent damage to eyes (impairment of vision).

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
Fine water spray

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

Formation of toxic gases is possible during heating or in fires.

5.3. Advice for firefighters

Wear protective equipment.
Wear self-contained breathing apparatus.

Additional information:

Cool endangered containers with water spray jet.

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

Avoid contact with skin and eyes.
Danger of slipping on spilled product.

6.2. Environmental precautions

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

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 skin and eye contact.
- Ensure that workrooms are adequately ventilated.
- See advice in section 8
- 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:

- Wash hands before work breaks and after finishing work.
- Do not eat, drink or smoke while working.
- Take off contaminated clothing and wash before reuse.
- The workplace should be equipped with an emergency shower and eye-rinsing facility.

7.2. Conditions for safe storage, including any incompatibilities

- Keep away from heat and direct sunlight.
- Store in a cool, well-ventilated place.
- Metal containers have to be grounded.
- Ensure adequate ventilation.
- Storage at 10 to 35°C is recommended.

7.3. Specific end use(s)

Dry film lubricant

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Great Britain

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Toluene 108-88-3 [TOLUENE]	50	191	Time Weighted Average (TWA):		EH40 WEL
Toluene 108-88-3 [TOLUENE]			Skin designation:	Can be absorbed through the skin.	EH40 WEL
Toluene 108-88-3 [TOLUENE]	50	192	Time Weighted Average (TWA):	Indicative	ECTLV
Toluene 108-88-3 [TOLUENE]	100	384	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Toluene 108-88-3 [TOLUENE]	100	384	Short Term Exposure Limit (STEL):	15 minutes	EH40 WEL
2-Methoxy-1-methylethyl acetate 108-65-6 [1-METHOXYPROPYL ACETATE]			Skin designation:	Can be absorbed through the skin.	EH40 WEL
2-Methoxy-1-methylethyl acetate 108-65-6 [1-METHOXYPROPYL ACETATE]	50	274	Time Weighted Average (TWA):		EH40 WEL
2-Methoxy-1-methylethyl acetate 108-65-6 [2-METHOXY-1-METHYLETHYLACETATE]	50	275	Time Weighted Average (TWA):	Indicative	ECTLV
2-Methoxy-1-methylethyl acetate 108-65-6 [2-METHOXY-1-METHYLETHYLACETATE]	100	550	Short Term Exposure Limit (STEL):	Indicative	ECTLV
2-Methoxy-1-methylethyl acetate 108-65-6 [1-METHOXYPROPYL ACETATE]	100	548	Short Term Exposure Limit (STEL):	15 minutes	EH40 WEL
Butan-1-ol 71-36-3 [BUTAN-1-OL]			Skin designation:	Can be absorbed through the skin.	EH40 WEL
Butan-1-ol 71-36-3 [BUTAN-1-OL]	50	154	Short Term Exposure Limit (STEL):	15 minutes	EH40 WEL
Ethanol 64-17-5 [ETHANOL]	1.000	1.920	Time Weighted Average (TWA):		EH40 WEL
Pentyl acetate 628-63-7 [PENTYL ACETATE (ALL ISOMERS)]	50	270	Time Weighted Average (TWA):		EH40 WEL
Pentyl acetate 628-63-7 [PENTYLACETATE]	50	270	Time Weighted Average (TWA):	Indicative	ECTLV
Pentyl acetate 628-63-7 [PENTYLACETATE]	100	540	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Pentyl acetate 628-63-7 [PENTYL ACETATE (ALL ISOMERS)]	100	541	Short Term Exposure Limit (STEL):	15 minutes	EH40 WEL
Phenol 108-95-2 [PHENOL]			Skin designation:	Can be absorbed through the skin.	EH40 WEL
Phenol 108-95-2 [PHENOL]	2	7,8	Time Weighted Average (TWA):		EH40 WEL
Phenol 108-95-2 [PHENOL]	2	8	Time Weighted Average (TWA):	Indicative	ECTLV

Phenol 108-95-2 [PHENOL]	4	16	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Phenol 108-95-2 [PHENOL]	4	16	Short Term Exposure Limit (STEL):	15 minutes	EH40 WEL
Methanol 67-56-1 [METHANOL]			Skin designation:	Can be absorbed through the skin.	EH40 WEL
Methanol 67-56-1 [METHANOL]	200	266	Time Weighted Average (TWA):		EH40 WEL
Methanol 67-56-1 [METHANOL]	200	260	Time Weighted Average (TWA):	Indicative	ECTLV
Methanol 67-56-1 [METHANOL]	250	333	Short Term Exposure Limit (STEL):	15 minutes	EH40 WEL
Formaldehyde 50-00-0 [Formaldehyde]	2	2,5	Time Weighted Average (TWA):		EH40 WEL
Formaldehyde 50-00-0 [Formaldehyde]	2	2,5	Short Term Exposure Limit (STEL):	15 minutes	EH40 WEL
Formaldehyde 50-00-0 [FORMALDEHYDE]	0,5	0,62	Time Weighted Average (TWA):		EU OELIII
Formaldehyde 50-00-0 [FORMALDEHYDE]	0,3	0,37	Time Weighted Average (TWA):		EU OELIII
Formaldehyde 50-00-0 [FORMALDEHYDE]	0,6		Short Term Exposure Limit (STEL):		EU OELIII
Formaldehyde 50-00-0 [FORMALDEHYDE]		0,74	Short Term Exposure Limit (STEL):		EU OELIII

Occupational Exposure Limits

Valid for
Ireland

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Toluene 108-88-3 [TOLUENE]	50	192	Time Weighted Average (TWA):	Indicative OELV	IR_OEL
Toluene 108-88-3 [TOLUENE]			Skin designation:	Can be absorbed through the skin.	IR_OEL
Toluene 108-88-3 [TOLUENE]	50	192	Time Weighted Average (TWA):	Indicative	ECTLV
Toluene 108-88-3 [TOLUENE]	100	384	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Toluene 108-88-3 [TOLUENE]	100	384	Short Term Exposure Limit (STEL):	15 minutes Indicative OELV	IR_OEL
2-Methoxy-1-methylethyl acetate 108-65-6 [2-METHOXY-1-METHYLETHYLACETATE]			Skin designation:	Can be absorbed through the skin.	IR_OEL
2-Methoxy-1-methylethyl acetate 108-65-6 [2-METHOXY-1-METHYLETHYLACETATE]	100	550	Short Term Exposure Limit (STEL):	15 minutes Indicative OELV	IR_OEL
2-Methoxy-1-methylethyl acetate 108-65-6 [2-METHOXY-1-METHYLETHYLACETATE]	50	275	Time Weighted Average (TWA):	Indicative OELV	IR_OEL
2-Methoxy-1-methylethyl acetate 108-65-6 [2-METHOXY-1-METHYLETHYLACETATE]	50	275	Time Weighted Average (TWA):	Indicative	ECTLV

2-Methoxy-1-methylethyl acetate 108-65-6 [2-METHOXY-1-METHYLETHYLACETATE]	100	550	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Butan-1-ol 71-36-3 [BUTAN-1-OL]	20		Time Weighted Average (TWA):		IR_OEL
Ethanol 64-17-5 [ETHANOL]	1.000		Short Term Exposure Limit (STEL):	15 minutes	IR_OEL
Pentyl acetate 628-63-7 [PENTYL ACETATE]	50	270	Time Weighted Average (TWA):	Indicative OELV	IR_OEL
Pentyl acetate 628-63-7 [PENTYLACETATE]	50	270	Time Weighted Average (TWA):	Indicative	ECTLV
Pentyl acetate 628-63-7 [PENTYLACETATE]	100	540	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Pentyl acetate 628-63-7 [PENTYL ACETATE]	100	540	Short Term Exposure Limit (STEL):	15 minutes Indicative OELV	IR_OEL
Phenol 108-95-2 [PHENOL]	2	8	Time Weighted Average (TWA):	Indicative OELV	IR_OEL
Phenol 108-95-2 [PHENOL]			Skin designation:	Can be absorbed through the skin.	IR_OEL
Phenol 108-95-2 [PHENOL]	2	8	Time Weighted Average (TWA):	Indicative	ECTLV
Phenol 108-95-2 [PHENOL]	4	16	Short Term Exposure Limit (STEL):	Indicative	ECTLV
Phenol 108-95-2 [PHENOL]	4	16	Short Term Exposure Limit (STEL):	15 minutes Indicative OELV	IR_OEL
Methanol 67-56-1 [METHANOL]	200	260	Time Weighted Average (TWA):	Indicative OELV	IR_OEL
Methanol 67-56-1 [METHANOL]			Skin designation:	Can be absorbed through the skin.	IR_OEL
Methanol 67-56-1 [METHANOL]	200	260	Time Weighted Average (TWA):	Indicative	ECTLV
Formaldehyde 50-00-0 [FORMALDEHYDE]	0,5	0,62	Time Weighted Average (TWA):	Binding OELV	IR_OEL
Formaldehyde 50-00-0 [FORMALDEHYDE]	0,6	0,738	Short Term Exposure Limit (STEL):	15 minutes Binding OELV	IR_OEL
Formaldehyde 50-00-0 [FORMALDEHYDE]	0,3	0,37	Time Weighted Average (TWA):	Binding OELV	IR_OEL
Formaldehyde 50-00-0 [FORMALDEHYDE]	0,5	0,62	Time Weighted Average (TWA):		EU OELIII
Formaldehyde 50-00-0 [FORMALDEHYDE]	0,3	0,37	Time Weighted Average (TWA):		EU OELIII
Formaldehyde 50-00-0 [FORMALDEHYDE]	0,6		Short Term Exposure Limit (STEL):		EU OELIII
Formaldehyde 50-00-0 [FORMALDEHYDE]		0,74	Short Term Exposure Limit (STEL):		EU OELIII

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Toluene 108-88-3	aqua (freshwater)		0,68 mg/l				
Toluene 108-88-3	sediment (freshwater)				16,39 mg/kg		
Toluene 108-88-3	sediment (marine water)				16,39 mg/kg		
Toluene 108-88-3	Soil				2,89 mg/kg		
Toluene 108-88-3	sewage treatment plant (STP)		13,61 mg/l				
Toluene 108-88-3	aqua (marine water)		0,68 mg/l				
Toluene 108-88-3	aqua (intermittent releases)		0,68 mg/l				
1-Methoxy-2-propyl 108-65-6	aqua (freshwater)		0,635 mg/l				
1-Methoxy-2-propyl 108-65-6	aqua (marine water)		0,0635 mg/l				
1-Methoxy-2-propyl 108-65-6	aqua (intermittent releases)		6,35 mg/l				
1-Methoxy-2-propyl 108-65-6	sewage treatment plant (STP)		100 mg/l				
1-Methoxy-2-propyl 108-65-6	sediment (freshwater)				3,29 mg/kg		
1-Methoxy-2-propyl 108-65-6	sediment (marine water)				0,329 mg/kg		
1-Methoxy-2-propyl 108-65-6	Soil				0,29 mg/kg		
butan-1-ol 71-36-3	aqua (freshwater)		0,082 mg/l				
butan-1-ol 71-36-3	aqua (marine water)		0,0082 mg/l				
butan-1-ol 71-36-3	aqua (intermittent releases)		2,25 mg/l				
butan-1-ol 71-36-3	sewage treatment plant (STP)		2476 mg/l				
butan-1-ol 71-36-3	sediment (freshwater)				0,324 mg/kg		
butan-1-ol 71-36-3	sediment (marine water)				0,032 mg/kg		
butan-1-ol 71-36-3	Soil				0,017 mg/kg		
butan-1-ol 71-36-3	Air						no hazard identified
butan-1-ol 71-36-3	oral						no potential for bioaccumulation
Ethanol 64-17-5	aqua (freshwater)		0,96 mg/l				
Ethanol 64-17-5	aqua (marine water)		0,79 mg/l				
Ethanol 64-17-5	aqua (intermittent releases)		2,75 mg/l				
Ethanol 64-17-5	sewage treatment plant (STP)		580 mg/l				
Ethanol 64-17-5	sediment (freshwater)				3,6 mg/kg		
Ethanol 64-17-5	sediment (marine water)				2,9 mg/kg		
Ethanol 64-17-5	Soil				0,63 mg/kg		
Ethanol	oral				380 mg/kg		

64-17-5							
phenol 108-95-2	aqua (freshwater)		0,008 mg/l				
phenol 108-95-2	aqua (marine water)		0,001 mg/l				
phenol 108-95-2	sediment (freshwater)				0,091 mg/kg		
phenol 108-95-2	sediment (marine water)				0,009 mg/kg		
phenol 108-95-2	Soil				0,136 mg/kg		
phenol 108-95-2	sewage treatment plant (STP)		2,1 mg/l				
phenol 108-95-2	Predator						no potential for bioaccumulation
phenol 108-95-2	aqua (intermittent releases)		0,031 mg/l				
phenol 108-95-2	Air						no hazard identified
methanol 67-56-1	aqua (freshwater)						no hazard identified
methanol 67-56-1	sediment (freshwater)						no hazard identified
methanol 67-56-1	aqua (marine water)						no hazard identified
methanol 67-56-1	Soil						no hazard identified
methanol 67-56-1	sewage treatment plant (STP)						no hazard identified
methanol 67-56-1	aqua (intermittent releases)						no hazard identified
methanol 67-56-1	sediment (marine water)						no hazard identified
formaldehyde 50-00-0	aqua (freshwater)		0,44 mg/l				
formaldehyde 50-00-0	aqua (marine water)		0,44 mg/l				
formaldehyde 50-00-0	Air						no hazard identified
formaldehyde 50-00-0	sediment (freshwater)				2,3 mg/kg		
formaldehyde 50-00-0	sediment (marine water)				2,3 mg/kg		
formaldehyde 50-00-0	Soil				0,2 mg/kg		
formaldehyde 50-00-0	sewage treatment plant (STP)		0,19 mg/l				
formaldehyde 50-00-0	Predator						no potential for bioaccumulation

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Toluene 108-88-3	Workers	Inhalation	Acute/short term exposure - local effects		384 mg/m3	
Toluene 108-88-3	Workers	Inhalation	Acute/short term exposure - systemic effects		384 mg/m3	
Toluene 108-88-3	Workers	Inhalation	Long term exposure - local effects		192 mg/m3	
Toluene 108-88-3	Workers	Inhalation	Long term exposure - systemic effects		192 mg/m3	
Toluene 108-88-3	Workers	dermal	Long term exposure - systemic effects		384 mg/kg	
Toluene 108-88-3	General population	Inhalation	Acute/short term exposure - local effects		226 mg/m3	
Toluene 108-88-3	General population	Inhalation	Acute/short term exposure - systemic effects		226 mg/m3	
Toluene 108-88-3	General population	Inhalation	Long term exposure - systemic effects		56,5 mg/m3	
Toluene 108-88-3	General population	dermal	Long term exposure - systemic effects		226 mg/kg	
Toluene 108-88-3	General population	oral	Long term exposure - systemic effects		8,13 mg/kg	
Toluene 108-88-3	General population	inhalation	Long term exposure - local effects		56,5 mg/m3	
1-Methoxy-2-propyl 108-65-6	Workers	inhalation	Long term exposure - systemic effects		275 mg/m3	
1-Methoxy-2-propyl 108-65-6	General population	inhalation	Long term exposure - systemic effects		33 mg/m3	
1-Methoxy-2-propyl 108-65-6	Workers	dermal	Long term exposure - systemic effects		796 mg/kg	
1-Methoxy-2-propyl 108-65-6	General population	inhalation	Long term exposure - local effects		33 mg/m3	
1-Methoxy-2-propyl 108-65-6	General population	dermal	Long term exposure - systemic effects		320 mg/kg	
1-Methoxy-2-propyl 108-65-6	General population	oral	Long term exposure - systemic effects		36 mg/kg	
1-Methoxy-2-propyl 108-65-6	Workers	inhalation	Acute/short term exposure - local effects		550 mg/m3	
1-Methoxy-2-propyl 108-65-6	General population	oral	Acute/short term exposure - systemic effects		500 mg/kg	
butan-1-ol 71-36-3	Workers	Inhalation	Long term exposure - local effects		310 mg/m3	no hazard identified
butan-1-ol 71-36-3	General population	dermal	Long term exposure - systemic effects		3,125 mg/kg	no hazard identified
butan-1-ol 71-36-3	General population	Inhalation	Long term exposure - systemic effects		55,357 mg/m3	no hazard identified
butan-1-ol 71-36-3	General population	inhalation	Long term exposure - local effects		155 mg/m3	no hazard identified
butan-1-ol 71-36-3	General population	oral	Long term exposure -		1,562 mg/kg	no hazard identified

			systemic effects			
Ethanol 64-17-5	Workers	dermal	Long term exposure - systemic effects		343 mg/kg	
Ethanol 64-17-5	Workers	inhalation	Long term exposure - systemic effects		950 mg/m3	
Ethanol 64-17-5	General population	dermal	Long term exposure - systemic effects		206 mg/kg	
Ethanol 64-17-5	General population	inhalation	Long term exposure - systemic effects		114 mg/m3	
Ethanol 64-17-5	General population	oral	Long term exposure - systemic effects		87 mg/kg	
phenol 108-95-2	Workers	dermal	Long term exposure - systemic effects		1,23 mg/kg	no potential for bioaccumulation
phenol 108-95-2	Workers	Inhalation	Long term exposure - systemic effects		8 mg/m3	no potential for bioaccumulation
phenol 108-95-2	Workers	Inhalation	Acute/short term exposure - local effects		16 mg/m3	no potential for bioaccumulation
phenol 108-95-2	General population	Inhalation	Long term exposure - systemic effects		1,32 mg/m3	no potential for bioaccumulation
phenol 108-95-2	General population	dermal	Long term exposure - systemic effects		0,4 mg/kg	no potential for bioaccumulation
phenol 108-95-2	General population	oral	Long term exposure - systemic effects		0,4 mg/kg	no potential for bioaccumulation
methanol 67-56-1	Workers	inhalation	Long term exposure - systemic effects		260 mg/m3	no hazard identified
methanol 67-56-1	Workers	inhalation	Acute/short term exposure - systemic effects		260 mg/m3	no hazard identified
methanol 67-56-1	Workers	inhalation	Long term exposure - local effects		260 mg/m3	no hazard identified
methanol 67-56-1	Workers	inhalation	Acute/short term exposure - local effects		260 mg/m3	no hazard identified
methanol 67-56-1	Workers	dermal	Long term exposure - systemic effects		40 mg/kg	no hazard identified
methanol 67-56-1	Workers	dermal	Acute/short term exposure - systemic effects		40 mg/kg	no hazard identified
methanol 67-56-1	General population	inhalation	Long term exposure - systemic effects		50 mg/m3	no hazard identified
methanol 67-56-1	General population	inhalation	Acute/short term exposure - systemic effects		50 mg/m3	no hazard identified
methanol 67-56-1	General population	inhalation	Long term exposure - local effects		50 mg/m3	no hazard identified
methanol 67-56-1	General population	inhalation	Acute/short term exposure - local effects		50 mg/m3	no hazard identified
methanol 67-56-1	General population	dermal	Long term exposure - systemic effects		8 mg/kg	no hazard identified
methanol 67-56-1	General population	dermal	Acute/short term exposure - systemic effects		8 mg/kg	no hazard identified
methanol 67-56-1	General population	oral	Long term exposure - systemic effects		8 mg/kg	no hazard identified
methanol 67-56-1	General population	oral	Acute/short term exposure - systemic effects		8 mg/kg	no hazard identified

formaldehyde 50-00-0	Workers	inhalation	Long term exposure - systemic effects		9 mg/m3	no hazard identified
formaldehyde 50-00-0	Workers	dermal	Long term exposure - systemic effects		240 mg/kg	no hazard identified
formaldehyde 50-00-0	Workers	dermal	Long term exposure - local effects		0,037 mg/cm2	no hazard identified
formaldehyde 50-00-0	General population	dermal	Long term exposure - local effects		0,012 mg/cm2	no hazard identified
formaldehyde 50-00-0	General population	oral	Long term exposure - systemic effects		4,1 mg/kg	no hazard identified
formaldehyde 50-00-0	General population	inhalation	Long term exposure - systemic effects		3,2 mg/m3	no hazard identified
formaldehyde 50-00-0	General population	inhalation	Long term exposure - local effects		0,1 mg/m3	no hazard identified
formaldehyde 50-00-0	General population	dermal	Long term exposure - systemic effects		102 mg/kg	no hazard identified
formaldehyde 50-00-0	Workers	inhalation	Long term exposure - local effects		0,375 mg/m3	no hazard identified
formaldehyde 50-00-0	Workers	inhalation	Acute/short term exposure - local effects		0,75 mg/m3	no hazard identified

Biological Exposure Indices:

None

8.2. Exposure controls:**Engineering controls:**

Ensure good ventilation/suction at the workplace.

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:

Suitable protective clothing

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

Advices to personal protection equipment:

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	Blue
Odor	Solvent
Physical state	liquid
Melting point	< 0 °C (< 32 °F)
Initial boiling point	> 35 °C (> 95 °F)None
Flammability	Not applicable
Explosive limits	
lower	1,1 % (V);
upper	36,5 % (V);
	Upper/lower explosion limit
Flash point	7,8 °C (46.04 °F); ASTM D 93-96 Flash point
Auto-ignition temperature	360 °C (680 °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);)	> 20,5 mm ² /s thixotropic
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Negligible
Partition coefficient: n-octanol/water	Not applicable
Vapour pressure (20 °C (68 °F))	Mixture
Vapour pressure (50 °C (122 °F))	30 mbar
Density (20 °C (68 °F))	300 mbar
Relative vapour density: (20 °C)	0,91 g/cm ³ no method / method unknown
Particle characteristics	> 1 (Air = 1)
	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

Reaction with strong oxidants.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

No decomposition if used according to specifications.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

None if used for intended purpose.

In case of fire toxic gases can be released.

SECTION 11: Toxicological information

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
Toluene 108-88-3	LD50	5.580 mg/kg	rat	EU Method B.1 (Acute Toxicity (Oral))
2-methoxy-1-methylethyl acetate 108-65-6	LD50	6.190 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
butan-1-ol 71-36-3	LD50	790 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
Ethanol 64-17-5	LD50	10.470 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
pentyl acetate 628-63-7	LD50	6.500 mg/kg	rat	not specified
phenol 108-95-2	Acute toxicity estimate (ATE)	140 mg/kg		Expert judgement
phenol 108-95-2	LD50	140 mg/kg	Human	not specified
methanol 67-56-1	Acute toxicity estimate (ATE)	300 mg/kg		Expert judgement
Formaldehyde 50-00-0	Acute toxicity estimate (ATE)	100 mg/kg		Expert judgement

Acute dermal 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
Toluene 108-88-3	LD50	> 5.000 mg/kg	rabbit	not specified
2-methoxy-1-methylethyl acetate 108-65-6	LD50	> 5.000 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
butan-1-ol 71-36-3	LD50	3.430 mg/kg	rabbit	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
Ethanol 64-17-5	LD50	> 2.000 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
pentyl acetate 628-63-7	LD50	17.500 mg/kg	rabbit	not specified
phenol 108-95-2	LD50	660 mg/kg	rat	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
Formaldehyde 50-00-0	LD50	270 mg/kg	rabbit	not specified

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
Toluene 108-88-3	LC50	28,1 mg/l	vapour	4 h	rat	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
2-methoxy-1-methylethyl acetate 108-65-6	LC0	> 70,458 mg/l	vapour	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)
2-methoxy-1-methylethyl acetate 108-65-6	LC50	> 70,458 mg/l	vapour	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)
butan-1-ol 71-36-3	LC50	> 17,76 mg/l	vapour	4 h	rat	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
Ethanol 64-17-5	LC50	124,7 mg/l	vapour	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)
phenol 108-95-2	LC50	> 0,9 mg/l	dust/mist	8 h	rat	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
phenol 108-95-2	Acute toxicity estimate (ATE)	1 mg/l	dust/mist	4 h		Expert judgement

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
Toluene 108-88-3	irritating	4 h	rabbit	EU Method B.4 (Acute Toxicity: Dermal Irritation / Corrosion)
2-methoxy-1-methylethyl acetate 108-65-6	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
butan-1-ol 71-36-3	irritating	2 h	rabbit	not specified
Ethanol 64-17-5	not irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
phenol 108-95-2	corrosive	3 min	Human, normal, human-derived epidermal keratinocytes	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method)
phenol 108-95-2	corrosive	1 min	rabbit	not specified
methanol 67-56-1	not irritating	20 h	rabbit	BASF Test
Formaldehyde 50-00-0	corrosive	20 h	rabbit	equivalent or similar to 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
Toluene 108-88-3	slightly irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
2-methoxy-1-methylethyl acetate 108-65-6	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
butan-1-ol 71-36-3	Category 1 (irreversible effects on the eye)		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Ethanol 64-17-5	irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
phenol 108-95-2	corrosive		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
methanol 67-56-1	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
Toluene 108-88-3	not sensitising	Guinea pig maximisation test	guinea pig	EU Method B.6 (Skin Sensitisation)
2-methoxy-1-methylethyl acetate 108-65-6	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
butan-1-ol 71-36-3	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Ethanol 64-17-5	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Ethanol 64-17-5	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
phenol 108-95-2	not sensitising	Buehler test	guinea pig	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
methanol 67-56-1	not sensitising	Guinea pig maximisation test	guinea pig	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
Formaldehyde 50-00-0	sensitising	Mouse local lymphnode assay (LLNA)	mouse	equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)

Germ cell mutagenicity:

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

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Toluene 108-88-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		EU Method B.13/14 (Mutagenicity)
Toluene 108-88-3	negative	mammalian cell gene mutation assay	with and without		equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
2-methoxy-1-methylethyl acetate 108-65-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
2-methoxy-1-methylethyl acetate 108-65-6	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
2-methoxy-1-methylethyl acetate 108-65-6	negative	DNA damage and repair assay, unscheduled DNA synthesis in mammalian cells in vitro	without		OECD Guideline 482 (Genetic Toxicology: DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells In Vitro)
butan-1-ol 71-36-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		Ames Test
butan-1-ol 71-36-3	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
butan-1-ol 71-36-3	negative	in vitro mammalian cell micronucleus test	without		not specified
Ethanol 64-17-5	negative	bacterial reverse mutation assay (e.g Ames test)			OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Ethanol 64-17-5	negative	in vitro mammalian chromosome aberration test	without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Ethanol 64-17-5	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
phenol 108-95-2	positive	in vitro mammalian cell micronucleus test	with and without		equivalent or similar to OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
phenol 108-95-2	negative without metabolic activation	in vitro mammalian chromosome aberration test	with and without		equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
methanol 67-56-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
methanol 67-56-1	negative	in vitro mammalian cell micronucleus test	without		not specified
methanol 67-56-1	negative	mammalian cell gene mutation assay	with and without		equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Formaldehyde 50-00-0	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		not specified
Formaldehyde 50-00-0	negative	bacterial reverse mutation assay (e.g Ames test)	without		Ames Test
Toluene 108-88-3	negative	intraperitoneal		rat	not specified
Toluene 108-88-3	negative	inhalation: vapour		mouse	OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test)
butan-1-ol 71-36-3	negative	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte

Ethanol 64-17-5	negative				Micronucleus Test) OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)
phenol 108-95-2	positive	intraperitoneal		mouse	equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
methanol 67-56-1	negative	intraperitoneal		mouse	equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

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
Toluene 108-88-3	not carcinogenic	inhalation: vapour	103 w 6.5 h/d, 5 d/w	rat	male/female	equivalent or similar OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
Ethanol 64-17-5	not carcinogenic					Expert judgement
phenol 108-95-2	not carcinogenic	oral: drinking water	103 w daily	mouse	male/female	equivalent or similar OECD Guideline 451 (Carcinogenicity Studies)
methanol 67-56-1	not carcinogenic	inhalation: vapour	18 m 19 h/d	mouse	male/female	equivalent or similar OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

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
Toluene 108-88-3	NOAEL P 7500 mg/m ³ NOAEL F1 1875 mg/m ³ NOAEL F2 1875 mg/m ³	Two generation study	inhalation: vapour	rat	OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
Toluene 108-88-3	NOAEL P 2261 mg/m ³ NOAEL F1 2261 mg/m ³	fertility	inhalation: vapour	rat	not specified
2-methoxy-1-methylethyl acetate 108-65-6	NOAEL P 1.000 mg/kg NOAEL F1 1.000 mg/kg	screening	oral: gavage	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
butan-1-ol 71-36-3	NOAEL P 500 mg/kg	Two generation study	oral: gavage	rat	not specified
butan-1-ol 71-36-3	NOAEL P 2000 ppm NOAEL F1 2000 ppm	Two generation study	inhalation: vapour	rat	OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
Ethanol 64-17-5	NOAEL P 13.800 mg/kg	Two generation study	oral: unspecified	mouse	OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
phenol 108-95-2	NOAEL P 71 mg/kg NOAEL F1 70 mg/kg NOAEL F2 1.000 mg/l	two- generation study	oral: drinking water	rat	equivalent or similar to OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
methanol 67-56-1	NOAEL P 1,3 mg/l NOAEL F1 0,13 mg/l NOAEL F2 0,13 mg/l	Two generation study	inhalation	rat	equivalent or similar to OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)

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
Toluene 108-88-3	NOAEL 625 mg/kg	oral: gavage	13 w daily, 5 d/w	rat	EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
Toluene 108-88-3	NOAEL 1131 mg/m ³	inhalation: vapour	24 m 6.5 h/d, 5 d/w	rat	equivalent or similar to OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
Toluene 108-88-3	NOAEL 2355 mg/m ³	inhalation: vapour	15 w 6.5 h/d, 5 d/w	rat	EU Method B.29 (Sub-Chronic Inhalation Toxicity Test: 90-Day Repeated Inhalation Dose Study Using Rodent Species)
2-methoxy-1-methylethyl acetate 108-65-6	NOAEL >= 1.000 mg/kg	oral: gavage	41 - 45 d daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
butan-1-ol 71-36-3	NOAEL 125 mg/kg	oral: gavage	13 w daily	rat	not specified
phenol 108-95-2	NOAEL 71 mg/kg	oral: drinking water	13 w daily	rat	equivalent or similar to OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
phenol 108-95-2	NOAEL 20 mg/m ³	inhalation	90 d 8 h/d, 5 d/w	monkey	not specified
phenol 108-95-2	NOAEL 130 mg/kg	dermal	18 d 5 h/d, 5 d/w	rabbit	not specified
methanol 67-56-1	NOAEL 6,63 mg/l	inhalation: vapour	4 weeks 6 h/d, 5 d/w	rat	equivalent or similar to OECD Guideline 412 (Repeated Dose Inhalation Toxicity: 28/14-Day)
methanol 67-56-1	NOAEL 0,13 mg/l	inhalation: vapour	12 m 20 h/d	rat	equivalent or similar to OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
Formaldehyde 50-00-0	NOAEL 15 mg/kg	oral: drinking water	up to 105 w daily ad libitum	rat	equivalent or similar to OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Aspiration hazard:

The mixture is classified based on Viscosity data.

Hazardous substances CAS-No.	Viscosity (kinematic) Value	Temperature	Method	Remarks
Toluene 108-88-3	0,57 mm ² /s	40 °C	not specified	

11.2 Information on other hazards

not applicable

SECTION 12: Ecological information

General ecological information:

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

12.1. Toxicity

Toxicity (Fish):

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Toluene 108-88-3	NOEC	3,2 mg/l	28 d	Cyprinodon variegatus	OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)
Toluene 108-88-3	LC50	5,5 mg/l	96 h	Oncorhynchus kisutch	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-methoxy-1-methylethyl acetate 108-65-6	LC50	100 - 180 mg/l	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-methoxy-1-methylethyl acetate 108-65-6	LC50	63,5 mg/l	14 d	Oryzias latipes	OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)
butan-1-ol 71-36-3	LC50	1.376 mg/l	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
Ethanol 64-17-5	LC50	14.200 mg/l	96 h	Pimephales promelas	EPA-660 (Methods for Acute Toxicity Tests with Fish, Macroinvertebrates and Amphibians)
Ethanol 64-17-5	NOEC	250 mg/l	120 h	Danio rerio	OECD Guideline 212 (Fish, Short-term Toxicity Test on Embryo and Sac-Fry Stages)
pentyl acetate 628-63-7	LC50	131 mg/l	96 h	not specified	OECD Guideline 203 (Fish, Acute Toxicity Test)
phenol 108-95-2	LC50	8,9 mg/l	96 h	Oncorhynchus mykiss	EPA-660 (Methods for Acute Toxicity Tests with Fish, Macroinvertebrates and Amphibians)
phenol 108-95-2	NOEC	0,077 mg/l	60 d	Cirrhinus mrigala	OECD Guideline 215 (Fish, Juvenile Growth Test)
methanol 67-56-1	LC50	15.400 mg/l	96 h	Lepomis macrochirus	EPA-660 (Methods for Acute Toxicity Tests with Fish, Macroinvertebrates and Amphibians)
methanol 67-56-1	NOEC	7.900 mg/l	200 h	Oryzias latipes	OECD Guideline 210 (fish early lite stage toxicity test)
Formaldehyde 50-00-0	LC50	6,7 mg/l	96 h	Morone saxatilis	OECD Guideline 203 (Fish, Acute Toxicity Test)
Formaldehyde 50-00-0	NOEC	48 mg/l	28 d	Oryzias latipes	OECD Guideline 215 (Fish, Juvenile Growth Test)

Toxicity (Daphnia):

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Toluene 108-88-3	EC50	3,78 mg/l	48 h	Ceriodaphnia dubia	other guideline:
2-methoxy-1-methylethyl acetate 108-65-6	EC50	> 500 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
butan-1-ol 71-36-3	EC50	1.328 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Ethanol 64-17-5	EC50	5.012 mg/l	48 h	Ceriodaphnia dubia	other guideline:
pentyl acetate 628-63-7	EC50	> 180 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
phenol	EC50	3,1 mg/l	48 h	Ceriodaphnia dubia	other guideline:

108-95-2					
methanol 67-56-1	EC50	18.260 mg/l	96 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Formaldehyde 50-00-0	EC50	5,8 mg/l	48 h	Daphnia pulex	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic toxicity to aquatic invertebrates

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Toluene 108-88-3	NOEC	0,74 mg/l	7 d	Ceriodaphnia dubia	other guideline:
2-methoxy-1-methylethyl acetate 108-65-6	NOEC	> 100 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
butan-1-ol 71-36-3	NOEC	4,1 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Ethanol 64-17-5	NOEC	9,6 mg/l	9 d	Daphnia magna	not specified
phenol 108-95-2	NOEC	0,16 mg/l	16 d	Daphnia magna	other guideline:
Formaldehyde 50-00-0	NOEC	6,4 mg/l	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.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Toluene 108-88-3	IC50	12 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-methoxy-1-methylethyl acetate 108-65-6	NOEC	> 1.000 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-methoxy-1-methylethyl acetate 108-65-6	EC50	> 1.000 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
butan-1-ol 71-36-3	EC50	225 mg/l	96 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
butan-1-ol 71-36-3	NOEC	129 mg/l	96 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Ethanol 64-17-5	EC50	275 mg/l	72 h	Chlorella vulgaris	OECD Guideline 201 (Alga, Growth Inhibition Test)
Ethanol 64-17-5	EC10	11,5 mg/l	72 h	Chlorella vulgaris	OECD Guideline 201 (Alga, Growth Inhibition Test)
pentyl acetate 628-63-7	EC0	120 mg/l	72 h	not specified	OECD Guideline 201 (Alga, Growth Inhibition Test)
pentyl acetate 628-63-7	EC50	> 120 mg/l	72 h	not specified	OECD Guideline 201 (Alga, Growth Inhibition Test)
phenol 108-95-2	EC50	61,1 mg/l	96 h	Pseudokirchneriella subcapitata (reported as Selenastrum capricornutum)	other guideline:
methanol 67-56-1	EC50	22.000 mg/l	96 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Formaldehyde 50-00-0	EC50	4,89 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity to microorganisms

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

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Toluene 108-88-3	NOEC	29 mg/l	16 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm- Test)
2-methoxy-1-methylethyl acetate 108-65-6	EC 50	> 100 mg/l			not specified
butan-1-ol 71-36-3	EC10	2.476 mg/l	17 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm- Test)
Ethanol 64-17-5	IC50	> 1.000 mg/l	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
phenol 108-95-2	EC50	766 mg/l	3 h	activated sludge, industrial	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
methanol 67-56-1	IC50	> 1.000 mg/l	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Formaldehyde 50-00-0	EC50	19 mg/l	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

12.2. Persistence and degradability

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
Toluene 108-88-3	readily biodegradable	aerobic	80 %	20 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
2-methoxy-1-methylethyl acetate 108-65-6	inherently biodegradable	aerobic	100 %	8 d	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
2-methoxy-1-methylethyl acetate 108-65-6	readily biodegradable		90 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
butan-1-ol 71-36-3	readily biodegradable	aerobic	70 - 81 %	30 d	EU Method C.4-E (Determination of the "Ready" Biodegradability Closed Bottle Test)
Ethanol 64-17-5	readily biodegradable	aerobic	80 - 85 %	30 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
pentyl acetate 628-63-7	readily biodegradable	aerobic	66 %	28 day	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
phenol 108-95-2	readily biodegradable	aerobic	62 %	100 h	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
methanol 67-56-1	readily biodegradable	aerobic	82 - 92 %	30 d	EU Method C.4-E (Determination of the "Ready" Biodegradability Closed Bottle Test)
Formaldehyde 50-00-0	readily biodegradable	aerobic	93 - 95 %	30 d	EU Method C.4-E (Determination of the "Ready" Biodegradability Closed Bottle Test)

12.3. Bioaccumulative potential

Hazardous substances CAS-No.	Bioconcentration factor (BCF)	Exposure time	Temperature	Species	Method
Toluene 108-88-3	90	3 d		Leuciscus idus melanotus	OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)
phenol 108-95-2	17,5	5 h	25 °C	Danio rerio (reported as Brachydanio rerio)	OECD Guideline 305 E (Bioaccumulation: Flow-through Fish Test)
methanol 67-56-1	< 10	72 h		Leuciscus idus melanotus	not specified

12.4. Mobility in soil

Hazardous substances CAS-No.	LogPow	Temperature	Method
Toluene 108-88-3	2,73	20 °C	EU Method A.8 (Partition Coefficient)
2-methoxy-1-methylethyl acetate 108-65-6	0,56		not specified
butan-1-ol 71-36-3	1	25 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Ethanol 64-17-5	-0,35	24 °C	not specified
pentyl acetate 628-63-7	2,3		not specified
phenol 108-95-2	1,47	30 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
methanol 67-56-1	-0,77		other guideline:
Formaldehyde 50-00-0	0,35	25 °C	QSAR (Quantitative Structure Activity Relationship)

12.5. Results of PBT and vPvB assessment

Hazardous substances CAS-No.	PBT / vPvB
Toluene 108-88-3	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
2-methoxy-1-methylethyl acetate 108-65-6	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
butan-1-ol 71-36-3	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Ethanol 64-17-5	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
phenol 108-95-2	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
methanol 67-56-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Formaldehyde 50-00-0	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

The product contains organic solvents which are insoluble in water. According to the requirements of the ATV regulations for the discharge of wastewater from commercial and industrial plant, organic solvents which are immiscible with water can only be discharged to an extent which corresponds to their solubility in water. The local discharge regulations take precedence.

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

080111

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.

SECTION 14: Transport information

14.1. UN number or ID number

ADR	1866
RID	1866
ADN	1866
IMDG	1866
IATA	1866

14.2. UN proper shipping name

ADR	RESIN SOLUTION
RID	RESIN SOLUTION
ADN	RESIN SOLUTION
IMDG	RESIN SOLUTION
IATA	Resin solution

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	not applicable
RID	not applicable
ADN	not applicable
IMDG	not applicable
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)	88,0 %

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

National regulations/information (Great Britain):

Remarks	Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, e.g COSHH Essentials. EH40 Occupational Exposure Limits Chemicals (Hazard Information & Packaging for Supply) Regulations. The Personnel Protective Equipment at Work Regulations. The Carriage of Dangerous Goods by Road Regulations. The Health & Safety at Work Act 1974. (Note: Use latest editions/amendments of above referenced documents.)
---------	--

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.
 H226 Flammable liquid and vapour.
 H301 Toxic if swallowed.
 H302 Harmful if swallowed.
 H304 May be fatal if swallowed and enters airways.
 H311 Toxic in contact with skin.
 H314 Causes severe skin burns and eye damage.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H319 Causes serious eye irritation.
 H331 Toxic if inhaled.
 H335 May cause respiratory irritation.
 H336 May cause drowsiness or dizziness.
 H341 Suspected of causing genetic defects.
 H350 May cause cancer.
 H361d Suspected of damaging the unborn child.
 H370 Causes damage to organs.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H411 Toxic to aquatic life with long lasting effects.
 H412 Harmful 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:

This Safety Data Sheet has been produced for sales from Henkel to parties purchasing from Henkel, is based on Regulation (EC) No 1907/2006 and provides information in accordance with applicable regulations of the European Union only. In that respect, no statement, warranty or representation of any kind is given as to compliance with any statutory laws or regulations of any other jurisdiction or territory other than the European Union. When exporting to territories other than the European Union, please consult with the respective Safety Data Sheet of the concerned territory to ensure compliance or liaise with Henkel's Product Safety and Regulatory Affairs Department (SDSinfo.Adhesive@henkel.com) prior to export to other territories than the European Union.

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

Dear Customer,

Henkel is committed to creating a sustainable future by promoting opportunities along the entire value chain. If you would like to contribute by switching from a paper to the electronic version of SDS, please contact the local Customer Service representative. We recommend to use a non-personal email address (e.g. SDS@your_company.com).

Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.