



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

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BONDERITE L-FM 51SC ACHESON known as GLASDAG 51SC

SDS No. : 473206
V008.0

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

1.1. Product identifier

BONDERITE L-FM 51SC ACHESON known as GLASDAG 51SC

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

Intended use:

Glass forming product

1.3. Details of the supplier of the safety data sheet

Henkel AG & Co. KGaA

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For Safety Data Sheet updates please visit our website <https://mysds.henkel.com/index.html#/appSelection> or www.henkel-adhesives.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.	
Aspiration hazard	Category 1
H304 May be fatal if swallowed and enters airways.	
Skin irritation	Category 2
H315 Causes skin irritation.	
Serious eye damage	Category 1
H318 Causes serious eye damage.	
Specific target organ toxicity - single exposure	Category 3
H335 May cause respiratory irritation.	
Target organ: respiratory tract irritation	
Specific target organ toxicity - single exposure	Category 3
H336 May cause drowsiness or dizziness.	
Target organ: Central nervous system	
Carcinogenicity	Category 1B
H350 May cause cancer.	
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

Butanone

Xylene - mixture of isomers

ethyl lactate

cumene

Signal word:

Danger

Hazard statement:

- H350 May cause cancer.
- H225 Highly flammable liquid and vapour.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H412 Harmful to aquatic life with long lasting effects.

Supplemental information	Restricted to professional users.
Precautionary statement: Prevention	P201 Obtain special instructions before use. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P260 Do not breathe mist/spray. 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. P308+P313 IF exposed or concerned: Get medical advice/attention. P310 Immediately call a POISON CENTER or doctor. P331 Do NOT induce vomiting. P370 + P378 In case of fire: Use alcohol-resistant foam, carbon dioxide or dry sand for extinction.
Precautionary statement: Storage	P403+P235 Store in a well-ventilated place. Keep cool.

2.3. Other hazards

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
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
Butanone 78-93-3 201-159-0 01-2119457290-43	20- 40 %	STOT SE 3, H336 Eye Irrit. 2, H319 Flam. Liq. 2, H225		EU OEL
Xylene - mixture of isomeres 1330-20-7 215-535-7 01-2119488216-32	10- 20 %	Asp. Tox. 1, H304 Acute Tox. 4, Inhalation, H332 Acute Tox. 4, Dermal, H312 Skin Irrit. 2, H315 Flam. Liq. 3, H226 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Aquatic Chronic 3, H412	dermal:ATE = 1.700 mg/kg oral:ATE = 3.523 mg/kg inhalation:ATE = 11 mg/l;vapour	EU OEL
4-methylpentan-2-one 108-10-1 203-550-1 01-2119473980-30	5- < 10 %	Acute Tox. 4, Inhalation, H332 Carc. 2, H351 Flam. Liq. 2, H225 STOT SE 3, H336 Eye Irrit. 2, H319	inhalation:ATE = 11 mg/l;vapour	EU OEL
Solvent naphtha (petroleum), light arom., <0.1% Benzene ----- 918-668-5 01-2119455851-35	5- < 10 %	Flam. Liq. 3, H226 Asp. Tox. 1, Oral, H304 STOT SE 3, H335 STOT SE 3, H336 Aquatic Chronic 2, H411		
ethyl lactate 97-64-3 202-598-0	1- < 5 %	Flam. Liq. 3, H226 STOT SE 3, H335 Eye Dam. 1, H318 Skin Irrit. 2, H315	oral:ATE = 2.500 mg/kg	
1,2,4-trimethylbenzene 95-63-6 202-436-9 01-2119472135-42	1- < 5 %	Aquatic Chronic 2, H411 STOT SE 3, H335 Eye Irrit. 2, H319 Flam. Liq. 3, H226 Acute Tox. 4, Inhalation, H332 Skin Irrit. 2, H315		EU OEL
aluminium powder (stabilised) 7429-90-5 231-072-3 01-2119529243-45	1- < 5 %	Water-react. 2, H261 Flam. Sol. 1, H228		EUEXPL2D
Hydrocarbons, C10-C13, n- alkanes, isoalkanes, cyclics, < 2% aromatic ----- 918-481-9 01-2119457273-39	1- < 5 %	Asp. Tox. 1, H304		
cumene 98-82-8 202-704-5 01-2119473983-24	0,1- < 1 %	Flam. Liq. 3, H226 Asp. Tox. 1, H304 STOT SE 3, H335 Aquatic Chronic 2, H411 Carc. 1B, H350	inhalation:ATE = 21 mg/l;vapour	EU OEL

If no ATE values are displayed, please refer to LD/LC50 values in Section 11.

For full text of the H - statements and other abbreviations see section 16 "Other information".

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:

After ingestion or vomit: danger of product entering the lung.

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

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

SKIN: Redness, inflammation.

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

ASPIRATION: Coughing, shortness of breath, nausea. Delayed effect: bronchopneumonia or pulmonary oedema

Vapors may cause drowsiness and dizziness.

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

Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary oedema.

Do not induce vomiting.

Seek medical attention from a specialist.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Fine water spray

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

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

Dispose of contaminated material as waste according to Section 13.

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

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

Take measures to prevent the build-up of electrostatic charges.

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

Ensure good ventilation/extraction.

7.3. Specific end use(s)

Glass forming product

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Germany

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Butanone 78-93-3 [BUTANONE]	200	600	Time Weighted Average (TWA):	Indicative	ECLTV
Butanone 78-93-3 [BUTANONE]	300	900	Short Term Exposure Limit (STEL):	Indicative	ECLTV
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
Xylene 1330-20-7 [XYLENE, MIXED ISOMERS, PURE]	50	221	Time Weighted Average (TWA):	Indicative	ECLTV
Xylene 1330-20-7 [XYLENE, MIXED ISOMERS, PURE]	100	442	Short Term Exposure Limit (STEL):	Indicative	ECLTV
Xylene 1330-20-7			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Xylene 1330-20-7			Skin designation:	Can be absorbed through the skin.	TRGS 900
Xylene 1330-20-7	50	220	Exposure limit(s):	2	TRGS 900
Carbon 7440-44-0			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Carbon 7440-44-0		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
Carbon 7440-44-0		1,25	Exposure limit(s):	If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
4-Methylpentan-2-one 108-10-1 [4-METHYLPENTAN-2-ONE]	20	83	Time Weighted Average (TWA):	Indicative	ECLTV
4-Methylpentan-2-one 108-10-1 [4-METHYLPENTAN-2-ONE]	50	208	Short Term Exposure Limit (STEL):	Indicative	ECLTV
4-Methylpentan-2-one 108-10-1	20	83	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
4-Methylpentan-2-one 108-10-1			Skin designation:	Can be absorbed through the skin.	TRGS 900
4-Methylpentan-2-one 108-10-1			Short Term Exposure Classification:	Category I: substances for which the localized effect has	TRGS 900

				an assigned OEL or for substances with a sensitizing effect in respiratory passages.	
1,2,4-Trimethylbenzene 95-63-6 [1,2,4-TRIMETHYLBENZENE]	20	100	Time Weighted Average (TWA):	Indicative	ECLTV
1,2,4-Trimethylbenzene 95-63-6	20	100	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
1,2,4-Trimethylbenzene 95-63-6			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Aluminium 7429-90-5			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Aluminium 7429-90-5		1,25	Exposure limit(s):	If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
Aluminium 7429-90-5		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
Cumene 98-82-8	10	50	Exposure limit(s):	4 If the AGW and BGW values are complied with, there should be no risk of reproductive damage (see Number 2.7).	TRGS 900
Cumene 98-82-8			Skin designation:	Can be absorbed through the skin.	TRGS 900
Cumene 98-82-8			Short Term Exposure Classification:	Category II: substances with a resorptive effect.	TRGS 900
Cumene 98-82-8 [2-PHENYLPROPANE (CUMENE)]			Skin designation:	Can be absorbed through the skin.	ECLTV
Cumene 98-82-8 [2-PHENYLPROPANE (CUMENE)]	50	250	Short Term Exposure Limit (STEL):	Indicative	ECLTV
Cumene 98-82-8 [2-PHENYLPROPANE (CUMENE)]	10	50	Time Weighted Average (TWA):	Indicative	ECLTV

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
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 78-93-3	sediment (marine water)				284,7 mg/kg		
Butanone 78-93-3	Soil				22,5 mg/kg		
Butanone 78-93-3	oral				1000 mg/kg		
Xylene - mixture of isomeres 1330-20-7	aqua (freshwater)		0,327 mg/l				
Xylene - mixture of isomeres 1330-20-7	sediment (freshwater)				12,46 mg/kg		
Xylene - mixture of isomeres 1330-20-7	Soil				2,31 mg/kg		
Xylene - mixture of isomeres 1330-20-7	aqua (marine water)		0,327 mg/l				
Xylene - mixture of isomeres 1330-20-7	Freshwater - intermittent		0,327 mg/l				
Xylene - mixture of isomeres 1330-20-7	sewage treatment plant (STP)		6,58 mg/l				
Xylene - mixture of isomeres 1330-20-7	sediment (marine water)				12,46 mg/kg		
Xylene - mixture of isomeres 1330-20-7	Predator						no potential for bioaccumulation
4-methylpentan-2-one 108-10-1	aqua (freshwater)		0,6 mg/l				
4-methylpentan-2-one 108-10-1	aqua (marine water)		0,06 mg/l				
4-methylpentan-2-one 108-10-1	sediment (freshwater)				8,27 mg/kg		
4-methylpentan-2-one 108-10-1	sediment (marine water)				0,83 mg/kg		
4-methylpentan-2-one 108-10-1	Soil				1,3 mg/kg		
4-methylpentan-2-one 108-10-1	sewage treatment plant (STP)		27,5 mg/l				
4-methylpentan-2-one 108-10-1	aqua (intermittent releases)		1,5 mg/l				
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	aqua (freshwater)						
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	aqua (marine water)						
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	sewage treatment plant (STP)						
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	sediment (freshwater)						
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	sediment (marine water)						

Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	Soil						
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	Predator						
1,2,4-trimethylbenzene 95-63-6	aqua (freshwater)		0,12 mg/l				
1,2,4-trimethylbenzene 95-63-6	aqua (intermittent releases)		0,12 mg/l				
1,2,4-trimethylbenzene 95-63-6	aqua (marine water)		0,12 mg/l				
1,2,4-trimethylbenzene 95-63-6	sewage treatment plant (STP)		2,41 mg/l				
1,2,4-trimethylbenzene 95-63-6	sediment (freshwater)				13,56 mg/kg		
1,2,4-trimethylbenzene 95-63-6	sediment (marine water)				13,56 mg/kg		
1,2,4-trimethylbenzene 95-63-6	Soil				2,34 mg/kg		
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatic -----							no hazard identified
cumene 98-82-8	aqua (freshwater)		0,035 mg/l				
cumene 98-82-8	sediment (marine water)				0,322 mg/kg		
cumene 98-82-8	aqua (marine water)		0,004 mg/l				
cumene 98-82-8	sewage treatment plant (STP)		200 mg/l				
cumene 98-82-8	Soil				0,624 mg/kg		
cumene 98-82-8	sediment (freshwater)				3,22 mg/kg		

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
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	
Xylene - mixture of isomers 1330-20-7	Workers	inhalation	Long term exposure - systemic effects		221 mg/m3	no potential for bioaccumulation
Xylene - mixture of isomers 1330-20-7	Workers	inhalation	Acute/short term exposure - systemic effects		442 mg/m3	no potential for bioaccumulation
Xylene - mixture of isomers 1330-20-7	Workers	inhalation	Long term exposure - local effects		221 mg/m3	no potential for bioaccumulation
Xylene - mixture of isomers 1330-20-7	Workers	inhalation	Acute/short term exposure - local effects		442 mg/m3	no potential for bioaccumulation
Xylene - mixture of isomers 1330-20-7	Workers	dermal	Long term exposure - systemic effects		212 mg/kg	no potential for bioaccumulation
Xylene - mixture of isomers 1330-20-7	General population	inhalation	Long term exposure - systemic effects		65,3 mg/m3	no potential for bioaccumulation
Xylene - mixture of isomers 1330-20-7	General population	inhalation	Acute/short term exposure - systemic effects		260 mg/m3	no potential for bioaccumulation
Xylene - mixture of isomers 1330-20-7	General population	inhalation	Long term exposure - local effects		65,3 mg/m3	no potential for bioaccumulation
Xylene - mixture of isomers 1330-20-7	General population	inhalation	Acute/short term exposure - local effects		260 mg/m3	no potential for bioaccumulation
Xylene - mixture of isomers 1330-20-7	General population	dermal	Long term exposure - systemic effects		125 mg/kg	no potential for bioaccumulation
Xylene - mixture of isomers 1330-20-7	General population	oral	Long term exposure - systemic effects		12,5 mg/kg	no potential for bioaccumulation
Xylene - mixture of isomers 1330-20-7	Workers	dermal	Acute/short term exposure - systemic effects			no potential for bioaccumulation
Xylene - mixture of isomers 1330-20-7	Workers	dermal	Acute/short term exposure - local effects			no potential for bioaccumulation
Xylene - mixture of isomers 1330-20-7	General population	dermal	Acute/short term exposure - systemic effects			no potential for bioaccumulation
Xylene - mixture of isomers 1330-20-7	General population	dermal	Acute/short term exposure - local effects			no potential for bioaccumulation
4-methylpentan-2-one 108-10-1	Workers	Inhalation	Acute/short term exposure - systemic effects		208 mg/m3	
4-methylpentan-2-one 108-10-1	Workers	Inhalation	Acute/short term exposure - local effects		208 mg/m3	
4-methylpentan-2-one 108-10-1	Workers	Inhalation	Long term exposure -		83 mg/m3	

			systemic effects			
4-methylpentan-2-one 108-10-1	Workers	Inhalation	Long term exposure - local effects		83 mg/m3	
4-methylpentan-2-one 108-10-1	Workers	dermal	Long term exposure - systemic effects		11,8 mg/kg	
4-methylpentan-2-one 108-10-1	General population	Inhalation	Acute/short term exposure - systemic effects		155,2 mg/m3	
4-methylpentan-2-one 108-10-1	General population	Inhalation	Acute/short term exposure - local effects		155,2 mg/m3	
4-methylpentan-2-one 108-10-1	General population	Inhalation	Long term exposure - systemic effects		14,7 mg/m3	
4-methylpentan-2-one 108-10-1	General population	Inhalation	Long term exposure - local effects		14,7 mg/m3	
4-methylpentan-2-one 108-10-1	General population	dermal	Long term exposure - systemic effects		4,2 mg/kg	
4-methylpentan-2-one 108-10-1	General population	oral	Long term exposure - systemic effects		4,2 mg/kg	
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	Workers	inhalation	Long term exposure - systemic effects		151 mg/m3	
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	Workers	dermal	Long term exposure - systemic effects		12,5 mg/kg	
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	General population	inhalation	Long term exposure - systemic effects		32 mg/m3	
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	General population	dermal	Long term exposure - systemic effects		7,5 mg/kg	
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	General population	oral	Long term exposure - systemic effects		7,5 mg/kg	
1,2,4-trimethylbenzene 95-63-6	General population	inhalation	Acute/short term exposure - local effects		29,4 mg/m3	
1,2,4-trimethylbenzene 95-63-6	General population	dermal	Long term exposure - systemic effects		9512 mg/kg	
1,2,4-trimethylbenzene 95-63-6	Workers	inhalation	Long term exposure - systemic effects		100 mg/m3	
1,2,4-trimethylbenzene 95-63-6	General population	inhalation	Long term exposure - local effects		29,4 mg/m3	
1,2,4-trimethylbenzene 95-63-6	Workers	inhalation	Acute/short term exposure - systemic effects		100 mg/m3	
1,2,4-trimethylbenzene 95-63-6	Workers	dermal	Long term exposure - systemic effects		16171 mg/kg	
1,2,4-trimethylbenzene 95-63-6	Workers	inhalation	Acute/short term exposure - local effects		100 mg/m3	
1,2,4-trimethylbenzene 95-63-6	General population	inhalation	Long term exposure - systemic effects		29,4 mg/m3	
1,2,4-trimethylbenzene 95-63-6	Workers	inhalation	Long term exposure - local effects		100 mg/m3	
1,2,4-trimethylbenzene 95-63-6	General population	inhalation	Acute/short term exposure - systemic effects		29,4 mg/m3	
1,2,4-trimethylbenzene 95-63-6	General population	oral	Long term exposure - systemic effects		15 mg/kg	

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatic -----						no hazard identified
cumene 98-82-8	Workers	inhalation	Acute/short term exposure - local effects		250 mg/m3	
cumene 98-82-8	General population	oral	Long term exposure - systemic effects		5 mg/kg	
cumene 98-82-8	General population	inhalation	Long term exposure - systemic effects		16,6 mg/m3	
cumene 98-82-8	Workers	inhalation	Long term exposure - systemic effects		100 mg/m3	
cumene 98-82-8	Workers	dermal	Long term exposure - systemic effects		15,4 mg/kg	
cumene 98-82-8	General population	dermal	Long term exposure - systemic effects		1,2 mg/kg	

Biological Exposure Indices:

Ingredient [Regulated substance]	Parameters	Biological specimen	Sampling time	Conc.	Basis of biol. exposure index	Remark	Additional Information
Butanone 78-93-3 [2-Butanone; Methylethylketone]	2-butanone	Urine	Sampling time: End of shift.	2 mg/l	DE BGW		
Xylene 1330-20-7	Methylhippuric (toluric) acid (all isomers)	Urine	Sampling time: End of shift.	2.000 mg/l	DE BGW		
4-Methylpentan-2-one 108-10-1	4-methylpentan-2-one	Urine	Sampling time: End of shift.	3,5 mg/l	DE BAT		
4-Methylpentan-2-one 108-10-1	4-methylpentan-2-one	Urine	Sampling time: End of shift.	0,7 mg/l	DE BGW		
1,2,4-Trimethylbenzene 95-63-6	Dimethylbenzoic acids (sum of isomers 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.	400 mg/g	DE BGW		
Aluminium 7429-90-5	Aluminium	Urine	Sampling time: End of shift.	200 µg/l	DE BAT		
Aluminium 7429-90-5 [Aluminium]	Aluminium	Creatinine in urine	Sampling time: End of work week.	50 µg/g	DE BGW		
Cumene 98-82-8	iso-Propylbenzene	Blood	Sampling time: End of shift.	2 mg/l	DE BAT		
Cumene 98-82-8	2-Phenyl-2-propanol	Creatinine in urine	Sampling time: End of shift.	50 mg/g	DE BAT		
Cumene 98-82-8	2-Phenyl-2-propanol, after hydrolysis	Creatinine in urine	Sampling time: End of shift.	10 mg/g	DE BGW		

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; ≥ 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; ≥ 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:

Protective eye equipment should conform to EN166.

Goggles which can be tightly sealed.

Skin protection:

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

Suitable protective clothing

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	black
Odor	Solvent
Physical state	liquid
Melting point	Not applicable, Product is a liquid
Solidification temperature	-87 °C (-124.6 °F)
Initial boiling point	80 °C (176 °F)
Flammability	Highly flammable.
Explosive limits	
lower	1,8 % (V);
upper	11,5 % (V);
	Upper/lower explosion limit
Flash point	-1 °C (30.2 °F); no method / method unknown
Auto-ignition temperature	404 °C (759.2 °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 mm ² /s
Viscosity, dynamic ()	100 - 200 mPa.s Supplier method
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Insoluble
Partition coefficient: n-octanol/water	Not applicable
	Mixture
Vapour pressure (50 °C (122 °F))	360 hPa
Vapour pressure (55 °C (131 °F))	370 mbar
Vapour pressure (20 °C (68 °F))	95 hPa
Density (20 °C (68 °F))	0,98 g/cm ³ no method / method unknown

Relative vapour density: (20 °C)	2,41
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

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
Butanone 78-93-3	LD50	2.737 mg/kg	rat	not specified
Xylene - mixture of isomeres 1330-20-7	LD50	3.523 mg/kg	rat	EU Method B.1 (Acute Toxicity (Oral))
Xylene - mixture of isomeres 1330-20-7	Acute toxicity estimate (ATE)	3.523 mg/kg		Expert judgement
4-methylpentan-2-one 108-10-1	LD50	2.080 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	LD50	3.492 mg/kg	rat	not specified
ethyl lactate 97-64-3	LD50	> 2.000 mg/kg	rat	OECD Guideline 423 (Acute Oral toxicity)
ethyl lactate 97-64-3	Acute toxicity estimate (ATE)	2.500 mg/kg		Expert judgement
1,2,4-trimethylbenzene 95-63-6	LD50	6.000 mg/kg	rat	EU Method B.1 (Acute Toxicity (Oral))
aluminium powder (stabilised) 7429-90-5	LD50	> 15.900 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatic -----	LD50	> 15.000 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
cumene 98-82-8	LD50	2.260 mg/kg	rat	not specified

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
Butanone 78-93-3	LD50	> 6.400 mg/kg	rabbit	not specified
Xylene - mixture of isomeres 1330-20-7	LD50	1.700 mg/kg	rabbit	not specified
Xylene - mixture of isomeres 1330-20-7	Acute toxicity estimate (ATE)	1.700 mg/kg		Expert judgement
4-methylpentan-2-one 108-10-1	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
4-methylpentan-2-one 108-10-1	LD0	>= 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	LD50	> 3.160 mg/kg	rabbit	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
1,2,4-trimethylbenzene 95-63-6	LD50	> 3.440 mg/kg	rat	not specified
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatic -----	LD50	> 5.000 mg/kg	rabbit	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
cumene 98-82-8	LD50	> 10.000 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
Butanone 78-93-3	LC50	34,5 mg/l	vapour	4 h	rat	not specified
Xylene - mixture of isomeres 1330-20-7	LC50	11 mg/l	vapour	4 h	rat	not specified
Xylene - mixture of isomeres 1330-20-7	Acute toxicity estimate (ATE)	11 mg/l	vapour			Expert judgement
4-methylpentan-2-one 108-10-1	Acute toxicity estimate (ATE)	11 mg/l	vapour			Expert judgement
4-methylpentan-2-one 108-10-1	LC50	8,2 - 16,4 mg/l	vapour	4 h	rat	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	LC50	> 10,2 mg/l	vapour	4 h	rat	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
1,2,4-trimethylbenzene 95-63-6	LC50	18 mg/l	vapour	4 h	rat	not specified
aluminium powder (stabilised) 7429-90-5	LC50	> 5 mg/l	dust/mist	4 h	rat	not specified
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatic -----	LC50	> 5,6 mg/l	dust/mist	4 h	rat	equivalent or similar to OECD Guideline 403 (Acute Inhalation Toxicity)
cumene 98-82-8	Acute toxicity estimate (ATE)	21 mg/l	vapour	4 h		Expert judgement
cumene 98-82-8	LC50	< 39 mg/l	vapour	4 h	rat	not specified
cumene 98-82-8	LC50	> 17,6 mg/l	vapour	6 h	rat	not specified

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
Butanone 78-93-3	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Xylene - mixture of isomeres 1330-20-7	moderately irritating		rabbit	not specified
4-methylpentan-2-one 108-10-1	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	mildly irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
ethyl lactate 97-64-3	not corrosive	60 min	Human, reconstructed epidermis (RhE) model	OECD Guideline 431 (In Vitro Skin Corrosion: Reconstructed Human Epidermis (RHE) Test Method)
1,2,4-trimethylbenzene 95-63-6	irritating	4 h	rabbit	EU Method B.4 (Acute Toxicity: Dermal Irritation / Corrosion)
aluminium powder (stabilised)	not irritating	24 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

7429-90-5				
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatic -----	mildly irritating	4 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
cumene 98-82-8	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
Butanone 78-93-3	irritating		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Xylene - mixture of isomeres 1330-20-7	slightly irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
4-methylpentan-2-one 108-10-1	slightly irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	not irritating		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
ethyl lactate 97-64-3	Category 1 (irreversible effects on the eye)		Bovine, cornea, in vitro test	OECD Guideline 437 (BCOP)
aluminium powder (stabilised) 7429-90-5	not irritating		rabbit	FDA Guideline
cumene 98-82-8	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
Butanone 78-93-3	not sensitising	Buehler test	guinea pig	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
Xylene - mixture of isomeres 1330-20-7	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
4-methylpentan-2-one 108-10-1	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	not sensitising	Guinea pig maximisation test	guinea pig	equivalent or similar to OECD Guideline 406 (Skin Sensitisation)
ethyl lactate 97-64-3	not sensitising	Direct peptide reactivity assay (DPRA)	cysteine and lysine, in chemico test	OECD Guideline 442C (Direct Peptide Reactivity Assay (DPRA))
ethyl lactate 97-64-3	not sensitising	Activation of keratinocytes	human keratinocytes, in vitro test	OECD Guideline 442D (ARE-Nrf2 Luciferase Test Method)
1,2,4-trimethylbenzene 95-63-6	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
aluminium powder (stabilised) 7429-90-5	not sensitising	Draize Test	guinea pig	Draize Test
cumene 98-82-8	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.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
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)
Xylene - mixture of isomers 1330-20-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Xylene - mixture of isomers 1330-20-7	negative	in vitro mammalian chromosome aberration test	with and without		EU Method B.10 (Mutagenicity)
Xylene - mixture of isomers 1330-20-7	negative	sister chromatid exchange assay in mammalian cells	with and without		EU Method B.19 (Sister Chromatid Exchange Assay In Vitro)
4-methylpentan-2-one 108-10-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
4-methylpentan-2-one 108-10-1	negative	in vitro mammalian chromosome aberration test	without		equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
4-methylpentan-2-one 108-10-1	ambiguous without metabolic activation	mammalian cell gene mutation assay	with and without		equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	negative	sister chromatid exchange assay in mammalian cells	with and without		equivalent or similar to OECD Guideline 479 (Genetic Toxicology: In Vitro Sister Chromatid Exchange Assay in Mammalian Cells)
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	negative	mammalian cell gene mutation assay	with and without		equivalent or similar to OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	negative	in vitro mammalian chromosome aberration test	with and without		equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
ethyl lactate 97-64-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
ethyl lactate 97-64-3	negative	in vitro mammalian cell micronucleus test	with and without		OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
ethyl lactate 97-64-3	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 490 (In Vitro Mammalian Cell Gene Mutation Tests Using the Thymidine Kinase Gene)
1,2,4-trimethylbenzene 95-63-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
1,2,4-trimethylbenzene 95-63-6	negative	in vitro mammalian chromosome aberration test	with and without		EU Method B.10 (Mutagenicity)
1,2,4-trimethylbenzene 95-63-6	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene

					Mutation Test)
aluminium powder (stabilised) 7429-90-5	positive	in vitro mammalian cell micronucleus test	without		OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
aluminium powder (stabilised) 7429-90-5	positive	in vitro mammalian chromosome aberration test	without		equivalent or similar to OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
aluminium powder (stabilised) 7429-90-5	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
cumene 98-82-8	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
cumene 98-82-8	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
cumene 98-82-8	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
cumene 98-82-8	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)
Butanone 78-93-3	negative	intraperitoneal		mouse	equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Xylene - mixture of isomeres 1330-20-7	negative	intraperitoneal		rat	OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test)
4-methylpentan-2-one 108-10-1	negative	intraperitoneal		mouse	equivalent or similar to OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	negative	inhalation		rat	equivalent or similar to OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)
1,2,4-trimethylbenzene 95-63-6	negative	intraperitoneal		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
aluminium powder (stabilised) 7429-90-5	negative	oral: gavage		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
aluminium powder (stabilised) 7429-90-5	ambiguous	oral: gavage		rat	OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)
cumene 98-82-8	negative	inhalation: gas		mouse	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
Xylene - mixture of isomeres 1330-20-7	not carcinogenic	oral: gavage	103 w 5 d/w	rat	male/female	EU Method B.32 (Carcinogenicity Test)
4-methylpentan-2-one 108-10-1		inhalation: vapour	2 y 6 h/d, 5 d/w	rat	male/female	OECD Guideline 451 (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
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)
4-methylpentan-2-one 108-10-1		screening	oral: gavage	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
4-methylpentan-2-one 108-10-1		One generation study	oral: gavage	rat	OECD Guideline 415 (One- Generation Reproduction Toxicity Study)
4-methylpentan-2-one 108-10-1		Two generation study	oral: gavage	rat	OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
1,2,4-trimethylbenzene 95-63-6	NOAEL P 500 ppm NOAEL F1 500 ppm NOAEL F2 500 ppm	multigenerat ion study	inhalation: vapour	rat	OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
aluminium powder (stabilised) 7429-90-5	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)

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
Butanone 78-93-3	NOAEL 2500 ppm	inhalation	90 days 6 hours/day, 5 days/week	rat	not specified
Xylene - mixture of isomeres 1330-20-7	NOAEL 150 mg/kg	oral: gavage	90 d daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
4-methylpentan-2-one 108-10-1	NOAEL 250 mg/kg	oral: gavage	13 w daily	rat	equivalent or similar to OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	NOAEL 600 mg/kg	oral: feed	90 d 7 days/week	rat	equivalent or similar to OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
ethyl lactate 97-64-3	NOAEL 600 mg/kg	oral: gavage	28 d daily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
1,2,4-trimethylbenzene 95-63-6	NOAEL 600 mg/kg	oral: gavage	90-91 d 5 d/w	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
1,2,4-trimethylbenzene 95-63-6	NOAEL 1,230 mg/l	inhalation: vapour	3 months 6 h/d, 5 d/week	rat	equivalent or similar to OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
1,2,4-trimethylbenzene 95-63-6	NOAEL 1,830 mg/l	inhalation: vapour	12 months 6 h/d, 5 d/week	rat	equivalent or similar to OECD Guideline 452 (Chronic Toxicity Studies)
cumene 98-82-8	NOAEL > 535,8 mg/kg	oral: feed	28 d daily	rat	not specified
cumene 98-82-8	NOAEL 125 ppm	inhalation: vapour	14 w 6 h/d, 5 d/w	rat	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)

Aspiration hazard:

The mixture is classified based on Viscosity data.

Hazardous substances CAS-No.	Viscosity (kinematic) Value	Temperature	Method	Remarks
Butanone 78-93-3	0,51 mm ² /s	20 °C	ASTM Standard D7042	
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	0,8 mm ² /s	40 °C	calculated	
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatic -----	1,13 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.

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
Butanone 78-93-3	LC50	3.220 mg/l	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
Xylene - mixture of isomeres 1330-20-7	LC50	2,6 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Xylene - mixture of isomeres 1330-20-7	NOEC	> 1,3 mg/l	56 d	Oncorhynchus mykiss	other guideline:
4-methylpentan-2-one 108-10-1	LC50	600 mg/l	96 h	Salmo gairdneri (new name: Oncorhynchus mykiss)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	LL50	9,2 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
ethyl lactate 97-64-3	LC50	320 mg/l	48 h		OECD Guideline 203 (Fish, Acute Toxicity Test)
1,2,4-trimethylbenzene 95-63-6	LC50	7,72 mg/l	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
Hydrocarbons, C10-C13, n- alkanes, isoalkanes, cyclics, < 2% aromatic -----	LL50	> 1.000 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
cumene 98-82-8	LC50	4,8 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)

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
Butanone 78-93-3	EC50	5.091 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Xylene - mixture of isomeres 1330-20-7	EC50	3,1 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
4-methylpentan-2-one 108-10-1	EC50	170 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	EL50	3,2 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
1,2,4-trimethylbenzene 95-63-6	EC50	3,6 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Hydrocarbons, C10-C13, n- alkanes, isoalkanes, cyclics, < 2% aromatic -----	EL50	> 1.000 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
cumene 98-82-8	EC50	2,14 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
Xylene - mixture of isomers 1330-20-7	NOEC	0,96 mg/l	7 d	Ceriodaphnia dubia	other guideline:
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	NOELR	2,6 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
cumene 98-82-8	NOEC	0,35 mg/l	21 day	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
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)
Xylene - mixture of isomeres 1330-20-7	EC50	4,36 mg/l	73 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Xylene - mixture of isomeres 1330-20-7	EC10	1,9 mg/l	73 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
4-methylpentan-2-one 108-10-1	EC50	400 mg/l	96 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	EL50	2,9 mg/l	72 h	Raphidocelis subcapitata (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	NOELR	1 mg/l	72 h	Raphidocelis subcapitata (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
ethyl lactate 97-64-3	EC50	2.300 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
ethyl lactate 97-64-3	NOEC	320 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydrocarbons, C10-C13, n- alkanes, isoalkanes, cyclics, < 2% aromatic -----	EL50	> 1.000 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Hydrocarbons, C10-C13, n- alkanes, isoalkanes, cyclics, < 2% aromatic -----	NOELR	1.000 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
cumene 98-82-8	EC50	2,01 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
cumene 98-82-8	EC10	1,35 mg/l	72 h	Desmodesmus subspicatus	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
Butanone 78-93-3	EC50	1.150 mg/l	16 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm- Test)
4-methylpentan-2-one 108-10-1	EC0	275 mg/l	16 h		not specified
cumene 98-82-8	EC10	211 mg/l	24 h		DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm- 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
Butanone 78-93-3	readily biodegradable	aerobic	98 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Xylene - mixture of isomers 1330-20-7	readily biodegradable	aerobic	90 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
4-methylpentan-2-one 108-10-1	readily biodegradable	aerobic	99 %	7 day	OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test)
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	readily biodegradable	aerobic	78 %	28 day	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
ethyl lactate 97-64-3	readily biodegradable	aerobic	70 %	28 day	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
1,2,4-trimethylbenzene 95-63-6	not readily biodegradable.	not specified	> 0 - < 60 %	28 d	OECD 301 A - F
Hydrocarbons, C10-C13, n- alkanes, isoalkanes, cyclics, < 2% aromatic -----	readily biodegradable	aerobic	80 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
cumene 98-82-8	readily biodegradable	aerobic	86 %	28 d	ISO 10708 (BODIS-Test)

12.3. Bioaccumulative potential

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

Hazardous substances CAS-No.	Bioconcentration factor (BCF)	Exposure time	Temperature	Species	Method
Xylene - mixture of isomers 1330-20-7	25,9	56 d		Oncorhynchus mykiss	not specified
cumene 98-82-8	35,5			Carassius auratus	OECD Guideline 305 (Bioconcentration: 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
Butanone 78-93-3	0,3	40 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
Xylene - mixture of isomeres 1330-20-7	3,16	20 °C	not specified
4-methylpentan-2-one 108-10-1	1,31	20 °C	not specified
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	2,13 - 4,58		QSAR (Quantitative Structure Activity Relationship)
ethyl lactate 97-64-3	-0,18		not specified
1,2,4-trimethylbenzene 95-63-6	3,63		other guideline:
cumene 98-82-8	3,55	23 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

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
Butanone 78-93-3	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Xylene - mixture of isomeres 1330-20-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
4-methylpentan-2-one 108-10-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Solvent naphtha (petroleum), light arom., <0.1% Benzene -----	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
ethyl lactate 97-64-3	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
1,2,4-trimethylbenzene 95-63-6	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
aluminium powder (stabilised) 7429-90-5	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatic -----	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
cumene 98-82-8	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

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.
080111

SECTION 14: Transport information

14.1. UN number or ID number

ADR	1993
RID	1993
ADN	1993
IMDG	1993
IATA	1993

14.2. UN proper shipping name

ADR	FLAMMABLE LIQUID, N.O.S. (Methyl ethyl ketone,Xylene)
RID	FLAMMABLE LIQUID, N.O.S. (Methyl ethyl ketone,Xylene)
ADN	FLAMMABLE LIQUID, N.O.S. (Methyl ethyl ketone,Xylene)
IMDG	FLAMMABLE LIQUID, N.O.S. (Methyl ethyl ketone,Xylene)
IATA	Flammable liquid, n.o.s. (Methyl ethyl ketone,Xylene)

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
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	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)	64,6 %

15.2. Chemical safety assessment

A chemical safety assessment has 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)
Storage class according to TRGS 510:	3
General remarks (DE):	This product is in scope of the German regulation "ChemikalienVerbotsVerordnung"

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.
H228 Flammable solid.
H261 In contact with water releases flammable gases.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H350 May cause cancer.
H351 Suspected of causing cancer.
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:

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