

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Urethane

Revision date: 11.04.2022

Product code: 121

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Signal word: Danger**Pictograms:****Hazard statements**

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P312	Call a doctor if you feel unwell.
P271	Use only outdoors or in a well-ventilated area.
P251	Do not pierce or burn, even after use.
P211	Do not spray on an open flame or other ignition source.
P210	Keep away from heat. No Smoking.

Special labelling of certain mixtures

EUH208	Contains Enthält 2-ethylhexanoate of cobalt. Contains ethylhexanoate of cobalt. May produce an allergic reaction.. May produce an allergic reaction.
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SECTION 3: Composition/information on ingredients**3.2. Mixtures**

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Hazardous components

CAS No	Chemical name	Quantity
	EC No	
	Index No	
	REACH No	
	GHS Classification	
106-97-8	butane	20-40%
	203-448-7	601-004-00-0
	Flam. Gas 1; H220	
	Hydrocarbons, C6, isoalkanes, <5% n-hexane	10-40%
	931-254-9	01-2119484651-34
	Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H225 H315 H336 H304 H411	
	Hydrocarbons, C9, aromatics	10-30%
	918-668-5	01-2119455851-35
	Flam. Liq. 3, STOT SE 3, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H226 H335 H336 H304 H411	
74-98-6	propane	10-30%
	200-827-9	601-003-00-5
	Flam. Gas 1; H220	
	Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics,aromatic	5-10 %
	919-446-0	01-2119458049-33
	Flam. Liq. 3, STOT SE 3, STOT RE 1, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 2; H226 H336 H372 H304 H400 H411	
136-52-7	2-ethylhexanoate of cobalt	< 0.1 %
	205-250-6	01-2119524678-29
	Repr. 1B, Eye Irrit. 2, Skin Sens. 1A, Aquatic Acute 1, Aquatic Chronic 3; H360 H319 H317 H400 H412	

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
	931-254-9	Hydrocarbons, C6, isoalkanes, <5% n-hexane	10-40% %
		inhalation: LC50 = 259354 mg/l (vapours); dermal: LD50 = 3350 mg/kg; oral: LD50 = >36750 mg/kg	
	918-668-5	Hydrocarbons, C9, aromatics	10-30% %
		inhalation: LC50 = 6193 mg/l (vapours); dermal: LD50 = 3160 mg/kg; oral: LD50 = 3492 mg/kg	
	919-446-0	Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics,aromatic	5-10 %
		inhalation: LC50 = 13,1 mg/l (vapours); dermal: LD50 = 3400 mg/kg; oral: LD50 = 15000 mg/kg	

SECTION 4: First aid measures
4.1. Description of first aid measures
After inhalation

Provide fresh air. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After contact with skin

After contact with skin, wash immediately with: Water. Change contaminated clothing.

After contact with eyes

If product gets into the eye, keep eyelid open and rinse immediately with large quantities of water, for at least 5 minutes. Subsequently consult an ophthalmologist.

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After ingestion

If swallowed, immediately drink: Water.

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

No data available

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

No data available

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**Carbon dioxide (CO₂). Foam. Extinguishing powder.**Unsuitable extinguishing media**

Water with tenside additive. Water.

5.2. Special hazards arising from the substance or mixture

Combustible. Vapours may form explosive mixtures with air. Heating causes rise in pressure with risk of bursting.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Contaminated fire-fighting water must be collected separately. Do not allow to enter into surface water or drains.

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

Remove all sources of ignition. Provide adequate ventilation. Wear a self-contained breathing apparatus and chemical protective clothing.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Explosion hazard.

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

Ventilate affected area.

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

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from sources of ignition - No smoking.

Hints on joint storage

Do not store together with: Material, rich in oxygen, oxidizing.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
106-97-8	Butane	600	1450		TWA (8 h)	WEL
		750	1810		STEL (15 min)	WEL

8.2. Exposure controls



Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink.

Eye/face protection

Tightly sealed safety glasses.

Hand protection

EN ISO 374 Tested protective gloves are to be worn: NBR (Nitrile rubber) For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. NBR (Nitrile rubber)

Skin protection

Protective clothing:

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Aerosol
Colour:	colourless
Odour:	characteristic

Test method

Changes in the physical state

Boiling point or initial boiling point and boiling range:	-0,5 °C
Softening point:	DIN EN 1238
Flash point:	<0 °C
Sustaining combustion:	Not sustaining combustion
Lower explosion limits:	1,2 vol. %
Upper explosion limits:	9,4 vol. %
Auto-ignition temperature:	300 °C

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Vapour pressure: (at 20 °C)	2100 hPa
Vapour pressure: (at 50 °C)	4900 hPa
Density (at 20 °C):	0,79 g/cm ³

SECTION 10: Stability and reactivity
10.1. Reactivity

No data available

10.2. Chemical stability

No data available

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

Keep away from heat. Ignition hazard.

10.5. Incompatible materials

No data available

10.6. Hazardous decomposition products

No data available

Further information

No data available

SECTION 11: Toxicological information
11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
	Hydrocarbons, C6, isoalkanes, <5% n-hexane				
	oral	LD50 >36750 mg/kg	Rat	OECD	Prüfrichtlinie 401
	dermal	LD50 3350 mg/kg	Rabbit	OECD	Prüfrichtlinie 402
	inhalation vapour	LC50 259354 mg/l	Rat	OECD	Prüfrichtlinie 403
	Hydrocarbons, C9, aromatics				
	oral	LD50 3492 mg/kg	Rat	OECD	Prüfrichtlinie 401
	dermal	LD50 3160 mg/kg	Rabbit	OECD	Prüfrichtlinie 402
	inhalation vapour	LC50 6193 mg/l	Rat	OECD	Prüfrichtlinie 403
	Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics,aromatic				
	oral	LD50 15000 mg/kg	Rat	OECD	Prüfrichtlinie 401
	dermal	LD50 3400 mg/kg	Rabbit	OECD	Prüfrichtlinie 402
	inhalation vapour	LC50 13,1 mg/l	Rat	OECD	Prüfrichtlinie 403

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Irritation and corrosivity

Causes skin irritation.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Irritating to eyes. Following inhalation: Lung irritation. Coughing. shortage of breath. After skin contact: irritant.

Sensitising effects

Contains Enthält 2-ethylhexanoate of cobalt. Contains ethylhexanoate of cobalt. May produce a allergic reaction.. May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

May cause drowsiness or dizziness. (Hydrocarbons, C6, isoalkanes, <5% n-hexane)

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure. (Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics,aromatic)

Aspiration hazard

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

SECTION 12: Ecological information

12.1. Toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
	Hydrocarbons, C6, isoalkanes, <5% n-hexane					
	Acute fish toxicity	LC50 >1 mg/l	96 h	Fish		
	Acute algae toxicity	ErC50 30 mg/l	72 h	Alge		
	Acute crustacea toxicity	EC50 3,87 mg/l	48 h	Daphnia pulex (water flea)		
	Hydrocarbons, C9, aromatics					
	Acute fish toxicity	LC50 9,2 mg/l	96 h	Fish		
	Acute algae toxicity	ErC50 2,9 mg/l		Alge		
	Acute crustacea toxicity	EC50 3,2 mg/l	48 h	Daphnia pulex (water flea)		
	Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics,aromatic					
	Acute fish toxicity	LC50 10-30 mg/l	96 h	Fish		
	Acute algae toxicity	ErC50 0,22 mg/l		Algae		
	Acute crustacea toxicity	EC50 10-22 mg/l	48 h	Daphnia pulex (water flea)		

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
106-97-8	butane	2,89
74-98-6	propane	2,36

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

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13.1. Waste treatment methods**Disposal recommendations**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number: UN1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
Hazard label: 2.1



Classification code: 5F
Special Provisions: 190 327 625
Limited quantity: 1 L
Transport category: 2
Tunnel restriction code: D

Other applicable information (land transport)

E0

Inland waterways transport (ADN)

14.1. UN number: UN1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2
Hazard label: 2.1



Classification code: 5F
Special Provisions: 190 327 344 625
Limited quantity: 1 L

Other applicable information (inland waterways transport)

E0

Marine transport (IMDG)

14.1. UN number: UN1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2

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14.4. Packing group: -
 Hazard label: 2, see SP63

Special Provisions: 63, 190, 277, 327, 344, 959
 Limited quantity: See SP277
 EmS: F-D, S-U

Other applicable information (marine transport)
 E0

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN1950
14.2. UN proper shipping name: AEROSOLS, flammable
14.3. Transport hazard class(es): 2.1
 Hazard label: 2.1



Special Provisions: A145 A167
 Limited quantity Passenger: 30 kg G
 IATA-packing instructions - Passenger: 203
 IATA-max. quantity - Passenger: 75 kg
 IATA-packing instructions - Cargo: 203
 IATA-max. quantity - Cargo: 150 kg

Other applicable information (air transport)
 E0
 : Y203

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes



Danger releasing substance: Hydrocarbons, C6, isoalkanes, <5% n-hexane

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

Restrictions on use (REACH, annex XVII):
 Entry 28

2004/42/EC (VOC): 200g/400ml Dose

Additional information

Contains no REACH substances with Annex XVII restrictions
 Contains no substances on the Reach candidate list
 Contains no Reach Annex XIV substances

National regulatory information

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Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.
Water hazard class (D):	2 - obviously hazardous to water

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information**Relevant H and EUH statements (number and full text)**

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H360	May damage fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains Enthält 2-ethylhexanoate of cobalt. Contains ethylhexanoate of cobalt. May produce a allergic reaction.. May produce an allergic reaction.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)