

**Safety Data Sheet**

according to UK REACH Regulation

**133 Valve cleaner MP13300400AB**

Revision date: 20.02.2024

Product code: 1103555

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

133 Valve cleaner MP13300400AB

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

Cleaner

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

Company name:	TUNAP GmbH & Co. KG	
Street:	Buergermeister-Seidl-Strasse 2	
Place:	D-82515 Wolfratshausen	
Telephone:	+49 (0) 8171/1600-0	Telefax: +49 (0) 8171/1600-40
E-mail:	sdb@tunap.com	
Internet:	www.tunap.com	

**1.4. Emergency telephone number:** 111 NHS (National Health Service)**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**

Aerosol 1; H222-H229  
Acute Tox. 4; H312  
Acute Tox. 4; H332  
Asp. Tox. 1; H304  
Skin Corr. 1B; H314  
Eye Dam. 1; H318  
Repr. 2; H361fd  
STOT SE 3; H335  
STOT SE 3; H336  
STOT RE 2; H373  
Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****GB CLP Regulation****Hazard components for labelling**

xylene  
n-propanol  
Hydrocarbons, C9, aromatics  
ethylbenzene  
morpholine  
Oxirane, 2-ethyl-, homopolymer, 3-aminopropyl C11-14-isoalkyl ethers, C13-rich

**Signal word:** Danger**Pictograms:**



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#### Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H312+H332	Harmful in contact with skin or if inhaled.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361fd	Suspected of damaging fertility. 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.

#### Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe spray.
P280	Wear protective gloves and eye/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P333+P317	If skin irritation or rash occurs: Get medical help.
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/doctor.
P304+P312	IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

#### 2.3. Other hazards

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop. The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII. This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

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**Relevant ingredients**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
1330-20-7	xylene			25 - < 50 %
	215-535-7	601-022-00-9	01-2119488216-32	
	Flam. Liq. 3, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 3; H226 H332 H312 H315 H319 H335 H373 H304 H412			
71-23-8	n-propanol			10 - < 20 %
	200-746-9	603-003-00-0	01-2119486761-29	
	Flam. Liq. 2, Eye Dam. 1, STOT SE 3; H225 H318 H336			
64742-95-6	Hydrocarbons, C9, aromatics			10 - < 20 %
	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 EUH066			
100-41-4	ethylbenzene			10 - < 20 %
	202-849-4	601-023-00-4		
	Flam. Liq. 2, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1; H225 H332 H315 H319 H335 H373 H304			
110-91-8	morpholine			5 - < 10 %
	203-815-1		01-2119496057-30	
	Flam. Liq. 3, Repr. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1; H226 H361fd H331 H311 H302 H314 H318			
	Polyether amine, polymer			3 - < 5 %
	Skin Irrit. 2, Eye Irrit. 2, Aquatic Chronic 2; H315 H319 H411			
108-88-3	toluene			0.1 - < 1 %
	203-625-9	601-021-00-3	01-2119471310-51	
	Flam. Liq. 2, Repr. 2, Skin Irrit. 2, STOT SE 3, STOT RE 2, Asp. Tox. 1; H225 H361d H315 H336 H373 H304			

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



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### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
1330-20-7	215-535-7	xylene	25 - < 50 %
		inhalation: LC50 = 6700 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = 12126 mg/kg; oral: LD50 = 3523 mg/kg	
71-23-8	200-746-9	n-propanol	10 - < 20 %
		inhalation: LC50 = > 33,8 mg/l (vapours); dermal: LD50 = 4032 mg/kg; oral: LD50 = 8000 mg/kg	
64742-95-6	918-668-5	Hydrocarbons, C9, aromatics	10 - < 20 %
		dermal: LD50 = > 3160 mg/kg; oral: LD50 = 3592 mg/kg	
100-41-4	202-849-4	ethylbenzene	10 - < 20 %
		inhalation: LC50 = 17,2 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: LD50 = 15400 mg/kg; oral: LD50 = 3500 mg/kg	
110-91-8	203-815-1	morpholine	5 - < 10 %
		inhalation: LC50 = 8 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: LD50 = ca. 500 mg/kg; oral: LD50 = ca. 1900 mg/kg	
108-88-3	203-625-9	toluene	0.1 - < 1 %
		inhalation: LC50 = 49 mg/l (vapours); dermal: LD50 = 12200 mg/kg; oral: LD50 = 5580 mg/kg	

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

First aider: Pay attention to self-protection! Remove persons to safety. Never give anything by mouth to an unconscious person or a person with cramps.

##### After inhalation

Remove person to fresh air and keep comfortable for breathing. In all cases of doubt, or when symptoms persist, seek medical advice.

##### After contact with skin

Wash with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. In all cases of doubt, or when symptoms persist, seek medical advice.

##### After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of troubles or persistent symptoms, consult an ophthalmologist.

##### After ingestion

Do NOT induce vomiting. Observe risk of aspiration if vomiting occurs. Call a physician in any case!

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

Headache, nausea, dizziness, fatigue, skin irritation

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

Treat symptomatically. Call a POISON CENTER. Symptoms can occur only after several hours.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Water fog. Foam. Carbon dioxide (CO<sub>2</sub>). Extinguishing powder.

##### Unsuitable extinguishing media

Full water jet



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

Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO<sub>2</sub>, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.

#### **5.3. Advice for firefighters**

In case of fire and/or explosion do not breathe fumes. Move undamaged containers from immediate hazard area if it can be done safely. In case of fire: Wear self-contained breathing apparatus.

#### **Additional information**

Danger of bursting container.

### **SECTION 6: Accidental release measures**

#### **6.1. Personal precautions, protective equipment and emergency procedures**

##### **General advice**

Wear breathing apparatus if exposed to vapours/dusts/aerosols. Remove all sources of ignition. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Wear personal protection equipment.

##### **For non-emergency personnel**

First aider: Pay attention to self-protection!

##### **For emergency responders**

Fight fire with normal precautions from a reasonable distance.

#### **6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Ensure all waste water is collected and treated via a waste water treatment plant.

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

##### **For containment**

Prevent spread over a wide area (e.g. by containment or oil barriers).

##### **For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

##### **Other information**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Clean contaminated articles and floor according to the environmental legislation.

#### **6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

### **SECTION 7: Handling and storage**

#### **7.1. Precautions for safe handling**

##### **Advice on safe handling**

Observe instructions for use.

Dust must be exhausted directly at the point of origin. Vapours/aerosols must be exhausted directly at the point of origin. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

When using do not eat, drink, smoke, sniff.

Wear personal protection equipment (refer to section 8).

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

##### **Advice on protection against fire and explosion**

Keep away from sources of ignition - No smoking. Heating causes rise in pressure with risk of bursting.

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**Advice on general occupational hygiene**

Avoid exposure. Wear suitable protective clothing. Draw up and observe skin protection programme.

**Further information on handling**

Avoid contact with skin and eyes.

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

Keep container tightly closed. Observe legal regulations and provisions.

**Hints on joint storage**

Do not store together with: Oxidizing agents. Pyrophoric or self-heating substances. Food and feedingstuffs.

**Further information on storage conditions**

Protect from frost. Protect from direct sunlight. Store in a cool dry place. Observe legal regulations and provisions.

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

No information available.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
100-41-4	Ethylbenzene	100	441		TWA (8 h)	WEL
		125	552		STEL (15 min)	WEL
110-91-8	Morpholine	10	36		TWA (8 h)	WEL
		20	72		STEL (15 min)	WEL
71-23-8	Propan-1-ol	200	500		TWA (8 h)	WEL
		250	625		STEL (15 min)	WEL
108-88-3	Toluene	50	191		TWA (8 h)	WEL
		100	384		STEL (15 min)	WEL
1330-20-7	Xylene: mixed isomers	50	220		TWA (8 h)	WEL
		100	441		STEL (15 min)	WEL

**Biological Monitoring Guidance Values (EH40)**

CAS No	Substance	Parameter	Value	Test material	Sampling time
1330-20-7	Xylene, o-, m-, p- or mixed isomers	methyl hippuric acid (creatinine)	650 mmol/mol	urine	Post shift

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**DNEL/DMEL values**

CAS No	Substance	DNEL type	Exposure route	Effect	Value
1330-20-7	xylene	Worker DNEL, long-term	inhalation	systemic	221 mg/m <sup>3</sup>
		Worker DNEL, acute	inhalation	systemic	442 mg/m <sup>3</sup>
		Worker DNEL, long-term	inhalation	local	221 mg/m <sup>3</sup>
		Worker DNEL, acute	inhalation	local	442 mg/m <sup>3</sup>
		Worker DNEL, long-term	dermal	systemic	212 mg/kg bw/day
		Consumer DNEL, long-term	inhalation	systemic	65,3 mg/m <sup>3</sup>
		Consumer DNEL, acute	inhalation	systemic	260 mg/m <sup>3</sup>
		Consumer DNEL, long-term	inhalation	local	65,3 mg/m <sup>3</sup>
		Consumer DNEL, acute	inhalation	local	260 mg/m <sup>3</sup>
		Consumer DNEL, long-term	dermal	systemic	125 mg/kg bw/day
		Consumer DNEL, long-term	oral	systemic	12,5 mg/kg bw/day
110-91-8	morpholine	Worker DNEL, long-term	inhalation	systemic	91 mg/m <sup>3</sup>
		Worker DNEL, long-term	inhalation	local	36 mg/m <sup>3</sup>
		Worker DNEL, acute	inhalation	local	72 mg/m <sup>3</sup>
		Worker DNEL, long-term	dermal	systemic	1,04 mg/kg bw/day
		Consumer DNEL, long-term	oral	systemic	6,3 mg/kg bw/day

**PNEC values**

CAS No	Substance	Environmental compartment	Value
1330-20-7	xylene	Freshwater	0,327 mg/l
		Freshwater (intermittent releases)	0,327 mg/l
		Marine water	0,327 mg/l
		Freshwater sediment	12,46 mg/kg
		Marine sediment	12,46 mg/kg
		Micro-organisms in sewage treatment plants (STP)	6,58 mg/l
		Soil	2,31 mg/kg
110-91-8	morpholine	Freshwater	0,163 mg/l
		Freshwater (intermittent releases)	0,09 mg/l
		Marine water	0,016 mg/l
		Freshwater sediment	1,83 mg/kg
		Marine sediment	0,183 mg/kg
		Micro-organisms in sewage treatment plants (STP)	10 mg/l
		Soil	0,269 mg/kg



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### Additional advice on limit values

- a no restriction
- b End of exposure or end of shift
- c at long-term exposure:
- d before next shift

blood (B)  
Urine (U)

### 8.2. Exposure controls

#### Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used.

#### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Suitable eye protection: Tightly sealed safety glasses.  
EN 166

##### Hand protection

Protect skin by using skin protective cream. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.  
Suitable material: NBR (Nitrile rubber) Breakthrough time: 480min  
Thickness of the glove material 0,45 mm  
EN ISO 374

##### Skin protection

Wear suitable protective clothing. Take off immediately all contaminated clothing and wash it before reuse.

##### Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.  
When exceeding the relevant workplace exposure limits, note the following:  
Suitable respiratory protective equipment: Combination filter device (DIN EN 141)..  
Filtering device with filter or ventilator filtering device of type: A  
Observe the wear time limits as specified by the manufacturer.  
Observe legal regulations and provisions.

##### Environmental exposure controls

Observe legal regulations and provisions.

## SECTION 9: Physical and chemical properties

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

Physical state:	Aerosol
Colour:	light yellow
Odour:	amine-like

	Test method
Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	97 °C
Flammability:	not applicable
Lower explosion limits:	0,7 vol. %
Upper explosion limits:	13,5 vol. %
Flash point:	15 °C
Auto-ignition temperature:	> 200 °C
Decomposition temperature:	not determined



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pH-Value (at 20 °C):	
Viscosity / kinematic: (at 40 °C)	< 20,5 mm <sup>2</sup> /s
Water solubility:	The study does not need to be conducted because the substance is known to be insoluble in water.
Solubility in other solvents not determined	
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	not determined
Density (at 20 °C):	0,8675 g/cm <sup>3</sup> DIN 51757
Relative vapour density:	not determined

**9.2. Other information****Information with regard to physical hazard classes**

Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

Oxidizing properties

Not oxidising.

**Other safety characteristics**

Evaporation rate:

not determined

Solid content:

not determined

Sublimation point:

not applicable

Softening point:

not determined

Pour point:

not determined

**Further Information**

Data apply to technical substance: Relative density, Colour, Odour, Viscosity, pH.

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Extremely flammable aerosol.

**10.2. Chemical stability**

The product is stable under normal conditions.

**10.3. Possibility of hazardous reactions**

Do not expose to temperatures above 50 °C. Heating causes rise in pressure with risk of bursting.

**10.4. Conditions to avoid**

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. Take precautionary measures against static discharges.

**10.5. Incompatible materials**

Oxidizing agents. Pyrophoric or self-heating substances.

**10.6. Hazardous decomposition products**Incomplete combustion and thermolysis gases of different toxicity can occur. In the case of hydrocarbonaceous products such as CO, CO<sub>2</sub>, aldehydes and soot. These can be very dangerous if they are inhaled in high concentrations or in enclosed spaces.**Further information**

Do not mix with other chemicals.

**SECTION 11: Toxicological information**



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#### **11.1. Information on hazard classes as defined in GB CLP Regulation**

##### **Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

##### **Acute toxicity**

Harmful in contact with skin.

Harmful if inhaled.

##### **ATEmix calculated**

ATE (oral) 7576 mg/kg; ATE (dermal) 1857 mg/kg; ATE (inhalation vapour) 18,61 mg/l; ATE (inhalation dust/mist) 1,980 mg/l

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CAS No	Chemical name					
	Exposure route	Dose	Species	Source	Method	
1330-20-7	xylene					
	oral	LD50 mg/kg	3523	Rat	Study report (1986)	EU Method B.1
	dermal	LD50 mg/kg	12126	Rabbit	Publication (1962)	Single dermal dose under occlusion follo
	inhalation (4 h) vapour	LC50 mg/l	6700	Rat	Toxicol Appl Pharmacol 33:543-558. (1975)	EU Method B.2
	inhalation dust/mist	ATE	1,5 mg/l			
71-23-8	n-propanol					
	oral	LD50 mg/kg	8000	Rat		
	dermal	LD50 mg/kg	4032	Rabbit		
	inhalation (4 h) vapour	LC50 mg/l	> 33,8	Rat		
64742-95-6	Hydrocarbons, C9, aromatics					
	oral	LD50 mg/kg	3592	Rat		
	dermal	LD50 mg/kg	> 3160	Rabbit		
100-41-4	ethylbenzene					
	oral	LD50 mg/kg	3500	Rat	GESTIS	
	dermal	LD50 mg/kg	15400	Rabbit	GESTIS	
	inhalation (4 h) vapour	LC50	17,2 mg/l	Rat		
	inhalation dust/mist	ATE	1,5 mg/l			
110-91-8	morpholine					
	oral	LD50 mg/kg	ca. 1900	Rat	Study report (1967)	OECD Guideline 401
	dermal	LD50 mg/kg	ca. 500	Rabbit	Arch. Ind. Hyg Occup. Med. 10 61-68 (195	OECD Guideline 402
	inhalation (4 h) vapour	LC50	8 mg/l	Rat		
	inhalation dust/mist	ATE	0,5 mg/l			
108-88-3	toluene					
	oral	LD50 mg/kg	5580	Rat		
	dermal	LD50 mg/kg	12200	Rabbit	GESTIS	
	inhalation (4 h) vapour	LC50	49 mg/l	Rat	GESTIS	

**Irritation and corrosivity**

Causes severe skin burns and eye damage.

Causes serious eye damage.



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#### Sensitising effects

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

#### Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of damaging fertility. Suspected of damaging the unborn child. (morpholine)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

No indication of human carcinogenicity.

No indications of human germ cell mutagenicity exist.

No indications of human reproductive toxicity exist.

#### STOT-single exposure

May cause respiratory irritation. (xylene)

May cause drowsiness or dizziness.

#### STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure. (xylene; ethylbenzene)

#### Aspiration hazard

May be fatal if swallowed and enters airways.

#### Information on likely routes of exposure

Ingestion, Inhalation, Skin contact, Eye contact.

Reference to other sections: 2.1, 4.2.

#### Specific effects in experiment on an animal

No information available.

#### 11.2. Information on other hazards

##### Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meet the criteria.

##### Other information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

### SECTION 12: Ecological information

#### 12.1. Toxicity

Harmful to aquatic life with long lasting effects.



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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
1330-20-7	xylene					
	Acute fish toxicity	LC50 8,4 mg/l	96 h	Oncorhynchus mykiss	Ecotoxicology and Environmental Safety.	OECD Guideline 203
	Acute algae toxicity	ErC50 4,9 mg/l	72 h	Pseudokirchneriella subcapitata	Ecotoxicology and Environmental Safety.	OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l > 3,4	48 h	Ceriodaphnia dubia	Ecotoxicology and Environmental Safety 3	other: US EPA 600/4-91-003
	Fish toxicity	NOEC mg/l > 1,3	56 d	Oncorhynchus mykiss	Appl. Sci. Branch, Eng. Res. Cent. Denve	Fish were exposed in artificial streams
	Crustacea toxicity	NOEC mg/l 1,17	7 d	Ceriodaphnia dubia	Ecotoxicology and Environmental Safety 3	other: US EPA 600/4-91-003
	Acute bacteria toxicity	EC50 mg/l ( ) > 175	0,5 h	Activated sludge	Research Journal WPCF 60(10) 1850-1856 (	OECD Guideline 209
71-23-8	n-propanol					
	Acute fish toxicity	LC50 mg/l 4480	96 h	Pimephales promelas		
64742-95-6	Hydrocarbons, C9, aromatics					
	Acute fish toxicity	LC50 9,2 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)		
	Acute algae toxicity	ErC50 mg/l 2,6-2,9	96 h	Pseudokirchneriella subcapitata		
	Acute crustacea toxicity	EC50 3,2 mg/l	48 h	Daphnia magna		
100-41-4	ethylbenzene					
	Acute algae toxicity	ErC50 3,6 mg/l	96 h	Pseudokirchneriella subcapitata	GESTIS	
110-91-8	morpholine					
	Acute fish toxicity	LC50 380 mg/l	96 h	Oncorhynchus mykiss	Chemosphere 9: 753-762 (1980)	other: IRSA
	Acute algae toxicity	ErC50 28 mg/l	96 h	Pseudokirchneriella subcapitata	Chemosphere 9: 753-762 (1980)	other: EPA, National Eutrophication Rese
	Acute crustacea toxicity	EC50 mg/l 44,5	48 h	Daphnia magna	Study report (1997)	OECD Guideline 202
	Algae toxicity	NOEC 10 mg/l	4 d	Desmodesmus subspicatus		
	Crustacea toxicity	NOEC 5 mg/l	21 d	Daphnia magna	Study report (1997)	OECD Guideline 211
108-88-3	toluene					
	Acute fish toxicity	LC50 13 mg/l	96 h	Carassius auratus	IUCLID	

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	Acute algae toxicity	ErC50 mg/l	> 433	96 h	Pseudokirchneriella subcapitata	GESTIS	
	Acute crustacea toxicity	EC50 mg/l	11,5	48 h	Daphnia magna		

**12.2. Persistence and degradability**

The product has not been tested.

CAS No	Chemical name	Method	Value	d	Source
		Evaluation			
110-91-8	morpholine				
	OECD 301E		93%	25	
	Easily biodegradable (concerning to the criteria of the OECD)				

**12.3. Bioaccumulative potential**

The product has not been tested.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
1330-20-7	xylene	3,2
71-23-8	n-propanol	0,29
100-41-4	ethylbenzene	3,15
110-91-8	morpholine	-2,55
108-88-3	toluene	2,73

**BCF**

CAS No	Chemical name	BCF	Species	Source
1330-20-7	xylene	> 5,5 - < 12,2	Oncorhynchus mykiss	Appl. Sci. Branch, E
110-91-8	morpholine	0	Cyprinus carpio	Review article or ha

**12.4. Mobility in soil**

The product has not been tested.

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

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

The product has not been tested.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**12.7. Other adverse effects**

No information available.

**Further information**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

**SECTION 13: Disposal considerations****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

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**List of Wastes Code - used product**

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

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

**14.1. UN number or ID number:** UN 1950  
**14.2. UN proper shipping name:** AEROSOLS  
**14.3. Transport hazard class(es):** 2  
**14.4. Packing group:** -  
Hazard label: 2.1+8  
Classification code: 5FC  
Special Provisions: 190 327 344 625  
Limited quantity: 1 L  
Excepted quantity: E0  
Transport category: 1  
Tunnel restriction code: D

**Inland waterways transport (ADN)**

**14.1. UN number or ID number:** UN 1950  
**14.2. UN proper shipping name:** AEROSOLS  
**14.3. Transport hazard class(es):** 2  
**14.4. Packing group:** -  
Hazard label: 2.1+8  
Classification code: 5FC  
Special Provisions: 190 327 344 625  
Limited quantity: 1 L  
Excepted quantity: E0

**Marine transport (IMDG)**

**14.1. UN number or ID number:** UN 1950  
**14.2. UN proper shipping name:** AEROSOLS  
**14.3. Transport hazard class(es):** 2.1  
**14.4. Packing group:** -  
Hazard label: 2.1+8  
Marine pollutant: no  
Special Provisions: 63, 190, 277, 327, 344, 381,959  
Limited quantity: 1000 mL  
Excepted quantity: E0  
EmS: F-D, S-U

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number or ID number:** UN 1950  
**14.2. UN proper shipping name:** AEROSOLS, flammable, containing substances in Class 8, Packing Group I  
**14.3. Transport hazard class(es):** 2.1  
**14.4. Packing group:** -  
Hazard label: 2.1+8  
Special Provisions: A145 A167 A802

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Limited quantity Passenger:	Forbidden
Passenger LQ:	Forbidden
Excepted quantity:	E0
IATA-packing instructions - Passenger:	Forbidden
IATA-max. quantity - Passenger:	Forbidden
IATA-packing instructions - Cargo:	Forbidden
IATA-max. quantity - Cargo:	Forbidden

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Warning: Flammable gases.

**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****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 28, Entry 40, Entry 48, Entry 75

Directive 2010/75/EU on industrial emissions: No information available.

Directive 2004/42/EC on VOC in paints and varnishes: No information available.

**Additional information**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) Aerosol Directive (75/324/)

**National regulatory information**

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.

Water hazard class (D): 2 - obviously hazardous to water

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s): 11.



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**Abbreviations and acronyms**

Aerosol: Aerosols

Flam. Liq: Flammable liquids

Acute Tox: Acute toxicity

Asp. Tox: Aspiration hazard

Skin Corr: Skin corrosion

Skin Irrit: Skin irritation

Eye Dam: Eye damage

Eye Irrit: Eye irritation

Repr: Reproductive toxicity

STOT SE: Specific target organ toxicity - single exposure

STOT RE: Specific target organ toxicity - repeated exposure

Aquatic Chronic: Chronic aquatic hazard

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA: International Air Transport Association

IMDG: International Maritime Code for Dangerous Goods

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL/DMEL: Derived No Effect Level / Derived Minimal Effect Level

WEL (UK): Workplace Exposure Limits

TWA (EC): Time-Weighted Average

ATE: Acute Toxicity Estimate

STEL (EC) Short Term Exposure Limit

LC50: Lethal Concentration

EC50: half maximal Effective Concentration

ErC50: means EC50 in terms of reduction of growth rate

**Classification for mixtures and used evaluation method according to GB CLP Regulation**

Classification	Classification procedure
Aerosol 1; H222-H229	On basis of test data
Acute Tox. 4; H312	Bridging principle "Aerosols"
Acute Tox. 4; H332	Bridging principle "Aerosols"
Asp. Tox. 1; H304	Calculation method
Skin Corr. 1B; H314	Bridging principle "Aerosols"
Eye Dam. 1; H318	Bridging principle "Aerosols"
Repr. 2; H361fd	Calculation method
STOT SE 3; H335	Bridging principle "Aerosols"
STOT SE 3; H336	Bridging principle "Aerosols"
STOT RE 2; H373	Bridging principle "Aerosols"
Aquatic Chronic 3; H412	Calculation method

**Relevant H and EUH statements (number and full text)**

H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H302	Harmful if swallowed.

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H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H312+H332	Harmful in contact with skin or if inhaled.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
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.
EUH066	Repeated exposure may cause skin dryness or cracking.

**Further Information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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