

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Proguard M-ST1 Part A

Revision date: 21.04.2020

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

1.1. Product identifier

Proguard M-ST1 Part A

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

Use of the substance/mixture

Colour

Uses advised against

No data available

1.3. Details of the supplier of the safety data sheet

Company name:	Chesterton International GmbH	
Street:	Am Lenzenfleck 23	
Place:	DE-85737 Ismaning GERMANY	
Telephone:	+49 89 99 65 46 - 0	Telefax: +49 89 99 65 46 - 50
e-mail:	eu-sds@chesterton.com	
e-mail (Contact person):	eu-sds@chesterton.com	
Internet:	www.chesterton.com	
Responsible Department:	eu-sds@chesterton.com	

1.4. Emergency telephone number:

+49(0) 551 - 1 92 40 (GIZ-Nord, 24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:

Flammable liquid: Flam. Liq. 3

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory or skin sensitisation: Skin Sens. 1A

Hazard Statements:

Flammable liquid and vapour.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

2.2. Label elements

Regulation (EC) No. 1272/2008

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Hazard components for labelling

Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2,2'-
((1-methylethylidene)bis(4,1-phenyleneoxymethylene))bis(oxirane)

2,2'-[(1-Methylethyliden)bis(4,1-phenyleneoxymethylen)]bisoxiran

Phenol, methylstyrenated

Reaction products of fatty acids, tall oil and fatty acids, C18 unsaturated, trimers and fatty acids, C18 unsaturated, dimers with (9Z)-octadec-9-en-1-amine

Signal word: Warning

Pictograms:



Hazard statements

H226 Flammable liquid and vapour.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

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

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P501 Dispose of contents/container to an appropriate recycling or disposal facility.

2.3. Other hazards

No information available.

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			
25036-25-3	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2,2'-((1-methylethylidene)bis(4,1-phenyleneoxymethylene))bis(oxirane)			25 - < 50 %
	Skin Irrit. 2, Skin Sens. 1; H315 H317			
1675-54-3	2,2'-[(1-Methylethyliden)bis(4,1-phenyleneoxymethylen)]bisoxiran			20 - < 25 %
	216-823-5	603-073-00-2	01-2119456619-26	
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1; H315 H319 H317			
7429-90-5	aluminium powder (stabilised)			10 - < 15 %
	231-072-3	013-002-00-1	01-2119529243-45	
	Flam. Sol. 1, Water-react. 2; H228 H261			
1330-20-7	xylene			7 - < 10 %
	215-535-7	601-022-00-9		
	Flam. Liq. 3, Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2; H226 H332 H312 H315			
68512-30-1	Phenol, methylstyrenated			3 - < 5 %
	270-966-8		01-2119555274-38	
	Skin Sens. 1, Aquatic Chronic 3; H317 H412			
78-83-1	2-methylpropan-1-ol; iso-butanol			1 - < 2,5 %
	201-148-0	603-108-00-1	01-2119484609-23	
	Flam. Liq. 3, Skin Irrit. 2, Eye Dam. 1, STOT SE 3, STOT SE 3; H226 H315 H318 H335 H336			
128601-23-0	Hydrocarbons, C9, aromatics			1 - < 2,5 %
	918-668-5		01-2119455851-35	
	Flam. Liq. 3, STOT SE 3, Asp. Tox. 1, Aquatic Chronic 2; H226 H336 H304 H411			
100-41-4	ethylbenzene			1 - < 2,5 %
	202-849-4	601-023-00-4		
	Flam. Liq. 2, Acute Tox. 4, STOT RE 2, Asp. Tox. 1, Aquatic Chronic 3; H225 H332 H373 H304 H412			
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether			0,5 - < 1 %
	203-603-9	603-064-00-3		
	Flam. Liq. 3, Acute Tox. 3, STOT SE 3; H226 H331 H336			
	Reaction products of fatty acids, tall oil and fatty acids, C18 unsaturated, trimers and fatty acids, C18 unsaturated, dimers with (9Z)-octadec-9-en-1-amine			0,25 - 0,5 %
	942-330-6		01-2120101675-63	
	Acute Tox. 4, Skin Irrit. 2, Skin Sens. 1A, STOT RE 2; H302 H315 H317 H373			

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

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SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Change contaminated, saturated clothing. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

Remove casualty to fresh air and keep warm and at rest.
If unconscious place in recovery position and seek medical advice.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Seek medical advice immediately.
Do not wash with: Solvents/Thinner

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.
Do NOT induce vomiting.

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

Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours.

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

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Dry extinguishing powder. Carbon dioxide (CO₂). alcohol resistant foam. Water spray jet

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Carbon monoxide Carbon dioxide (CO₂). Nitrogen oxides (NO_x)

5.3. Advice for firefighters

Special protective equipment for firefighters Protective clothing. In case of fire: Wear self-contained breathing apparatus.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

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6.1. Personal precautions, protective equipment and emergency procedures

See protective measures under point 7 and 8.

Provide adequate ventilation.

Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Cover drains.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

See protective measures under point 7 and 8.

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

See section 8. Wear personal protection equipment (refer to section 8). Keep container tightly closed.

Advice on protection against fire and explosion

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place. Keep/Store only in original container.

Hints on joint storage

Keep away from:

Food and feedingstuffs

Oxidising agent

Further information on storage conditions

Keep away from:

Frost

Heat

Humidity

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
107-98-2	1-Methoxypropan-2-ol	100	375		TWA (8 h)	WEL
		150	560		STEL (15 min)	WEL
78-83-1	2-Methylpropan-1-ol	50	154		TWA (8 h)	WEL
		75	231		STEL (15 min)	WEL
7429-90-5	Aluminium metal, respirable dust	-	4		TWA (8 h)	WEL
100-41-4	Ethylbenzene	100	441		TWA (8 h)	WEL
		125	552		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	Exposure route	Effect	Value
1675-54-3	2,2'-[(1-Methylethyliden)bis(4,1-phenylenoxymethylen)]bisoxiran			
Worker DNEL, long-term	inhalation	local		310 mg/m ³
Consumer DNEL, long-term	inhalation	local		55 mg/m ³
Worker DNEL, long-term	inhalation	systemic		4,93 mg/m ³
Worker DNEL, long-term	dermal	systemic		0,75 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic		0,87 mg/m ³
Consumer DNEL, long-term	dermal	systemic		0,0893 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic		0,5 mg/kg bw/day
7429-90-5	aluminium powder (stabilised)			
Worker DNEL, long-term	inhalation	systemic		3,72 mg/m ³
Worker DNEL, long-term	inhalation	local		3,72 mg/m ³
Consumer DNEL, long-term	oral	systemic		7,9 mg/kg bw/day
1330-20-7	xylene			
Worker DNEL, long-term	inhalation	local		221 mg/m ³
Consumer DNEL, long-term	inhalation	local		65,3 mg/m ³
Worker DNEL, long-term	inhalation	systemic		221 mg/m ³
Worker DNEL, acute	inhalation	systemic		442 mg/m ³
Worker DNEL, acute	inhalation	local		442 mg/m ³
Worker DNEL, long-term	dermal	systemic		212 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic		65,3 mg/m ³
Consumer DNEL, acute	inhalation	systemic		260 mg/m ³
Consumer DNEL, acute	inhalation	local		260 mg/m ³
Consumer DNEL, long-term	dermal	systemic		125 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic		12,5 mg/kg bw/day
68512-30-1	Phenol, methylstyrenated			
Worker DNEL, long-term	inhalation	systemic		57 mg/m ³
Worker DNEL, long-term	dermal	systemic		16,4 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic		28 mg/m ³

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Consumer DNEL, long-term	dermal	systemic	8 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	4 mg/kg bw/day
78-83-1	2-methylpropan-1-ol; iso-butanol		
Worker DNEL, long-term	inhalation	local	310 mg/m ³
Consumer DNEL, long-term	inhalation	local	55 mg/m ³
128601-23-0	Hydrocarbons, C9, aromatics		
Worker DNEL, long-term	dermal	systemic	25 mg/kg bw/day
Worker DNEL, long-term	inhalation	systemic	150 mg/m ³
Consumer DNEL, long-term	dermal	systemic	11 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	32 mg/m ³
Consumer DNEL, long-term	oral	systemic	11 mg/kg bw/day
100-41-4	ethylbenzene		
Worker DNEL, acute	inhalation	local	293 mg/m ³
Worker DNEL, long-term	inhalation	systemic	77 mg/m ³
Worker DNEL, acute	inhalation	systemic	293 mg/m ³
Worker DNEL, long-term	dermal	systemic	180 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	15 mg/m ³
Consumer DNEL, long-term	oral	systemic	1,6 mg/kg bw/day
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether		
Worker DNEL, long-term	inhalation	systemic	369 mg/m ³
Consumer DNEL, long-term	inhalation	systemic	43,9 mg/m ³
Worker DNEL, acute	inhalation	local	553,5 mg/m ³
Worker DNEL, acute	inhalation	systemic	553,5 mg/m ³
Worker DNEL, long-term	dermal	systemic	183 mg/kg bw/day
Consumer DNEL, long-term	dermal	systemic	78 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	33 mg/kg bw/day
	Reaction products of fatty acids, tall oil and fatty acids, C18 unsaturated, trimers and fatty acids, C18 unsaturated, dimers with (9Z)-octadec-9-en-1-amine		
Worker DNEL, long-term	inhalation	systemic	0,75 mg/m ³
Worker DNEL, long-term	dermal	systemic	0,43 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	0,37 mg/m ³
Consumer DNEL, long-term	dermal	systemic	0,21 mg/kg bw/day

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Consumer DNEL, long-term	oral	systemic	0,11 mg/kg bw/day
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PNEC values

CAS No	Substance	Value
1675-54-3	2,2'-[(1-Methylethyliden)bis(4,1-phenylenoxymethylen)]bisoxiran	
	Freshwater	0,006 mg/l
	Freshwater (intermittent releases)	0,018 mg/l
	Marine water	0,001 mg/l
	Freshwater sediment	0,341 mg/kg
	Marine sediment	0,034 mg/kg
	Secondary poisoning	11 mg/kg
	Micro-organisms in sewage treatment plants (STP)	10 mg/l
	Soil	0,065 mg/kg
7429-90-5	aluminium powder (stabilised)	
	Freshwater	0,0749 mg/l
	Micro-organisms in sewage treatment plants (STP)	20 mg/l
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
68512-30-1	Phenol, methylstyrenated	
	Freshwater	0,014 mg/l
	Freshwater (intermittent releases)	0,14 mg/l
	Marine water	0,0014 mg/l
	Freshwater sediment	52,9 mg/kg
	Marine sediment	5,3 mg/kg
	Micro-organisms in sewage treatment plants (STP)	2,4 mg/l
	Soil	10,5 mg/kg
78-83-1	2-methylpropan-1-ol; iso-butanol	
	Freshwater	0,4 mg/l
	Freshwater (intermittent releases)	11 mg/l
	Marine water	0,04 mg/l
	Freshwater sediment	1,56 mg/kg

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Marine sediment	0,156 mg/kg
Micro-organisms in sewage treatment plants (STP)	10 mg/l
Soil	0,076 mg/kg
100-41-4	ethylbenzene
Freshwater	0,1 mg/l
Freshwater (intermittent releases)	0,1 mg/l
Marine water	0,01 mg/l
Freshwater sediment	13,7 mg/kg
Marine sediment	1,37 mg/kg
Secondary poisoning	20 mg/kg
Micro-organisms in sewage treatment plants (STP)	9,6 mg/l
Soil	2,68 mg/kg
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether
Freshwater	10 mg/l
Freshwater (intermittent releases)	100 mg/l
Marine water	1 mg/l
Freshwater sediment	52,3 mg/kg
Marine sediment	5,2 mg/kg
Micro-organisms in sewage treatment plants (STP)	100 mg/l
Soil	4,59 mg/kg
	Reaction products of fatty acids, tall oil and fatty acids, C18 unsaturated, trimers and fatty acids, C18 unsaturated, dimers with (9Z)-octadec-9-en-1-amine
Freshwater	0,194 mg/l
Freshwater (intermittent releases)	0,097 mg/l
Marine water	0,019 mg/l
Freshwater sediment	29,6 mg/kg
Marine sediment	2,96 mg/kg
Secondary poisoning	0,416 mg/kg
Micro-organisms in sewage treatment plants (STP)	100 mg/l
Soil	120 mg/kg

8.2. Exposure controls

Appropriate engineering controls

Provide adequate ventilation as well as local exhaust at critical locations.

Protective and hygiene measures

Work in well-ventilated zones or use proper respiratory protection. Only wear fitting, comfortable and clean protective clothing. Avoid contact with skin, eyes and clothes. Wash hands and face before breaks and after work and take a shower if necessary.

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

Eye/face protection

goggles

Hand protection

Tested protective gloves must be worn: EN ISO 374

NBR (Nitrile rubber), Butyl caoutchouc (butyl rubber)

Wearing time with permanent contact: Thickness of the glove material: $\geq 0,4$ mm, Breakthrough time (maximum wearing time): >480 min

Wearing time with occasional contact (splashes):: Thickness of the glove material: $\geq 0,1$ mm, Breakthrough time (maximum wearing time) > 30 min

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.

Breakthrough times and swelling properties of the material must be taken into consideration.

Skin protection

Protective clothing

Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Combination filtering device (EN 14387) ABEK-P2

Self-contained respirator (breathing apparatus) (DIN EN 133)

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid	
Colour:	various	
Odour:	characteristic	
pH-Value:		No data available

Changes in the physical state

Melting point:	No data available
Initial boiling point and boiling range:	137 - 143 °C
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
Flash point:	> 55 °C

Flammability

Solid:	No data available
Gas:	No data available

Explosive properties

not explosive according to EU A.14

Vapours can form explosive mixtures with air.

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Lower explosion limits:	No data available
Upper explosion limits:	No data available
Ignition temperature:	240 °C
Auto-ignition temperature	
Solid:	No data available
Gas:	No data available
Decomposition temperature:	No data available
Oxidizing properties	
Not oxidising.	
Vapour pressure:	No data available
Density:	1,171 g/cm ³
Water solubility:	Immiscible
Solubility in other solvents	
No information available.	
Partition coefficient:	No data available
Viscosity / dynamic:	No data available
Viscosity / kinematic: (at 20 °C)	100 mm ² /s
Vapour density:	No data available
Evaporation rate:	No data available
Solvent content:	18,9

9.2. Other information

Solid content:	78,1
No information available.	

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is stable under storage at normal ambient temperatures.

10.2. Chemical stability

The substance is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

10.5. Incompatible materials

No information available.

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10.6. Hazardous decomposition products

No information available.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

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

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
1675-54-3	2,2'-[(1-Methylethyliden)bis(4,1-phenylenoxymethylen)]bisoxiran				
	oral	LD50 mg/kg	19800	Rabbit	Publication (1958) Rabbits were orally gavigated with test ma
	dermal	LD50 mg/kg	> 2000	Rat	Study report (2007) OECD Guideline 402
	inhalation (4 h) vapour	LC50 mg/l	ca. 24,6	Rat	AMA Arch. Ind. Hyg. Occ. Med. 10: 61-68 Rats were exposed to 8000 ppm of the tes
7429-90-5	aluminium powder (stabilised)				
	oral	LD50 mg/kg	> 15900	Rat	Study report (1969) OECD Guideline 401
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	6700 mg/l	Rat	Toxicol Appl Pharmacol 33:543-558. (1975) EU Method B.2
	inhalation aerosol	ATE	1,5 mg/l		
68512-30-1	Phenol, methylstyrenated				
	oral	LD50 mg/kg	> 2000	Rat	Study report (2007) OECD Guideline 423
	dermal	LD50 mg/kg	> 2000	Rat	Study report (2009) OECD Guideline 402
78-83-1	2-methylpropan-1-ol; iso-butanol				
	oral	LD50 mg/kg	3350	Rat	Study report (1993) EPA OTS 798.1175
	dermal	LD50 mg/kg	2460	Rabbit	Study report (1993) EPA OTS 798.1100
	inhalation (4 h) vapour	LC50 mg/l	ca. 24,6	Rat	AMA Arch. Ind. Hyg. Occ. Med. 10: 61-68 Rats were exposed to 8000 ppm of the tes
128601-23-0	Hydrocarbons, C9, aromatics				
	oral	LD50 mg/kg	3592	Rat	
	dermal	LD50 mg/kg	> 3160	Rabbit	Study report (1984) OECD Guideline 402
	inhalation (4 h) vapour	LC50 mg/l	>6193	Rat	
100-41-4	ethylbenzene				

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	oral	LD50 mg/kg	ca. 3500	Rat	AMA Arch. Ind. Health. 14:387-398. (1956)	No guideline available
	dermal	LD50 mg/kg	15400	Rabbit	GESTIS	
	inhalation (4 h) vapour	LC50	17,2 mg/l	Rat		
	inhalation aerosol	ATE	1,5 mg/l			
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether					
	oral	LD50 mg/kg	4277	Rat	Study report (1985)	EU Method B.1
	dermal	LD50 mg/kg	> 2000	Rat	Study report (1985)	EU Method B.3
	inhalation (4 h) vapour	LC50	>20 mg/l	Rat		
	inhalation aerosol	ATE	0,5 mg/l			
	Reaction products of fatty acids, tall oil and fatty acids, C18 unsaturated, trimers and fatty acids, C18 unsaturated, dimers with (9Z)-octadec-9-en-1-amine					
	oral	LD50 mg/kg	> 300	Rat	Study report	OECD Guideline 423
	dermal	LD50 mg/kg	> 5000	Rat	Study report	OECD Guideline 402

Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

Sensitising effects

May cause an allergic skin reaction. (Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2,2'-((1-methylethylidene)bis(4,1-phenyleneoxymethylene))bis(oxirane); 2,2'-[(1-Methylethyliden)bis(4,1-phenyleneoxymethylen)]bisoxiran; Phenol, methylstyrenated; Reaction products of fatty acids, tall oil and fatty acids, C18 unsaturated, trimers and fatty acids, C18 unsaturated, dimers with (9Z)-octadec-9-en-1-amine)

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

SECTION 12: Ecological information

12.1. Toxicity

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
1675-54-3	2,2'-[(1-Methylethyliden)bis(4,1-phenylenoxymethylen)]bisoxiran					
	Acute fish toxicity	LC50 3,6 mg/l	96 h	Oncorhynchus mykiss	Study report (1982)	OECD Guideline 203
	Acute algae toxicity	ErC50 > 100 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (2007)	OECD Guideline 201
	Acute crustacea toxicity	EC50 2,8 mg/l	48 h	Daphnia magna	REACH Registration Dossier	OECD Guideline 202
	Crustacea toxicity	NOEC 0,3 mg/l	21 d	Daphnia magna	REACH Registration Dossier	OECD Guideline 211
7429-90-5	aluminium powder (stabilised)					
	Acute fish toxicity	LC50 6,17 mg/l	96 h	Oncorhynchus mykiss	Canadian Journal of Fisheries and Aquati	Juvenile rainbow trout were exposed to f
	Acute algae toxicity	ErC50 0,0169 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (2009)	OECD Guideline 201
	Acute crustacea toxicity	EC50 0,72 mg/l	48 h	Ceriodaphnia dubia	Study report (1992)	other: USEPA 1985. Methods for measuring
	Fish toxicity	NOEC 0,4 mg/l	7 d	Pimephales promelas	Study report (1992)	other: USEPA 1989. Short-term Methods fo
	Crustacea toxicity	NOEC 1,02 mg/l	6 d	Ceriodaphnia dubia	Study report (1992)	other: US EPA
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 > 3,4 mg/l	48 h	Ceriodaphnia dubia	Ecotoxicology and Environmental Safety 3	other: US EPA 600/4-91-003
	Fish toxicity	NOEC > 1,3 mg/l	56 d	Oncorhynchus mykiss	Appl. Sci. Branch, Eng. Res. Cent. Denve	Fish were exposed in artificial streams
	Crustacea toxicity	NOEC 1,17 mg/l	7 d	Ceriodaphnia dubia	Ecotoxicology and Environmental Safety 3	other: US EPA 600/4-91-003
	Acute bacteria toxicity	(> 175 mg/l)	0,5 h	Activated sludge	Research Journal WPCF 60(10) 1850-1856 (OECD Guideline 209

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68512-30-1	Phenol, methylstyrenated					
	Acute algae toxicity	ErC50	15 mg/l	72 h	Desmodesmus subspicatus	Study report (2009) OECD Guideline 201
	Acute crustacea toxicity	EC50	17 mg/l	48 h	Daphnia magna	Study report (2010) OECD Guideline 202
78-83-1	2-methylpropan-1-ol; iso-butanol					
	Acute fish toxicity	LC50 mg/l	1430	96 h	Pimephales promelas	Environ Toxicol Chem 14: 1591-1605 (1995) Method according to Brooke LT et al.
	Acute algae toxicity	ErC50 mg/l	1799	72 h	Pseudokirchneriella subcapitata	Study report (2007) OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	1100	48 h	Daphnia pulex	Environmental Toxicology and Chemistry 5 Method: ASTM Methods
	Crustacea toxicity	NOEC	20 mg/l	21 d	Daphnia magna	Water Res. 23(4): 501-510 (1989) Method: The test was conducted in line w
128601-23-0	Hydrocarbons, C9, aromatics					
	Acute fish toxicity	LC50	9,2 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	
	Acute algae toxicity	ErC50	7,9 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (2006) OECD Guideline 201
	Acute crustacea toxicity	EC50	3,2 mg/l	48 h	Daphnia magna	Study report (1994) OECD Guideline 202
	Fish toxicity	NOEC mg/l	1,228	28 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2010) The aquatic toxicity was estimated by a
	Crustacea toxicity	NOEC mg/l	2,144	21 d	Daphnia magna	CONCAWE, Brussels, Belgium (2010) The aquatic toxicity was estimated by a
100-41-4	ethylbenzene					
	Acute fish toxicity	LC50	4,2 mg/l	96 h	Oncorhynchus mykiss	Ecotoxicol. Environ. Saf. 16:158-169 (19) OECD Guideline 203
	Acute algae toxicity	ErC50	4,6 mg/l	72 h	Pseudokirchneriella subcapitata	Chemosphere 10(10): 1123-1126 (1981) OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	1,8 - 2,4	48 h	Daphnia magna	Water Res. 27:903-909 (1993) other: According to EPA method F
	Acute bacteria toxicity	(ca. 600 mg/l)		0,5 h	activated sludge, domestic	Study report (1988) OECD Guideline 209
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether					
	Acute fish toxicity	LC50	> 4600 - < 10000 mg/l	96 h	Leuciscus idus	Study report (1989) other: DIN 38 412, part L15

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	Acute algae toxicity	ErC50 > 1000 mg/l	96 h	Pseudokirchneriella subcapitata	Study report (1986)	OECD Guideline 201
	Acute crustacea toxicity	EC50 21100 - 25900 mg/l	48 h	Daphnia magna	Study report (1981)	other: Environmental Sciences Research T
Reaction products of fatty acids, tall oil and fatty acids, C18 unsaturated, trimers and fatty acids, C18 unsaturated, dimers with (9Z)-octadec-9-en-1-amine						
	Acute fish toxicity	LC50 0,1 - 1 mg/l	96 h	Danio rerio	http://www.echa.europa.eu/documents/1016	Literature
	Acute algae toxicity	ErC50 26,8 mg/l	72 h	Desmodesmus subspicatus	Study report (2013)	OECD Guideline 201
	Acute crustacea toxicity	EC50 0,01 - 0,013 mg/l	48 h	Daphnia magna	http://www.echa.europa.eu/documents/1016	Literature
	Crustacea toxicity	NOEC > 10 mg/l	21 d	Daphnia magna	Study report (2013)	OECD Guideline 211
	Acute bacteria toxicity	(> 1000 mg/l)	3 h	activated sludge of a predominantly domestic sewage	Study report (2013)	OECD Guideline 209

12.2. Persistence and degradability

No information available.

CAS No	Chemical name	Method	Value	d	Source
		Evaluation			
1675-54-3	2,2'-[(1-Methylethyliden)bis(4,1-phenylenoxymethylen)]bisoxiran	OECD 302B	12%	28	
	Not readily biodegradable (according to OECD criteria)				
100-41-4	ethylbenzene	OECD 301B	79%	10	
	Readily biodegradable (according to OECD criteria).				

12.3. Bioaccumulative potential

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Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
1675-54-3	2,2'-[(1-Methylethyliden)bis(4,1-phenylenoxymethylen)]bisoxiran	>= 2,64
1330-20-7	xylene	3,2
68512-30-1	Phenol, methylstyrenated	3,627
78-83-1	2-methylpropan-1-ol; iso-butanol	10
100-41-4	ethylbenzene	3,6
107-98-2	1-methoxy-2-propanol; monopropylene glycol methyl ether	< 1
	Reaction products of fatty acids, tall oil and fatty acids, C18 unsaturated, trimers and fatty acids, C18 unsaturated, dimers with (9Z)-octadec-9-en-1-amine	13,18

BCF

CAS No	Chemical name	BCF	Species	Source
1675-54-3	2,2'-[(1-Methylethyliden)bis(4,1-phenylenoxymethylen)]bisoxiran	31		Study report (2010)
1330-20-7	xylene	> 5,5 - < 12,2	Oncorhynchus mykiss	Appl. Sci. Branch, E
68512-30-1	Phenol, methylstyrenated	165	Cyprinus carpio	http://www.safe.nite
100-41-4	ethylbenzene	1	Oncorhynchus kisutch	Arch. Environ. Conta
	Reaction products of fatty acids, tall oil and fatty acids, C18 unsaturated, trimers and fatty acids, C18 unsaturated, dimers with (9Z)-octadec-9-en-1-amine	0,871		Catalogic calculatio

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

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

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Dispose of waste according to applicable legislation.

Contaminated packaging

Non-contaminated packages may be recycled. Dispose of waste according to applicable legislation.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:

UN 1263

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14.2. UN proper shipping name: PAINT
14.3. Transport hazard class(es): 3
14.4. Packing group: III
 Hazard label: 3
 Classification code: F1
 Special Provisions: 163 367 650
 Limited quantity: 5 L
 Excepted quantity: E1
 Transport category: 3
 Hazard No: 30
 Tunnel restriction code: D/E

Other applicable information (land transport)

Exemption: ADR/RID 2.2.3.1.5.1 (<450l)

Inland waterways transport (ADN)

14.1. UN number: UN 1263
14.2. UN proper shipping name: Paint
14.3. Transport hazard class(es): 3
14.4. Packing group: III
 Hazard label: 3
 Classification code: F1
 Special Provisions: 163 367 650
 Limited quantity: 5 L
 Excepted quantity: E1

Marine transport (IMDG)

14.1. UN number: UN 1263
14.2. UN proper shipping name: PAINT
14.3. Transport hazard class(es): 3
14.4. Packing group: III
 Hazard label: 3
 Special Provisions: 163, 223, 367, 955
 Limited quantity: 5 L
 Excepted quantity: E1
 EmS: F-E, S-E

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1263
14.2. UN proper shipping name: PAINT
14.3. Transport hazard class(es): 3
14.4. Packing group: III
 Hazard label: 3
 Special Provisions: A3 A72 A192
 Limited quantity Passenger: 10 L

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Passenger LQ:	Y344	
Excepted quantity:	E1	
IATA-packing instructions - Passenger:		355
IATA-max. quantity - Passenger:		60 L
IATA-packing instructions - Cargo:		366
IATA-max. quantity - Cargo:		220 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

No information available.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No information available.

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: 2-methylpropan-1-ol; iso-butanol

2010/75/EU (VOC): 18,87

2004/42/EC (VOC): 18,87

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. Observe employment restrictions for women of child-bearing age.

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

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

2,2'-[[1-Methylethylidene]bis(4,1-phenylenoxymethylen)]bisoxiran

aluminium powder (stabilised)

xylene

Phenol, methylstyrenated

2-methylpropan-1-ol; iso-butanol

Hydrocarbons, C9, aromatics

ethylbenzene

1-methoxy-2-propanol; monopropylene glycol methyl ether

Reaction products of fatty acids, tall oil and fatty acids, C18 unsaturated, trimers and fatty acids, C18

unsaturated, dimers with (9Z)-octadec-9-en-1-amine

SECTION 16: Other information

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Abbreviations and acronyms

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)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
CAS: Chemical Abstracts Service
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
SVHC: Substance of Very High Concern

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Flam. Liq. 3; H226	On basis of test data
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
Skin Sens. 1A; H317	Calculation method

Relevant H and EUH statements (number and full text)

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H228 Flammable solid.
H261 In contact with water releases flammable gases.
H302 Harmful if swallowed.

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H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs (...) through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

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