Safety Data Sheet

according to Regulation (EC) No 1907/2006

Proguard CN-1M V15 H3 Part B

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

1.1. Product identifier

Proguard CN-1M V15 H3 Part B

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

Use of the substance/mixture

Coatings and paints, fillers, putties, thinners

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:
Acute toxicity: Acute Tox. 4
Skin corrosion/irritation: Skin Corr. 1
Serious eye damage/eye irritation: Eye Dam. 1
Respiratory or skin sensitisation: Skin Sens. 1
Hazardous to the aquatic environment: Aquatic Chronic 2
Hazard Statements:
Harmful if swallowed.
Causes severe skin burns and eye damage.
Causes serious eye damage.
May cause an allergic skin reaction.
Toxic to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

3-aminomethyl-3,5,5-trimethylcyclohexylamine
m-phenylenebis(methylamine)
Copolymer of benzenamine and formaldehyde, hydrogenated
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)
4,4'-methylenebis(cyclohexylamine)

Signal word: Danger

Pictograms:

Hazard statements

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
135470-04-1	1,3-Benzenedimethanamine,reaction products with epichlorohydrin			38-47 %
	Aquatic Chronic 2; H411			
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine			15-25 %
	220-666-8	612-067-00-9	01-2119514687-32	
	Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1, Aquatic Chronic 3; H312 H302 H314 H317 H412			
1477-55-0	m-phenylenebis(methylamine)			10-25 %
	216-032-5		01-2119480150-50	
	Acute Tox. 4, Acute Tox. 4, Skin Corr. 1, Skin Sens. 1, Aquatic Chronic 3; H332 H302 H314 H317 H412 EUH071			
100-51-6	benzyl alcohol			5-10 %
	202-859-9	603-057-00-5	01-2119492630-38	
	Acute Tox. 4, Acute Tox. 4, Eye Irrit. 2; H332 H302 H319			
135108-88-2	Copolymer of benzenamine and formaldehyde, hydrogenated			2-7 %
	603-894-6		01-2119983522-33	
	Acute Tox. 4, Skin Corr. 1, Skin Sens. 1, STOT RE 2, Aquatic Chronic 3; H302 H314 H317 H373 H412			
113930-69-1	4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)			2-5 %
	500-302-7		01-2119965162-39	
	Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 2; H314 H318 H317 H411			
78-93-3	butanone; ethyl methyl ketone			1-5 %
	201-159-0	606-002-00-3	01-2119457290-43	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
919-30-2	3-aminopropyltriethoxysilane			0,5 - 2 %
	213-048-4	612-108-00-0	01-2119480479-24	
	Acute Tox. 4, Skin Corr. 1B; H302 H314			
1761-71-3	4,4'-methylenebis(cyclohexylamine)			0,1-1 %
	217-168-8		01-2119541673-38	
	Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1, STOT RE 2; H302 H314 H317 H373			

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

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

In case of inhalation of decomposition products, affected person should be moved into fresh air and kept still.

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

Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.
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.
After contact with skin, wash immediately with plenty of Lutrol.

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 (NOx)

5.3. Advice for firefighters

Special protective equipment for firefighters Protective clothing. In case of fire: Wear self-contained breathing apparatus.
Co-ordinate fire-fighting measures to the fire surroundings.

Additional information

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

SECTION 6: Accidental release measures

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
Remove persons to safety.

6.2. Environmental precautions

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

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

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
78-93-3	Butan-2-one (methyl ethyl ketone)	200	600		TWA (8 h)	WEL
		300	899		STEL (15 min)	WEL

Biological Monitoring Guidance Values (EH40)

CAS No	Substance	Parameter	Value	Test material	Sampling time
78-93-3	Butan-2-one	butan-2-one	70 µmol/L	urine	Post shift

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine			
Worker DNEL, long-term		inhalation	local	0,073 mg/m³
Worker DNEL, acute		inhalation	local	0,073 mg/m³
Consumer DNEL, long-term		oral	systemic	0,526 mg/kg bw/day
1477-55-0	m-phenylenebis(methylamine)			
Worker DNEL, long-term		dermal	systemic	0,33 mg/kg bw/day
Worker DNEL, long-term		inhalation	local	0,2 mg/m³
Worker DNEL, long-term		inhalation	systemic	1,2 mg/m³
100-51-6	benzyl alcohol			
Worker DNEL, long-term		inhalation	systemic	22 mg/m³
Worker DNEL, acute		inhalation	systemic	110 mg/m³
Worker DNEL, long-term		dermal	systemic	8 mg/kg bw/day
Worker DNEL, acute		dermal	systemic	40 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	5,4 mg/m³
Consumer DNEL, acute		inhalation	systemic	27 mg/m³
Consumer DNEL, long-term		dermal	systemic	4 mg/kg bw/day
Consumer DNEL, acute		dermal	systemic	20 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	4 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	20 mg/kg bw/day
,				
135108-88-2	Copolymer of benzenamine and formaldehyde, hydrogenated			
Worker DNEL, long-term		inhalation	systemic	0,2 mg/m³
Worker DNEL, acute		inhalation	systemic	2 mg/m³
Worker DNEL, long-term		dermal	systemic	2 mg/kg bw/day
Worker DNEL, acute		dermal	systemic	6 mg/kg bw/day
,				
113930-69-1	4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)			
Worker DNEL, acute		inhalation	systemic	6,99 mg/m³
Consumer DNEL, acute		inhalation	systemic	1,5 mg/m³
Consumer DNEL, acute		oral	systemic	0,99 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	2,33 mg/m³

Worker DNEL, long-term	dermal	systemic	1,33 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	0,5 mg/m³
Consumer DNEL, long-term	dermal	systemic	0,66 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	0,33 mg/kg bw/day
78-93-3	butanone; ethyl methyl ketone		
Consumer DNEL, long-term	oral	systemic	31 mg/kg bw/day
Consumer DNEL, long-term	dermal	systemic	412 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	106 mg/m³
Worker DNEL, long-term	inhalation	systemic	600 mg/m³
Worker DNEL, long-term	dermal	systemic	1161 mg/kg bw/day
919-30-2	3-aminopropyltriethoxysilane		
Worker DNEL, long-term	inhalation	systemic	59 mg/m³
Worker DNEL, acute	inhalation	systemic	59 mg/m³
Worker DNEL, long-term	dermal	systemic	8,3 mg/kg bw/day
Worker DNEL, acute	dermal	systemic	8,3 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	17,4 mg/m³
Consumer DNEL, acute	inhalation	systemic	17,4 mg/m³
Consumer DNEL, long-term	dermal	systemic	5 mg/kg bw/day
Consumer DNEL, acute	dermal	systemic	5 mg/kg bw/day
1761-71-3	4,4'-methylenebis(cyclohexylamine)		
Worker DNEL, long-term	inhalation	systemic	1 mg/m³
Worker DNEL, long-term	dermal	systemic	0,1 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	0,21 mg/m³
Consumer DNEL, long-term	dermal	systemic	0,06 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	0,06 mg/kg bw/day
,			

PNEC values

CAS No	Substance
Environmental compartment	Value
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine
Freshwater	0,06 mg/l
Freshwater (intermittent releases)	0,23 mg/l
Marine water	0,006 mg/l
Freshwater sediment	5,784 mg/kg
Marine sediment	0,578 mg/kg
Micro-organisms in sewage treatment plants (STP)	3,18 mg/l
Soil	1,121 mg/kg
1477-55-0	m-phenylenebis(methylamine)
Freshwater	0,094 mg/l
Freshwater (intermittent releases)	0,152 mg/l
Marine water	0,009 mg/l
Freshwater sediment	12,4 mg/kg
Marine sediment	1,24 mg/kg
Micro-organisms in sewage treatment plants (STP)	10 mg/l
Soil	2,44 mg/kg
100-51-6	benzyl alcohol
Freshwater	1 mg/l
Freshwater (intermittent releases)	2,3 mg/l
Marine water	0,1 mg/l
Freshwater sediment	5,27 mg/kg
Marine sediment	0,527 mg/kg
Micro-organisms in sewage treatment plants (STP)	39 mg/l
Soil	0,456 mg/kg
135108-88-2	Copolymer of benzenamine and formaldehyde, hydrogenated
Freshwater	0,015 mg/l
Freshwater (intermittent releases)	0,15 mg/l
Marine water	0,002 mg/l
Freshwater sediment	15 mg/kg
Marine sediment	1,5 mg/kg
Micro-organisms in sewage treatment plants (STP)	1,9 mg/l
Soil	1,8 mg/kg
113930-69-1	4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)

Freshwater	0,002 mg/l
Freshwater (intermittent releases)	0,021 mg/l
Marine water	0 mg/l
Freshwater sediment	2,08 mg/kg
Marine sediment	0,208 mg/kg
Secondary poisoning	3,33 mg/kg
Micro-organisms in sewage treatment plants (STP)	3,1 mg/l
Soil	0,41 mg/kg
78-93-3	butanone; ethyl methyl ketone
Freshwater	55,8 mg/l
Freshwater (intermittent releases)	55,8 mg/l
Marine water	55,8 mg/l
Freshwater sediment	284,74 mg/kg
Marine sediment	284,7 mg/kg
Secondary poisoning	1000 mg/kg
Micro-organisms in sewage treatment plants (STP)	709 mg/l
Soil	22,5 mg/kg
919-30-2	3-aminopropyltriethoxysilane
Freshwater	0,33 mg/l
Freshwater (intermittent releases)	3,3 mg/l
Marine water	0,033 mg/l
Freshwater sediment	1,2 mg/kg
Marine sediment	0,12 mg/kg
Micro-organisms in sewage treatment plants (STP)	13 mg/l
Soil	0,05 mg/kg
1761-71-3	4,4'-methylenebis(cyclohexylamine)
Freshwater	0,08 mg/l
Freshwater (intermittent releases)	0,08 mg/l
Marine water	0,008 mg/l
Freshwater sediment	137 mg/kg
Marine sediment	13,7 mg/kg
Secondary poisoning	0,556 mg/kg
Micro-organisms in sewage treatment plants (STP)	3,2 mg/l
Soil	27,2 mg/kg

8.2. Exposure controls

Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion 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.

Eye/face protection

Suitable eye protection:
Eye glasses with side 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: >= 0,4 mm, Breakthrough time (maximum wearing time): >480 min
Wearing time with occasional contact (splashes):: Thickness of the glove material: >= 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) A-P3
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:	light yellow
Odour:	characteristic
pH-Value:	~11

Changes in the physical state

Melting point:	No data available
Initial boiling point and boiling range:	No data available
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
Flash point:	>65 °C

Flammability

Solid:	No data available

Gas:	No data available

Explosive properties
No information available.

Lower explosion limits:	No data available
Upper explosion limits:	No data available
Ignition temperature:	No data available

Auto-ignition temperature

Solid:	No data available
Gas:	No data available
Decomposition temperature:	No data available

Oxidizing properties
No information available.

Vapour pressure: (at 25 °C)	No data available
Density (at 23 °C):	~1,06 g/cm³
Water solubility:	partially soluble

Solubility in other solvents
No information available.

Partition coefficient:	No data available
Viscosity / dynamic: (at 23 °C)	~1500 mPa·s
Vapour density:	No data available
Evaporation rate:	No data available

9.2. Other information

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

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

10.4. Conditions to avoid

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

10.5. Incompatible materials

Acid, Oxidising agent

10.6. Hazardous decomposition products

Does not decompose when used for intended uses. No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Harmful if swallowed.

ATEmix calculated

ATE (oral) 1899,7 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine				
	oral	LD50 1030 mg/kg	Rat	Study report (1965)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (2010)	OECD Guideline 402
1477-55-0	m-phenylenebis(methylamine)				
	oral	LD50 930 mg/kg	Rat	Study report (1973)	OECD Guideline 401
	dermal	LD50 > 3100 mg/kg	Rat	Study report (1975)	TK 11813 was applied to a shaved area of
	inhalation vapour	ATE 11 mg/l			
	inhalation (4 h) aerosol	LC50 1,34 mg/l	Rat		
100-51-6	benzyl alcohol				
	oral	LD50 1580 mg/kg	Mouse	Cosmet. Toxicol. 11, 1011-1013 (1973) (1	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rabbit	Raw Material Data Handbook, Vol.1:(Orga	EPA OTS 798.1100
	inhalation vapour	ATE 11 mg/l			
	inhalation (4 h) aerosol	LC50 >4,178 mg/l	Rat	ECHA	OECD 403
135108-88-2	Copolymer of benzenamine and formaldehyde, hydrogenated				
	oral	LD50 > 50 - < 300 mg/kg	Rat	Study report (2005)	OECD Guideline 423
	dermal	LD50 > 1000 mg/kg	Rabbit	Study report (1988)	other: 40CFR Part 158 Series 81-2, EPA P
113930-69-1	4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)				
	oral	LD50 1000 mg/kg	Rat	Study report (2007)	OECD Guideline 423
	dermal	LD50 2000 mg/kg	Rat	Study report (2007)	OECD Guideline 402
78-93-3	butanone; ethyl methyl ketone				
	oral	LD50 >2000 mg/kg	Rat	Supplier	OECD 423
	dermal	LD50 6400 - 8000 mg/kg	Rabbit	Supplier	
	inhalation (4 h) aerosol	LC50 34,5 mg/l	Rat		
919-30-2	3-aminopropyltriethoxysilane				

	oral	LD50 530 mg/kg	Mouse	Study report (1972)	No details of a guideline and only limit
1761-71-3	4,4'-methylenebis(cyclohexylamine)				
	oral	LD50 480 mg/kg	Rat	Study report (1987)	EPA OPP 81-1
	dermal	LD50 2110 mg/kg	Rabbit	Study report (1986)	EPA OPP 81-2

Irritation and corrosivity

Causes severe skin burns and eye damage.
Causes serious eye damage.

Sensitising effects

May cause an allergic skin reaction. (3-aminomethyl-3,5,5-trimethylcyclohexylamine; m-phenylenebis(methylamine); Copolymer of benzenamine and formaldehyde, hydrogenated; 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine); 4,4'-methylenebis(cyclohexylamine))

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

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine						
	Acute fish toxicity	LC50	110 mg/l	96 h	Leuciscus idus	Study report (1993)	EU Method C.1
	Acute algae toxicity	ErC50	37 mg/l	72 h	Desmodesmus subspicatus	Study report (1993)	EU Method C.3
	Acute crustacea toxicity	EC50	23 mg/l	48 h	Daphnia magna	Study report (2002)	OECD Guideline 202
	Crustacea toxicity	NOEC	3 mg/l	21 d	Daphnia magna	Study report (1993)	other: OECD 202, part 2
1477-55-0	m-phenylenebis(methylamine)						
	Acute fish toxicity	LC50	> 100 mg/l	96 h	Oncorhynchus mykiss	REACh Registration Dossier	OECD Guideline 203
	Acute algae toxicity	ErC50	12 mg/l	72 h	Desmodesmus subspicatus	REACh Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50	15,2 mg/l	48 h	Daphnia magna (Big water flea)		
	Acute bacteria toxicity	(> 1000 mg/l)		0,5 h	Activated sludge from laboratory wastewater plant	Study report (2004)	OECD Guideline 209
100-51-6	benzyl alcohol						
	Acute fish toxicity	LC50	> 100 mg/l	96 h	Oryzias latipes	Review article or handbook (2009)	OECD Guideline 203
	Acute algae toxicity	ErC50	770 mg/l	72 h	Pseudokirchneriella subcapitata	Review article or handbook (2009)	OECD Guideline 201
	Acute crustacea toxicity	EC50	230 mg/l	48 h	Daphnia magna	Review article or handbook (2009)	OECD Guideline 202
	Fish toxicity	NOEC	48,897 mg/l	30 d	Fish species	http://epa.gov/oppt/exposure/pubs/episui	other: QSAR
	Algea toxicity	NOEC	51 mg/l	3 d			
	Crustacea toxicity	NOEC	51 mg/l	21 d	Daphnia magna	Review article or handbook (2009)	OECD Guideline 211
	Acute bacteria toxicity	(1385 mg/l)		3 h	activated sludge, domestic	Study report (1989)	OECD Guideline 209
135108-88-2	Copolymer of benzenamine and formaldehyde, hydrogenated						
	Acute fish toxicity	LC50	63 mg/l	96 h	Poecilia reticulata	REACh Registration Dossier	OECD Guideline 203
	Acute algae toxicity	ErC50	43,94 mg/l	72 h	Desmodesmus subspicatus	Study report (2012)	EU Method C.3

113930-69-1	4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)						
	Acute fish toxicity	LC50	8,72 mg/l	96 h	Danio rerio	Study report (2008)	EU Method C.1
	Acute algae toxicity	ErC50	2,11 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (2014)	OECD Guideline 201
	Acute crustacea toxicity	EC50	3,54 mg/l	48 h	Daphnia magna	Study report (2008)	EU Method C.2
	Algea toxicity	NOEC	<30 mg/l	3 d			
	Acute bacteria toxicity	(119,5 mg/l)		3 h	Activated sludge	Study report (2007)	EU Method C.11
78-93-3	butanone; ethyl methyl ketone						
	Acute fish toxicity	LC50	2993 mg/l	96 h	Pimephales promelas	Study report (1998)	OECD Guideline 203
	Acute algae toxicity	ErC50	2029 mg/l	96 h	Pseudokirchneriella subcapitata	Study report (1998)	OECD Guideline 201
	Acute crustacea toxicity	EC50	308 mg/l	48 h	Daphnia magna	Study report (1998)	OECD Guideline 202
	Acute bacteria toxicity	(1150 mg/l)			Pseudomonas putida	Supplier	
919-30-2	3-aminopropyltriethoxysilane						
	Acute fish toxicity	LC50	> 934 mg/l	96 h	Danio rerio	Study report (1994)	OECD Guideline 203
	Acute algae toxicity	ErC50	> 1000 mg/l	72 h	Desmodesmus subspicatus	Study report (1994)	EU Method C.3
	Acute crustacea toxicity	EC50	331 mg/l	48 h	Daphnia magna	Study report (1993)	OECD Guideline 202
1761-71-3	4,4'-methylenebis(cyclohexylamine)						
	Acute fish toxicity	LC50	> 100 mg/l	96 h	Leuciscus idus	Study report (1988)	other: German industrial standard test g
	Acute algae toxicity	ErC50	140 - 200 mg/l	72 h		Study report (1990)	other: German Industrial Standard DIN 38
	Acute crustacea toxicity	EC50	7,07 mg/l	48 h	Daphnia magna	Study report (2002)	OECD Guideline 202
	Fish toxicity	NOEC	> 1 mg/l	14 d	freshwater fish	Technical report no. 91, Brussels, Novem	Estimation of a chronic NOEC according t
	Crustacea toxicity	NOEC	4 mg/l	21 d	Daphnia magna	Publication (2002)	OECD Guideline 211
	Acute bacteria toxicity	(ca. 100 mg/l)		0,5 h	activated sludge, industrial	Study report (1986)	OECD Guideline 209

12.2. Persistence and degradability

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine			
	OECD 301A/ ISO 7827/ EEC 92/69/V, C.4-A	8 %	28	
	Not readily biodegradable (according to OECD criteria)			
1477-55-0	m-phenylenebis(methylamine)			
	OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C	49 %	28	
	Not readily biodegradable (according to OECD criteria)			
100-51-6	benzyl alcohol			
	OECD 301A/ ISO 7827/ EEC 92/69/V, C.4-A	95 - 97%	21	
	Readily biodegradable (according to OECD criteria).			
113930-69-1	4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)			
	OECD 301F/ ISO 9408/ EEC 92/69/V, C.4-D	0%	28	
	Not readily biodegradable (according to OECD criteria)			
78-93-3	butanone; ethyl methyl ketone			
	OECD 301	98%	28	
	Readily biodegradable (according to OECD criteria).			
919-30-2	3-aminopropyltriethoxysilane			
		68	28	
1761-71-3	4,4'-methylenebis(cyclohexylamine)			
	OECD 302B/ ISO 9888/ EEC 92/69/V, C.9	<10%	28	

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	0,99
1477-55-0	m-phenylenebis(methylamine)	ca. 0,18
100-51-6	benzyl alcohol	1
135108-88-2	Copolymer of benzenamine and formaldehyde, hydrogenated	2,68
113930-69-1	4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)	2,3
78-93-3	butanone; ethyl methyl ketone	0,3
919-30-2	3-aminopropyltriethoxysilane	1,7
1761-71-3	4,4'-methylenebis(cyclohexylamine)	2,03

BCF

CAS No	Chemical name	BCF	Species	Source
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	3,16	QSAR estimate	Other company data (
1477-55-0	m-phenylenebis(methylamine)	3,16	no data	Validated suite of c
100-51-6	benzyl alcohol	1,371	QSAR model	http://epa.gov/oppt/
135108-88-2	Copolymer of benzenamine and formaldehyde, hydrogenated	> 18 - < 22	Cyprinus carpio	Study report (1997)
113930-69-1	4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)	4,7		
919-30-2	3-aminopropyltriethoxysilane	3,4	Cyprinus carpio	Other company data (
1761-71-3	4,4'-methylenebis(cyclohexylamine)	10,15	Cyprinus carpio	Other company data (

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 2735
14.2. UN proper shipping name:	AMINES, LIQUID, CORROSIVE, N.O.S. (Isophorondiamine, m-phenylenebis(methylamine))
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8
Classification code:	C7
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2

Hazard No:	80
Tunnel restriction code:	E

Inland waterways transport (ADN)

14.1. UN number:	UN 2735
14.2. UN proper shipping name:	AMINES, LIQUID, CORROSIVE, N.O.S. (Isophorondiamine, m-phenylenebis(methylamine))
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8
Classification code:	C7
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2

Marine transport (IMDG)

14.1. UN number:	UN 2735
14.2. UN proper shipping name:	AMINES, LIQUID, CORROSIVE, N.O.S. (Isophorondiamine, m-phenylenebis(methylamine))
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8
Marine pollutant:	P
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-A, S-B
Segregation group:	alkalis

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 2735
14.2. UN proper shipping name:	AMINES, LIQUID, CORROSIVE, N.O.S. (Isophorondiamine, m-phenylenebis(methylamine))
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8
Special Provisions:	A3 A803
Limited quantity Passenger:	0.5 L
Passenger LQ:	Y840
Excepted quantity:	E2
IATA-packing instructions - Passenger:	851
IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	855
IATA-max. quantity - Cargo:	30 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: yes

Danger releasing substance: 1,3-Benzenedimethanamine,reaction products with epichlorohydrin

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: 3-aminopropyltriethoxysilane

Information according to 2012/18/EU (SEVESO III): E2 Hazardous to the Aquatic Environment

National regulatory information

Water contaminating class (D): 2 - clearly water contaminating

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:
3-aminomethyl-3,5,5-trimethylcyclohexylamine
m-phenylenebis(methylamine)
benzyl alcohol
Copolymer of benzenamine and formaldehyde, hydrogenated
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)
butanone; ethyl methyl ketone
3-aminopropyltriethoxysilane
4,4'-methylenebis(cyclohexylamine)

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,3,11,15.

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 conernat 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 Refulations 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
Acute Tox. 4; H302	Calculation method
Skin Corr. 1; H314	Calculation method
Eye Dam. 1; H318	Calculation method
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
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.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH071	Corrosive to the respiratory tract.

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.)