

Safety Data Sheet

according to Regulation (EC) No 1907/2006

SUSSMANN &

HASULITH PRODUKTE SEIT 1925

STEINHAUSER G M B H

Print date: 20.08.2024

Hardener V20L

Revision date: 19.08.2024

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

1.1. Product identifier

Hardener V20L

UFI: R5N4-Y0Q4-100R-FPDK

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

Use of the substance/mixture

hardener for epoxy-systems

1.3. Details of the supplier of the safety data sheet

Company name: Sussmann & Steinhauser GmbH
Street: Glasschleiferstrasse 14
Place: D-87600 Kaufbeuren
Telephone: +49 (0) 8341-62087
E-mail: info@hasulith.de
Contact person: Herbert Steinhauser
Dr. Rüdiger Stieglitz
Internet: www.hasulith.de

1.4. Emergency telephone number:

Poisoning Information Centre Freiburg +49 (0) 761-19240
Poison control center Munich
Tel. 089-19240
E-Mail: tox@mri.tum.de

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Acute Tox. 4; H302
Acute Tox. 4; H332
Skin Corr. 1; H314
Eye Dam. 1; H318
Skin Sens. 1; H317
Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

benzyl alcohol
3-aminomethyl-3,5,5-trimethylcyclohexylamine
Reaction products of 3-aminomethyl-3,5,5-trimethylcyclohexylamine with 2,2'-
[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine
Phenol, 4,4'- (1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, reaction products with
2,2,4(or2,4,4)-trimethyl-1,6-hexanediamine

Signal word: Danger

Pictograms:



Hazard statements

H302+H332 Harmful if swallowed or if inhaled.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.

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H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing and 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.
P405 Store locked up.
P501 Dispose of contents/container to an appropriate recycling or disposal facility.

2.3. Other hazards

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

preparation based on polyamines

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
100-51-6	benzyl alcohol			25 - < 45 %
	202-859-9	603-057-00-5		
	Acute Tox. 4, Acute Tox. 4; H332 H302			
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine			25 - < 45 %
	220-666-8	612-067-00-9		
	Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1A; H302 H314 H318 H317			
68609-08-5	Reaction products of 3-aminomethyl-3,5,5-trimethylcyclohexylamine with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane			10 - < 25 %
	614-657-1			
	Acute Tox. 4, Skin Sens. 1, Aquatic Chronic 2; H302 H317 H411			
25513-64-8	2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine			2.5 - < 5 %
	247-063-2		01-2119560598-25	
	Acute Tox. 4, Skin Corr. 1A, Eye Dam. 1, Skin Sens. 1A; H302 H314 H318 H317			
111850-23-8	Phenol, 4,4'- (1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, reaction products with 2,2,4(or 2,4,4)-trimethyl-1,6-hexanediamine			2.5 - < 5 %
	Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 3; H302 H314 H318 H317 H412			

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	
100-51-6	202-859-9	benzyl alcohol	25 - < 45 %
		inhalation: ATE = 11 mg/l (vapours); inhalation: LC50 = >4178 mg/l (dusts or mists); dermal: LD50 = > 2000 mg/kg; oral: LD50 = 1580 mg/kg	
2855-13-2	220-666-8	3-aminomethyl-3,5,5-trimethylcyclohexylamine	25 - < 45 %
		dermal: LD50 = > 2000 mg/kg; oral: ATE 1030 mg/kg Skin Sens. 1A; H317: >= 0,001 - 100	
68609-08-5	614-657-1	Reaction products of 3-aminomethyl-3,5,5-trimethylcyclohexylamine with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	10 - < 25 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = 500 mg/kg	
25513-64-8	247-063-2	2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	2.5 - < 5 %
		oral: LD50 = 910 mg/kg	
111850-23-8		Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, reaction products with 2,2,4(or 2,4,4)-trimethyl-1,6-hexanediamine	2.5 - < 5 %
		oral: ATE = 500 mg/kg	

Further Information

This product contains no substances of very high concern in concentrations where an information obligation applies (REACH Regulation (EC) No. 1907/2006, Article 59).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down. Decontaminate, destroy and dispose of contaminated protective clothing (see section 13).

After inhalation

Provide fresh air. When in doubt or if symptoms are observed, get medical advice. Remove person to fresh air and keep comfortable for breathing. At substantial vapor concentrations respirators must be used. In case of irregular breathing or respiratory arrest provide artificial respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator. If unconscious but breathing normally, place in recovery position and seek medical advice. Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing. Chemical burns must be treated immediately by a doctor.

After ingestion

Rinse mouth immediately and drink plenty of water. IF SWALLOWED: Immediately call a POISON CENTER/doctor/. Remove person to fresh air and keep comfortable for breathing. Do NOT induce vomiting. Observe risk of aspiration if vomiting occurs. Chemical burns must be treated immediately by a doctor. Never give anything by mouth to an unconscious person or a person with cramps. If unconscious but breathing normally, place in recovery position and seek medical advice.

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

Causes serious eye damage.
Processing vapours can irritate the respiratory tracts, skin and eyes.
If decomposition products are inhaled the following symptoms can occur: health hazards
Delayed appearance of the symptoms is possible.
Causes skin irritation. May cause an allergic skin reaction.
May cause chemical burns to the mouth, throat or stomach

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

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

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂), Foam, Dry extinguishing powder, Water mist. For larger fires: Water spray. Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

In case of warming: Danger of bursting container. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

In case of fire may be liberated: Carbon monoxide, Carbon dioxide (CO₂), Nitrogen oxides (NO_x)

5.3. Advice for firefighters

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

Move victim out of danger zone.

Additional information

Suppress gases/vapours/mists with water spray jet. 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

General advice

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

For non-emergency personnel

No information available.

For emergency responders

No information available.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities. Avoid release to the environment. Collect spillage.

6.3. Methods and material for containment and cleaning up

For containment

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Stop leak if safe to do so. Take up mechanically, placing in appropriate containers for disposal.

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

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

In all workplaces or parts of the plant where high concentrations of aerosols and/or vapors may be generated (e.g. during pressure release, mold venting or when cleaning mixing heads with an air blast), appropriately located exhaust ventilation must be provided in such a way that the OEL is not exceeded. The effectiveness of the equipment must be checked periodically. Air limit values mentioned in section 8 must be controlled. The personal protective measures described in chapter 8 must be observed. Avoid contact with skin and eyes and inhalation of vapors. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact

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during pregnancy and while nursing. Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Do not breathe vapour/aerosol. Avoid release to the environment.

Advice on protection against fire and explosion

Take precautionary measures against static discharges.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store in the original container or an approved replacement container made from a compatible material. Keep tightly closed when not in use. Empty containers contain product residue and can be dangerous. Do not reuse the container. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations.

Hints on joint storage

Keep away from food, drink and animal feeding stuffs. Do not store together with: Incompatible materials, Acids

Further information on storage conditions

Sensitive to cold from +2 °C

Heat sensitive from +40 °C

Keep only in the original container in a cool, well-ventilated place away from acids. Protect from sunlight.

Recommended storage temperature +15 - +25°C

7.3. Specific end use(s)

hardener for epoxy-systems

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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DNEL/DMEL values

CAS No	Name of agent	Exposure route	Effect	Value
100-51-6	benzyl alcohol			
Worker DNEL, long-term		inhalation	systemic	22 mg/m ³
Worker DNEL, acute		inhalation	systemic	110 mg/m ³
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/m ³
Consumer DNEL, acute		inhalation	systemic	27 mg/m ³
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
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine			
Worker DNEL, long-term		inhalation	local	0,073 mg/m ³
Worker DNEL, acute		inhalation	local	0,073 mg/m ³
Consumer DNEL, long-term		oral	systemic	0,3 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	0,3 mg/kg bw/day
68609-08-5	Reaction products of 3-aminomethyl-3,5,5-trimethylcyclohexylamine with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane			
Worker DNEL, long-term		inhalation	systemic	3,29 mg/m ³
Worker DNEL, acute		inhalation	systemic	9,87 mg/m ³
Worker DNEL, long-term		dermal	systemic	1,87 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,58 mg/m ³
Consumer DNEL, acute		inhalation	systemic	1,74 mg/m ³
Consumer DNEL, long-term		dermal	systemic	0,67 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,33 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	0,99 mg/kg bw/day
25513-64-8	2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine			
Consumer DNEL, long-term		oral	systemic	0,05 mg/kg bw/day

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PNEC values

CAS No	Name of agent	
Environmental compartment		Value
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
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
68609-08-5	Reaction products of 3-aminomethyl-3,5,5-trimethylcyclohexylamine with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	
Freshwater		0,002 mg/l
Freshwater (intermittent releases)		0,016 mg/l
Marine water		0 mg/l
Freshwater sediment		10,5 mg/kg
Marine sediment		1,05 mg/kg
Micro-organisms in sewage treatment plants (STP)		3,1 mg/l
Soil		2,1 mg/kg
25513-64-8	2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	
Freshwater		0,102 mg/l
Freshwater (intermittent releases)		0,315 mg/l
Marine water		0,01 mg/l
Freshwater sediment		0,622 mg/kg
Marine sediment		0,062 mg/kg
Micro-organisms in sewage treatment plants (STP)		72 mg/l
Soil		10 mg/kg

Additional advice on limit values

To date, no national critical limit values exist.

8.2. Exposure controls

Appropriate engineering controls

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

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye/face protection.

Hand protection

Suitable materials for protective gloves (DIN EN 374-3): Long-term glove material (BTT > 480 min): butyl

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rubber, ethyl vinyl alcohol laminate (EVAL). Short term use / splash glove material (10 min <BTT <480 min): nitrile rubber.

The selection of a suitable glove not only depends on the material but also on other quality features and varies from manufacturer to manufacturer. Since the product is a preparation of several substances, the resistance of glove materials is not predictable and must therefore be checked before use. Always get advice from the glove supplier.

Skin protection

Wear suitable protective clothing. Recommendation: Protective sleeves

Respiratory protection

In case of inadequate ventilation wear respiratory protection. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used. Recommendation: Filtering device (full mask or mouthpiece) with filter: AX-P2

Environmental exposure controls

Emissions from ventilation and process equipment should be checked to ensure that they meet the requirements of environmental legislation. In some cases, fume scrubbers, filters or technical modifications to the process equipment will be required to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	light yellow
Odour:	amine-like
Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	> 200 °C
Flammability:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	> 100 °C
Decomposition temperature:	not determined
pH-Value:	12,4
Water solubility:	partially miscible
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	< 1 hPa
(at 20 °C)	
Density (at 22 °C):	0,99 -1,02 g/cm ³
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
Viscosity / dynamic:	50 - 400 mPa·s
(at 22 °C)	

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SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

No information available.

10.5. Incompatible materials

Strong alkali, strong acid, Oxidizing agents, strong.

10.6. Hazardous decomposition products

Thermal decomposition can lead to the escape of irritating gases and vapours. Carbon dioxide (CO₂), Carbon monoxide, Nitrogen oxides (NO_x).

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Harmful if swallowed.

Harmful if inhaled.

ATEmix calculated

ATE (oral) 1013,0 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) 3,5710 mg/l

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
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) dust/mist	LC50 >4178 mg/l	Rat		
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine				
	oral	ATE 1030 mg/kg			
	dermal	LD50 > 2000 mg/kg	Rat	Study report (2010)	OECD Guideline 402
68609-08-5	Reaction products of 3-aminomethyl-3,5,5-trimethylcyclohexylamine with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane				
	oral	LD50 500 mg/kg	Rat	Study report (2007)	OECD Guideline 423
	dermal	LD50 > 2000 mg/kg	Rat	Study report (2007)	OECD Guideline 402
25513-64-8	2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine				
	oral	LD50 910 mg/kg	Rat	Study report (1965)	other: comparable to guideline study wit
111850-23-8	Phenol, 4,4'- (1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, reaction products with 2,2,4(or2,4,4)-trimethyl-1,6-hexanediamine				
	oral	ATE 500 mg/kg			

Irritation and corrosivity

Skin corrosion/irritation: Causes severe skin burns and eye damage. (On basis of test data)

Serious eye damage/eye irritation: Causes serious eye damage. (On basis of test data)

Sensitising effects

May cause an allergic skin reaction. (3-aminomethyl-3,5,5-trimethylcyclohexylamine; Reaction products of 3-aminomethyl-3,5,5-trimethylcyclohexylamine with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane; 2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine; Phenol, 4,4'- (1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, reaction products with 2,2,4(or2,4,4)-trimethyl-1,6-hexanediamine)

Carcinogenic/mutagenic/toxic effects for reproduction

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

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

Reproductive toxicity: 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.

11.2. Information on other hazards

Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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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
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	Raphidocelis 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
	Crustacea toxicity	NOEC 51 mg/l	21 d	Daphnia magna	Review article or handbook (2009)	OECD Guideline 211
	Acute bacteria toxicity	EC50 1385 mg/l ()	3 h	activated sludge, domestic	Study report (1989)	OECD Guideline 209
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine					
	Acute fish toxicity	LC50 110 mg/l	96 h	Leuciscus idus	REACH Registration Dossier	EU Method C.1
	Acute algae toxicity	ErC50 37 mg/l	72 h	Desmodesmus subspicatus	REACH Registration Dossier	EU Method C.3
	Acute crustacea toxicity	EC50 23 mg/l	48 h	Daphnia magna	REACH Registration Dossier	OECD Guideline 202
	Crustacea toxicity	NOEC 3 mg/l	21 d	Daphnia magna	REACH Registration Dossier	other: OECD 202, part 2
68609-08-5	Reaction products of 3-aminomethyl-3,5,5-trimethylcyclohexylamine with 2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane					
	Acute fish toxicity	LC50 1,62 mg/l	96 h	Danio rerio	REACH Registration Dossier	EU Method C.1
	Acute algae toxicity	ErC50 3,13 mg/l	72 h	Raphidocelis subcapitata	REACH Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50 1,75 mg/l	48 h	Daphnia magna	REACH Registration Dossier	EU Method C.2
	Acute bacteria toxicity	EC50 72,63 mg/l ()	3 h	Activated sludge	REACH Registration Dossier	EU Method C.11
25513-64-8	2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine					
	Acute fish toxicity	LC50 174 mg/l	96 h	Leuciscus idus (golden orfe)		DIN 38412
	Acute algae toxicity	ErC50 43,5 mg/l	72 h	Raphidocelis subcapitata	REACH Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50 31,5 mg/l	48 h	Daphnia magna (24h)		DIN 38412
	Fish toxicity	NOEC >= 10,9 mg/l	30 d	Danio rerio	REACH Registration Dossier	OECD Guideline 210
	Crustacea toxicity	NOEC 1,02 mg/l	21 d	Daphnia magna	REACH Registration Dossier	OECD Guideline 211

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	Acute bacteria toxicity	EC50	89 mg/l (Pseudomonas putida		
)		(17h)		

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
100-51-6	benzyl alcohol			
	OECD 301A	95-97%	21	
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine			
	OECD 301A/ ISO 7827/ EEC 92/69/V, C.4-A	8%	28	
25513-64-8	2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine			
	EU	7%	28	activated sludge
	not readily biodegradable			

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
100-51-6	benzyl alcohol	1
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	0,99
68609-08-5	Reaction products of 3-aminomethyl-3,5,5-trimethylcyclohexylamine with 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	2,36
25513-64-8	2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	-0,3

BCF

CAS No	Chemical name	BCF	Species	Source
100-51-6	benzyl alcohol	1,371	QSAR model	http://epa.gov/oppt/
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	2,63	fish	REACH Registration D

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 REACH, annex XIII.

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

Disposal under consideration of all applicable international, national and local laws, ordinances and statutes

For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

Contaminated packaging

After final product withdrawal, all residues must be removed from containers (drip-free, powder-free or paste-free). Packaging empty of usable product can be handed to a professional waste management

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company; in the EU, this is done per packaging type at collection points run by the existing take-back systems for the chemicals industry. The product and hazardous substance labelling must be left intact on the packaging.

No disposal to the sewer.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:

UN 2735

14.2. UN proper shipping name:

AMINES, LIQUID, CORROSIVE, N.O.S. (ISOPHORONE DIAMINE, TRIMETHYL-1,6-HEXANEDIAMINE)

14.3. Transport hazard class(es):

8

14.4. Packing group:

III

Hazard label:

8



Classification code:

C7

Special Provisions:

274

Limited quantity:

5 L

Excepted quantity:

E1

Transport category:

3

Hazard No:

80

Tunnel restriction code:

E

Inland waterways transport (ADN)

14.1. UN number or ID number:

UN 2735

14.2. UN proper shipping name:

AMINES, LIQUID, CORROSIVE, N.O.S. (ISOPHORONE DIAMINE, TRIMETHYL-1,6-HEXANEDIAMINE)

14.3. Transport hazard class(es):

8

14.4. Packing group:

III

Hazard label:

8



Classification code:

C7

Special Provisions:

274

Limited quantity:

5 L

Excepted quantity:

E1

Marine transport (IMDG)

14.1. UN number or ID number:

UN 2735

14.2. UN proper shipping name:

AMINES, LIQUID, CORROSIVE, N.O.S. (ISOPHORONE DIAMINE, TRIMETHYL-1,6-HEXANEDIAMINE)

14.3. Transport hazard class(es):

8

14.4. Packing group:

III

Hazard label:

8



Special Provisions:

223, 274

Limited quantity:

5 L

Excepted quantity:

E1

EmS:

F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:

UN 2735

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14.2. UN proper shipping name:

AMINES, LIQUID, CORROSIVE, N.O.S. (ISOPHORONE DIAMINE, TRIMETHYL-1,6-HEXANEDIAMINE)

14.3. Transport hazard class(es):

8

14.4. Packing group:

III

Hazard label:

8



Special Provisions:

A3 A803

Limited quantity Passenger:

1 L

Passenger LQ:

Y841

Excepted quantity:

E1

IATA-packing instructions - Passenger:

852

IATA-max. quantity - Passenger:

5 L

IATA-packing instructions - Cargo:

856

IATA-max. quantity - Cargo:

60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: strongly corrosive.

14.7. Maritime transport in bulk according to IMO instruments

Product is not transported by us in bulk

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

Directive 2004/42/EC on VOC in paints and varnishes:

57 % (564,3 g/l)

Information according to Directive 2012/18/EU (SEVESO III):

Not subject to 2012/18/EU (SEVESO III)

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

Skin resorption/Sensitization:

Causes allergic hypersensitivity reactions.

15.2. Chemical safety assessment

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

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,4,6,9,10,11,12,13,14,15.

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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)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
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
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
Acute Tox: Acute toxicity
Skin Corr: Skin corrosion
Eye Dam: Eye damage
Skin Sens: Skin sensitisation
Aquatic Chronic: Chronic aquatic hazard

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

Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
Acute Tox. 4; H332	Calculation method
Skin Corr. 1; H314	On basis of test data
Eye Dam. 1; H318	On basis of test data
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.
H302+H332 Harmful if swallowed or if inhaled.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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