Safety Data Sheet

according to Regulation (EC) No 1907/2006

ARC S4+(E) Part A

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

1.1. Product identifier

ARC S4+(E) Part A

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

Use of the substance/mixture

ARC Polymer Composite. To be mixed with ARC S4+(E) Part B to provide protection in corrosive environments.

Uses advised against

No information 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:
Skin corrosion/irritation: Skin Irrit. 2
Respiratory or skin sensitisation: Skin Sens. 1
Hazardous to the aquatic environment: Aquatic Chronic 2
Hazard Statements:
Causes skin irritation.
May cause an allergic skin reaction.
Toxic to aquatic life with long lasting effects.

2.2. Label elements

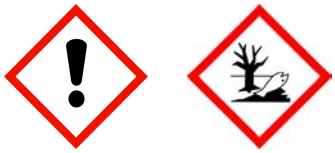
Regulation (EC) No. 1272/2008

Hazard components for labelling

Phenol, polymer with formaldehyde, glycidether
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol
Addition reaction products of conjugated sunflower-oil fatty acids and tall-oil fatty acids with maleic anhydride

Signal word: Warning

Pictograms:



Hazard statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
P501	Dispose of waste according to applicable legislation.

2.3. Other hazards

The safety and health hazards are detailed separately for Part A and Part B. The final cured material is considered nonhazardous. Upon machining, refer to the precautions in the safety data sheets for Part A and Part B.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
28064-14-4	Phenol, polymer with formaldehyde, glycidether			70 - < 75 %
	608-164-0			
	Skin Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H315 H317 H411			
9003-36-5	Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol			20 - < 25 %
	500-006-8		01-2119454392-40	
	Skin Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H315 H317 H411			
	Addition reaction products of conjugated sunflower-oil fatty acids and tall-oil fatty acids with maleic anhydride			< 1 %
			01-2119976378-19	
	Skin Irrit. 2, Skin Sens. 1; H315 H317			
108-31-6	maleic anhydride			< 0.1 %
	203-571-6	607-096-00-9	01-2119463268-32	
	Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Resp. Sens. 1, Skin Sens. 1A, STOT RE 1, STOT RE 2; H302 H314 H318 H334 H317 H372 H373 EUH071			

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

No information available.

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 (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).

Do not breathe vapour/aerosol.

Avoid contact with skin, eyes and clothes.

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.

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
108-31-6	Maleic anhydride	-	1		TWA (8 h)	WEL
		-	3		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
28064-14-4	Phenol, polymer with formaldehyde, glycidether			
Worker DNEL,		dermal		104,15 mg/kg bw/day
Worker DNEL,		inhalation		29,39 mg/m³
9003-36-5	Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol			
Worker DNEL, long-term		inhalation	systemic	29,39 mg/m³
Worker DNEL, long-term		dermal	systemic	104,15 mg/kg bw/day
Worker DNEL, acute		dermal	local	0,0083 mg/cm²
Consumer DNEL, long-term		inhalation	systemic	8,7 mg/m³
Consumer DNEL, long-term		dermal	systemic	62,5 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	6,25 mg/kg bw/day
108-31-6	maleic anhydride			
Worker DNEL, acute		inhalation	local	0,8 mg/m³
Worker DNEL, long-term		inhalation	systemic	0,4 mg/m³
Worker DNEL, acute		inhalation	systemic	0,8 mg/m³
Worker DNEL, long-term		inhalation	local	0,4 mg/m³

PNEC values

CAS No	Substance	
Environmental compartment		Value
9003-36-5	Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	
Freshwater		0,003 mg/l
Freshwater sediment		0,294 mg/kg
Marine sediment		0,029 mg/kg
Soil		0,237 mg/kg
108-31-6	maleic anhydride	
Freshwater		0,1 mg/l
Freshwater (intermittent releases)		0,428 mg/l
Marine water		0,01 mg/l
Freshwater sediment		0,334 mg/kg
Marine sediment		0,033 mg/kg
Micro-organisms in sewage treatment plants (STP)		44,6 mg/l
Soil		0,042 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)
Thickness of the glove material >= 0,4 mm
Breakthrough times and swelling properties of the material must be taken into consideration.
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.
Observe the wear time limits as specified by the manufacturer.

Skin protection

Protective clothing

Respiratory protection

Usually no personal respirative protection necessary.
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:	grey; red
Odour:	characteristic

		Test method
pH-Value:	not determined	
Changes in the physical state		
Melting point:	not determined	
Initial boiling point and boiling range:	not determined	
Flash point:	>93 °C	
Sustaining combustion:	Not sustaining combustion	
Flammability		
Solid:	not determined	
Gas:	not determined	
Explosive properties		
No information available.		
Lower explosion limits:	not applicable	
Upper explosion limits:	not applicable	
Ignition temperature:	not determined	
Auto-ignition temperature		
Solid:	not determined	
Gas:	not determined	
Decomposition temperature:	not determined	
Oxidizing properties		
No information available.		
Vapour pressure:	not determined	
Density:	1,23 g/cm³	
Water solubility:	Immiscible	
Solubility in other solvents		
No information available.		
Partition coefficient:	not determined	
Viscosity / dynamic: (at 25 °C)	9000 mPa·s	
Vapour density:	>1 (Air = 1)	

Evaporation rate: <1 (Ether = 1)

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

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

10.3. Possibility of hazardous reactions

Exothermic reaction with: Acid, Oxidising agent

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.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
28064-14-4	Phenol, polymer with formaldehyde, glycidether				
	oral	LD50 >2000 mg/kg	Rat	Supplier	
	dermal	LD50 >2000 mg/kg	Rabbit	Supplier	
9003-36-5	Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1988)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1988)	OECD Guideline 402
	Addition reaction products of conjugated sunflower-oil fatty acids and tall-oil fatty acids with maleic anhydride				
	oral	LD50 > 2000 mg/kg	Rat	Study report (2012)	OECD Guideline 423
108-31-6	maleic anhydride				
	oral	LD50 1090 mg/kg	Rat	(1984)	OECD Guideline 401
	dermal	LD50 2620 mg/kg	Rabbit	Publication (1977)	The method used for skin absorption toxi

Irritation and corrosivity

Causes skin irritation.

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

Sensitising effects

May cause an allergic skin reaction. (Phenol, polymer with formaldehyde, glycidether; Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol; Addition reaction products of conjugated sunflower-oil fatty acids and tall-oil fatty acids with maleic anhydride; maleic anhydride)

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
28064-14-4	Phenol, polymer with formaldehyde, glycidether						
	Acute fish toxicity	LC50	2,54 mg/l	96 h	Leuciscus idus (golden orfe)	Supplier	
	Acute crustacea toxicity	EC50	2,55 mg/l	48 h	Daphnia magna (Big water flea)	Supplier	
9003-36-5	Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol						
	Acute fish toxicity	LC50	> 1000 mg/l	96 h	Oncorhynchus mykiss	Study report (1998)	OECD Guideline 203
	Acute algae toxicity	ErC50	> 1,8 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (1993)	OECD Guideline 201
	Acute crustacea toxicity	EC50	> 1000 mg/l	48 h	Daphnia magna	Study report (1998)	OECD Guideline 202
	Crustacea toxicity	NOEC	0,3 mg/l	21 d	Daphnia magna	Study report (1984)	OECD Guideline 211
	Addition reaction products of conjugated sunflower-oil fatty acids and tall-oil fatty acids with maleic anhydride						
	Acute algae toxicity	ErC50	> 100 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (2013)	OECD Guideline 201
	Acute crustacea toxicity	EC50	> 100 mg/l	48 h	Daphnia magna	Study report (2013)	OECD Guideline 202
	Acute bacteria toxicity	(> 1000 mg/l)		3 h	activated sludge of a predominantly domestic sewag	Study report (2012)	OECD Guideline 209
108-31-6	maleic anhydride						
	Acute fish toxicity	LC50	75 mg/l	96 h	Lepomis macrochirus	Publication (1982)	other: EPA-660/3-75-009, EPA Methods for
	Acute algae toxicity	ErC50	74,35 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (2010)	OECD Guideline 201
	Acute crustacea toxicity	EC50	42,81 mg/l	48 h	Daphnia magna	Study report (2010)	OECD Guideline 202
	Crustacea toxicity	NOEC	10 mg/l	21 d	Daphnia magna	Publication (1988)	other: Prolonged toxicity test according

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
9003-36-5	Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	2,7
	Addition reaction products of conjugated sunflower-oil fatty acids and tall-oil fatty acids with maleic anhydride	< 1
108-31-6	maleic anhydride	-2,61

BCF

CAS No	Chemical name	BCF	Species	Source
9003-36-5	Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	150		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

Advice on disposal

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 3082
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (epoxy resin)
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
Hazard label:	9
Classification code:	M6
Special Provisions:	274 335 375 601
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	90
Tunnel restriction code:	-

Inland waterways transport (ADN)

14.1. UN number:	UN 3082
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (epoxy resin)
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
Hazard label:	9
Classification code:	M6
Special Provisions:	274 335 375 601
Limited quantity:	5 L
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number:	UN 3082
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (epoxy resin)
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
Hazard label:	9
Marine pollutant:	P
Special Provisions:	274, 335, 969
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-A, S-F

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 3082
14.2. UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (epoxy resin)
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
Hazard label:	9
Special Provisions:	A97 A158 A197
Limited quantity Passenger:	30 kg G
Passenger LQ:	Y964
Excepted quantity:	E1
IATA-packing instructions - Passenger:	964
IATA-max. quantity - Passenger:	450 L
IATA-packing instructions - Cargo:	964
IATA-max. quantity - Cargo:	450 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:	yes
Danger releasing substance:	epoxy resin

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

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:
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol
Addition reaction products of conjugated sunflower-oil fatty acids and tall-oil fatty acids with maleic anhydride maleic anhydride

SECTION 16: Other information

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)
CAS: Chemical Abstracts Service (division of the American Chemical Society)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CLP: Regulation on Classification, Labelling and Packaging of Substances and Mixtures,
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
EC50: Effectice concentration, 50 percent
DNEL: Derived No Effect Level
PNEC: Predicted No Effect Concentration
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

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

Classification	Classification procedure
Skin Irrit. 2; H315	Calculation method
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H372	Causes 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.
EUH071	Corrosive to the respiratory tract.

Further Information

This information is based solely on data privided by suppliers of the materials used, not on the mixture itself.
No warranty is expressed or implied regarding the suitability of the product for the user's particular purpose.
The user must make their own determination as to suitability.

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ARC S4+(E) Part B

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

1.1. Product identifier

ARC S4+(E) Part B

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

Use of the substance/mixture

ARC Polymer Composite. To be mixed with ARC S4+(E) Part A to provide protection in corrosive environments.

Uses advised against

No information 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:
Skin corrosion/irritation: Skin Corr. 1
Serious eye damage/eye irritation: Eye Dam. 1
Respiratory or skin sensitisation: Skin Sens. 1A
Hazardous to the aquatic environment: Aquatic Chronic 3
Hazard Statements:
Causes severe skin burns and eye damage.
Causes serious eye damage.
May cause an allergic skin reaction.
Harmful to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)
3-aminomethyl-3,5,5-trimethylcyclohexylamine
Phenol, styrenated
m-phenylenebis(methylamine)
Copolymer of benzenamine and formaldehyde, hydrogenated
4,4'-methylenebis(cyclohexylamine)
Fatty acids, C18, unsatd., dimers, reaction products with N,N-dimethyl-1,3-propanediamine and 1,3-propanediamine

Signal word: Danger

Pictograms:

Hazard statements

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P260	Do not breathe Vapour, Aerosol.
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

The safety and health hazards are detailed separately for Part A and Part B. The final cured material is considered nonhazardous. Upon machining, refer to the precautions in the safety data sheets for Part A and Part B.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
113930-69-1	4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)			10 - < 15 %
	500-302-7		01-2119965162-39	
	Skin Corr. 1, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 2; H314 H318 H317 H411			
100-51-6	benzyl alcohol			10 - < 15 %
	202-859-9	603-057-00-5	01-2119492630-38	
	Acute Tox. 4, Acute Tox. 4, Eye Irrit. 2; H332 H302 H319			
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine			10 - < 15 %
	220-666-8	612-067-00-9	01-2119514687-32	
	Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 3; H312 H302 H314 H318 H317 H412			
61788-44-1	Phenol, styrenated			10 - < 15 %
	262-975-0		01-2119557886-19	
	Skin Irrit. 2, Skin Sens. 1A, Aquatic Chronic 2; H315 H317 H411			
1477-55-0	m-phenylenebis(methylamine)			5 - < 10 %
	216-032-5		01-2119480150-50	
	Acute Tox. 4, Acute Tox. 4, Skin Corr. 1, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 3; H332 H302 H314 H318 H317 H412 EUH071			
135108-88-2	Copolymer of benzenamine and formaldehyde, hydrogenated			1 - < 5 %
	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			
69-72-7	salicylic acid			1 - < 5 %
	200-712-3		01-2119486984-17	
	Acute Tox. 4, Eye Dam. 1; H302 H318			
1761-71-3	4,4'-methylenebis(cyclohexylamine)			< 1 %
	217-168-8		01-2119541673-38	
	Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1, STOT RE 2; H302 H314 H317 H373			
162627-17-0	Fatty acids, C18, unsatd., dimers, reaction products with N,N-dimethyl-1,3-propanediamine and 1,3-propanediamine			< 1 %
	605-296-0		01-2119970640-38	
	Skin Sens. 1; H317			

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection!
Take off immediately all contaminated clothing and wash it before reuse.
IF exposed or if you feel unwell: Immediately call a POISON CENTER or doctor/physician.

After inhalation

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
Immediately call a doctor.

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

Causes severe skin burns and eye damage.
Harmful if swallowed.
Skin sensitisation

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 (CO_2). alcohol resistant foam. Water spray jet

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Nitrogen oxides (NOx), Ammonia (NH_3), Carbon monoxide, Carbon dioxide (CO_2).

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).
Do not breathe aerosol.
Avoid contact with skin, eyes and clothes.
Take off contaminated clothing and wash it before reuse.
Contaminated work clothing should not be allowed out of the workplace.
When using do not eat, drink or smoke.
Never use pressure to empty container. Keep/Store only in original container.
Do not allow to enter into surface water or drains.

Advice on protection against fire and explosion

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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.

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
13463-67-7	Titanium dioxide, total inhalable	-	10		TWA (8 h)	WEL

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
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
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
,				
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
61788-44-1	Phenol, styrenated			
Worker DNEL, long-term		inhalation	systemic	7,4 mg/m³
Worker DNEL, long-term		dermal	systemic	2,1 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	1,31 mg/m³
Consumer DNEL, long-term		dermal	systemic	0,75 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,75 mg/kg bw/day
13463-67-7	Titanium dioxide			

Worker DNEL, long-term	inhalation	local	10 mg/m³
Consumer DNEL, long-term	oral	systemic	700 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
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
,			
69-72-7	salicylic acid		
Worker DNEL, long-term	inhalation	systemic	5 mg/m³
Worker DNEL, long-term	inhalation	local	5 mg/m³
Worker DNEL, long-term	dermal	systemic	2,3 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	4 mg/m³
Consumer DNEL, long-term	dermal	systemic	1 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	1 mg/kg bw/day
Consumer DNEL, acute	oral	systemic	4 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
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
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
61788-44-1	Phenol, styrenated
Freshwater	0,03 mg/l
Freshwater (intermittent releases)	0,046 mg/l
Marine water	0,003 mg/l
Freshwater sediment	1,86 mg/kg
Marine sediment	0,186 mg/kg
Micro-organisms in sewage treatment plants (STP)	36,2 mg/l
Soil	0,355 mg/kg

13463-67-7	Titanium dioxide
Freshwater	0,184 mg/l
Freshwater (intermittent releases)	0,193 mg/l
Marine water	0,018 mg/l
Freshwater sediment	1000 mg/kg
Marine sediment	100 mg/kg
Micro-organisms in sewage treatment plants (STP)	100 mg/l
Soil	100 mg/kg
1477-55-0	m-phenylenebis(methylamine)
Freshwater	0,094 mg/l
Marine water	0,009 mg/l
Freshwater sediment	0,43 mg/kg
Marine sediment	0,043 mg/kg
Micro-organisms in sewage treatment plants (STP)	10 mg/l
Soil	0,045 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
69-72-7	salicylic acid
Freshwater	0,2 mg/l
Marine water	0,02 mg/l
Freshwater sediment	1,42 mg/kg
Marine sediment	0,142 mg/kg
Soil	0,166 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
162627-17-0	Fatty acids, C18, unsatd., dimers, reaction products with N,N-dimethyl-1,3-propanediamine and 1,3-propanediamine	
Soil		5,8 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)
Thickness of the glove material >= 0,4 mm
Breakthrough times and swelling properties of the material must be taken into consideration.
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.
Observe the wear time limits as specified by the manufacturer.

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-P2

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	white
Odour:	like: Amines

		Test method
pH-Value:	not determined	
Changes in the physical state		
Melting point:	not determined	
Initial boiling point and boiling range:	not determined	
Flash point:	>93 °C	

Flammability

Solid:	not determined	
Gas:	not determined	

Explosive properties

No information available.

Lower explosion limits:	not applicable	
Upper explosion limits:	not applicable	
Ignition temperature:	not determined	

Auto-ignition temperature

Solid:	not determined	
Gas:	not determined	
Decomposition temperature:	not determined	ASTM D 2879-86

Oxidizing properties

No information available.

Vapour pressure:	not determined	
Density:	1,36 g/cm³	
Water solubility:	Immiscible	

Solubility in other solvents

No information available.

Partition coefficient:	not determined	
Viscosity / dynamic: (at 25 °C)	4000 mPa·s	
Vapour density:	>1	(Air=1)
Evaporation rate:	<1	(Ether=1)

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

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

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Strong alkali , Oxidising agent

10.6. Hazardous decomposition products

Does not decompose when used for intended uses.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

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

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
113930-69-1	4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)					
	oral	LD50 mg/kg	1000	Rat	Study report (2007)	OECD Guideline 423
	dermal	LD50 mg/kg	2000	Rat	Study report (2007)	OECD Guideline 402
100-51-6	benzyl alcohol					
	oral	LD50 mg/kg	1580	Mouse	Cosmet. Toxicol. 11, 1011-1013 (1973) (1	OECD Guideline 401
	dermal	LD50 mg/kg	> 2000	Rabbit	Raw Material Data Handbook, Vol.1:(Orga	EPA OTS 798.1100
	inhalation vapour	ATE	11 mg/l			
	inhalation (4 h) aerosol	LC50 mg/l	>4,178	Rat	ECHA	OECD 403
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine					
	oral	LD50 mg/kg	1030	Rat	Study report (1965)	OECD Guideline 401
	dermal	LD50 mg/kg	> 2000	Rat	Study report (2010)	OECD Guideline 402
61788-44-1	Phenol, styrenated					
	oral	LD50 mg/kg	> 2000	Rat	Study report (2014)	OECD Guideline 423
	dermal	LD50 mg/kg	> 2000	Rat	Study report (2014)	OECD Guideline 402
1477-55-0	m-phenylenebis(methylamine)					
	oral	LD50 mg/kg	1180	Mouse	OECD Guideline 401	
	dermal	LD50 mg/kg	> 3100	Rabbit	TK 11813 was applied	
	inhalation vapour	ATE	11 mg/l			
	inhalation (4 h) aerosol	LC50	1,34 mg/l	Rat		
135108-88-2	Copolymer of benzenamine and formaldehyde, hydrogenated					
	oral	LD50	> 50 - < 300 mg/kg	Rat	Study report (2005)	OECD Guideline 423
	dermal	LD50 mg/kg	> 1000	Rabbit	Study report (1988)	other: 40CFR Part 158 Series 81-2, EPA P
69-72-7	salicylic acid					
	oral	LD50 mg/kg	891	Rat	Study report (1971)	OECD Guideline 401

	dermal	LD50 > 2000 mg/kg	Rat	J Am Coll Toxicol, V	OECD Guideline 402
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
162627-17-0	Fatty acids, C18, unsatd., dimers, reaction products with N,N-dimethyl-1,3-propanediamine and 1,3-propanediamine				
	oral	LD50 > 10000 mg/kg	Rat	Study report (1985)	OECD Guideline 401

Irritation and corrosivity

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

Sensitising effects

May cause an allergic skin reaction. (4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine); 3-aminomethyl-3,5,5-trimethylcyclohexylamine; Phenol, styrenated; m-phenylenebis(methylamine); Copolymer of benzenamine and formaldehyde, hydrogenated; 4,4'-methylenebis(cyclohexylamine); Fatty acids, C18, unsatd., dimers, reaction products with N,N-dimethyl-1,3-propanediamine and 1,3-propanediamine)

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
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
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
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
61788-44-1	Phenol, styrenated						
	Acute fish toxicity	LC50	1,77 mg/l	96 h	Danio rerio	Study report (2010)	OECD Guideline 203
	Acute algae toxicity	ErC50	20,42 mg/l	72 h	Chlorella vulgaris	REACh Registration Dossier	OECD Guideline 201

	Acute crustacea toxicity	EC50	4,6 mg/l	48 h	Daphnia magna	REACh Registration Dossier	OECD Guideline 202
	Fish toxicity	NOEC	1,9 mg/l	14 d	fish	REACh Registration Dossier	other: Refer below principle
	Crustacea toxicity	NOEC	0,2 mg/l	21 d	Daphnia magna	REACh Registration Dossier	other: Refer below principle
1477-55-0	m-phenylenebis(methylamine)						
	Acute fish toxicity	LC50	87,6 mg/l	96 h	Oryzias latipes (Ricefish)		
	Acute algae toxicity	ErC50	20,3 mg/l	72 h	Selenastrum capricornutum		
	Acute crustacea toxicity	EC50	15,2 mg/l	48 h	Daphnia magna (Big water flea)		
	Algea toxicity	NOEC	10,5 mg/l	3 d	Selenastrum capricornutum		
	Crustacea toxicity	NOEC	4,7 mg/l	21 d	Daphnia magna (Big water flea)		
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
69-72-7	salicylic acid						
	Acute fish toxicity	LC50	1370 mg/l	96 h	Pimephales promelas	Publication (1985)	OECD Guideline 203
	Acute algae toxicity	ErC50	> 100 mg/l	72 h	Desmodesmus subspicatus	Regulatory Toxicolog	OECD Guideline 201
	Acute crustacea toxicity	EC50	870 mg/l	48 h	Daphnia magna	Chemosphere 59 255-2	OECD Guideline 202
	Crustacea toxicity	NOEC	10 mg/l	21 d	Daphnia magna	Muench. Beitr. Abwas	other: Cited as OECD
	Acute bacteria toxicity	(> 1000 mg/l)		3 h	activated sludge, domestic	Chemosphere 14 (9) :	OECD Guideline 209
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
162627-17-0	Fatty acids, C18, unsatd., dimers, reaction products with N,N-dimethyl-1,3-propanediamine and 1,3-propanediamine						
	Acute algae toxicity	ErC50	> 100 mg/l	72 h	Pseudokirchneriella subcapitata	REACh Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50	> 100 mg/l	48 h	Daphnia magna	REACh Registration Dossier	OECD Guideline 202
	Crustacea toxicity	NOEC	>= 100 mg/l	21 d	Daphnia magna	REACh Registration Dossier	OECD Guideline 211

12.2. Persistence and degradability

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
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)			
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).			
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)			
61788-44-1	Phenol, styrenated			
	OECD 301F	7%	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)			
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
113930-69-1	4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)	2,3
100-51-6	benzyl alcohol	1
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	0,99
61788-44-1	Phenol, styrenated	2,415
1477-55-0	m-phenylenebis(methylamine)	0,18
135108-88-2	Copolymer of benzenamine and formaldehyde, hydrogenated	2,68
69-72-7	salicylic acid	2,25
1761-71-3	4,4'-methylenebis(cyclohexylamine)	2,03
162627-17-0	Fatty acids, C18, unsatd., dimers, reaction products with N,N-dimethyl-1,3-propanediamine and 1,3-propanediamine	> 5,5

BCF

CAS No	Chemical name	BCF	Species	Source
113930-69-1	4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)	4,7		
100-51-6	benzyl alcohol	1,371	QSAR model	http://epa.gov/oppt/
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexyl amine	3,16	QSAR estimate	Other company data (
61788-44-1	Phenol, styrenated	18,21	fish	REACh Registration D
1477-55-0	m-phenylenebis(methylamine)	<0,3		
135108-88-2	Copolymer of benzenamine and formaldehyde, hydrogenated	> 18 - < 22	Cyprinus carpio	Study report (1997)
69-72-7	salicylic acid	<100		
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

Advice on disposal

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. (4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine), 3-aminomethyl-3,5,5-trimethylcyclohexylamine)
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:	UN 2735
14.2. UN proper shipping name:	AMINES, LIQUID, CORROSIVE, N.O.S. (4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine), 3-aminomethyl-3,5,5-trimethylcyclohexylamine)
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:	UN 2735
14.2. UN proper shipping name:	AMINES, LIQUID, CORROSIVE, N.O.S. (4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine), 3-aminomethyl-3,5,5-trimethylcyclohexylamine)
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
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. (4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine), 3-aminomethyl-3,5,5-trimethylcyclohexylamine)
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

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

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

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:
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)
benzyl alcohol

3-aminomethyl-3,5,5-trimethylcyclohexylamine
Phenol, styrenated
Titanium dioxide
m-phenylenebis(methylamine)
Copolymer of benzenamine and formaldehyde, hydrogenated
salicylic acid
4,4'-methylenebis(cyclohexylamine)
Fatty acids, C18, unsatd., dimers, reaction products with N,N-dimethyl-1,3-propanediamine and 1,3-propanediamine

SECTION 16: Other information

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)
CAS: Chemical Abstracts Service (division of the American Chemical Society)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CLP: Regulation on Classification, Labelling and Packaging of Substances and Mixtures,
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
EC50: Effectice concentration, 50 percent
DNEL: Derived No Effect Level
PNEC: Predicted No Effect Concentration
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

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

Classification	Classification procedure
Skin Corr. 1; H314	Calculation method
Eye Dam. 1; H318	Calculation method
Skin Sens. 1A; H317	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

H319	Causes serious eye irritation.
H332	Harmful if inhaled.
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.
EUH071	Corrosive to the respiratory tract.

Further Information

This information is based solely on data privided by suppliers of the materials used, not on the mixture itself.
No warranty is expressed or implied regarding the suitability of the product for the user's particular purpose.
The user must make their own determination as to suitability.

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