

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ARC S4+(E) Part B

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#### 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

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#### 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

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#### 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

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#### **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<sub>2</sub>). alcohol resistant foam. Water spray jet

##### **Unsuitable extinguishing media**

Full water jet

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

Nitrogen oxides (NO<sub>x</sub>), Ammonia (NH<sub>3</sub>), Carbon monoxide, Carbon dioxide (CO<sub>2</sub>).

#### **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

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

See protective measures under point 7 and 8.

Provide adequate ventilation.

Personal protection equipment: see section 8

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**

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#### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
13463-67-7	Titanium dioxide, total inhalable	-	10		TWA (8 h)	WEL

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#### DNEL/DMEL values

CAS No	Substance	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/m <sup>3</sup>
	Consumer DNEL, acute	inhalation	systemic	1,5 mg/m <sup>3</sup>
	Consumer DNEL, acute	oral	systemic	0,99 mg/kg bw/day
	Worker DNEL, long-term	inhalation	systemic	2,33 mg/m <sup>3</sup>
	Worker DNEL, long-term	dermal	systemic	1,33 mg/kg bw/day
	Consumer DNEL, long-term	inhalation	systemic	0,5 mg/m <sup>3</sup>
	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/m <sup>3</sup>
	Worker DNEL, acute	inhalation	systemic	110 mg/m <sup>3</sup>
	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 <sup>3</sup>
	Consumer DNEL, acute	inhalation	systemic	27 mg/m <sup>3</sup>
	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 <sup>3</sup>
	Worker DNEL, acute	inhalation	local	0,073 mg/m <sup>3</sup>
	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/m <sup>3</sup>
	Worker DNEL, long-term	dermal	systemic	2,1 mg/kg bw/day
	Consumer DNEL, long-term	inhalation	systemic	1,31 mg/m <sup>3</sup>
	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			

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Worker DNEL, long-term	inhalation	local	10 mg/m <sup>3</sup>
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/m <sup>3</sup>
Worker DNEL, long-term	inhalation	systemic	1,2 mg/m <sup>3</sup>
135108-88-2	Copolymer of benzenamine and formaldehyde, hydrogenated		
Worker DNEL, long-term	inhalation	systemic	0,2 mg/m <sup>3</sup>
Worker DNEL, acute	inhalation	systemic	2 mg/m <sup>3</sup>
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/m <sup>3</sup>
Worker DNEL, long-term	inhalation	local	5 mg/m <sup>3</sup>
Worker DNEL, long-term	dermal	systemic	2,3 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	4 mg/m <sup>3</sup>
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/m <sup>3</sup>
Worker DNEL, long-term	dermal	systemic	0,1 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	0,21 mg/m <sup>3</sup>
Consumer DNEL, long-term	dermal	systemic	0,06 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	0,06 mg/kg bw/day

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#### 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

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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

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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  $\geq 0,4$  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

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#### 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/cm<sup>3</sup>

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

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#### **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.

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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 1000 mg/kg	Rat	Study report (2007)	OECD Guideline 423
	dermal	LD50 2000 mg/kg	Rat	Study report (2007)	OECD Guideline 402
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
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
61788-44-1	Phenol, styrenated				
	oral	LD50 > 2000 mg/kg	Rat	Study report (2014)	OECD Guideline 423
	dermal	LD50 > 2000 mg/kg	Rat	Study report (2014)	OECD Guideline 402
1477-55-0	m-phenylenebis(methylamine)				
	oral	LD50 1180 mg/kg	Mouse	OECD Guideline 401	
	dermal	LD50 > 3100 mg/kg	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 > 1000 mg/kg	Rabbit	Study report (1988)	other: 40CFR Part 158 Series 81-2, EPA P
69-72-7	salicylic acid				
	oral	LD50 891 mg/kg	Rat	Study report (1971)	OECD Guideline 401

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	dermal	LD50 mg/kg	> 2000	Rat	J Am Coll Toxicol, V	OECD Guideline 402
1761-71-3	4,4'-methylenebis(cyclohexylamine)					
	oral	LD50 mg/kg	480	Rat	Study report (1987)	EPA OPP 81-1
	dermal	LD50 mg/kg	2110	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 mg/kg	> 10000	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

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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
	Algae 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	<a href="http://epa.gov/oppt/exposure/pubs/episui">http://epa.gov/oppt/exposure/pubs/episui</a>	other: QSAR
	Algae 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

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	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)		
	Algae 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 mg/l	43,94	72 h	Desmodesmus subspicatus	Study report (2012)	EU Method C.3
69-72-7	salicylic acid						
	Acute fish toxicity	LC50 mg/l	1370	96 h	Pimephales promelas	Publication (1985)	OECD Guideline 203
	Acute algae toxicity	ErC50 mg/l	> 100	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 mg/l	> 100	96 h	Leuciscus idus	Study report (1988)	other: German industrial standard test g
	Acute algae toxicity	ErC50 200 mg/l	140 -	72 h		Study report (1990)	other: German Industrial Standard DIN 38

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	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 mg/l	> 100	72 h	Pseudokirchneriella subcapitata	REACH Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	> 100	48 h	Daphnia magna	REACH Registration Dossier	OECD Guideline 202
	Crustacea toxicity	NOEC mg/l	>= 100	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

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#### 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	<a href="http://epa.gov/oppt/">http://epa.gov/oppt/</a>
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	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.

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#### Contaminated packaging

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

### SECTION 14: Transport information

#### Land transport (ADR/RID)

<b>14.1. UN number:</b>	UN 2735
<b>14.2. UN proper shipping name:</b>	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)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	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)

<b>14.1. UN number:</b>	UN 2735
<b>14.2. UN proper shipping name:</b>	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)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8
Classification code:	C7
Special Provisions:	274
Limited quantity:	5 L
Excepted quantity:	E1

#### Marine transport (IMDG)

<b>14.1. UN number:</b>	UN 2735
<b>14.2. UN proper shipping name:</b>	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)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8

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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)

<b>14.1. UN number:</b>	UN 2735
<b>14.2. UN proper shipping name:</b>	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)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	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

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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 concernant le transport des marchandises dangereuses par chemin de fer  
(Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
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: Effect 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.

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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 provided 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.

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