

according to Regulation (EC) No 1907/2006

ARC S2(E) GN Part B, ARC S2(E) GY Part B

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

1.1. Product identifier

ARC S2(E) GN Part B, ARC S2(E) GY Part B

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

Use of the substance/mixture

ARC Polymer Composite. Repair damage caused by impact, abrasion, erosion or corrosion; rebuild worn areas; fill holes and cracks; provide abrasion resistant surfaces.

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

number:

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:

Skin corrosion/irritation: Skin Corr. 1B

Serious eye damage/eye irritation: Eye Dam. 1 Respiratory or skin sensitisation: Skin Sens. 1

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

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Fatty acids, C18, unsatd., dimers, reaction products with N,N-dimethyl-1,3-propanediamine and

1,3-propanediamine

N-(3-(trimethoxysilyl)propyl)ethylenediamine

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 dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

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

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with

water or shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures



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Hazardous components

CAS No	Chemical name					
	EC No	Index No	REACH No			
	Classification according to Regulati	on (EC) No. 1272/2008 [CLP]	•			
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclo	hexylamine		25 - <30 %		
	220-666-8	612-067-00-9	01-2119514687-32			
	Acute Tox. 4, Acute Tox. 4, Skin Co H317 H412	rr. 1B, Skin Sens. 1, Aquatic Chronic	c 3; H312 H302 H314			
100-51-6	benzyl alcohol			25 - <30 %		
	202-859-9	603-057-00-5	01-2119492630-38			
	Acute Tox. 4, Acute Tox. 4; H332 H					
162627-17-0	Fatty acids, C18, unsatd., dimers, r 1,3-propanediamine	1,3-propanediamine and	<1 %			
	605-296-0		01-2119970640-38			
	Skin Sens. 1; H317					
1760-24-3	N-(3-(trimethoxysilyl)propyl)ethylenediamine			<1 %		
	217-164-6		01-2119970215-39			
	Acute Tox. 4, Eye Dam. 1, Skin Sens. 1; H332 H318 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

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

After inhalation

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

After contact with skin

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

After contact with eyes

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

After ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

Do NOT induce vomiting.

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

Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.



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

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

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

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

Unsuitable extinguishing media

High power water jet

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

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

Co-ordinate fire-fighting measures to the fire surroundings.

Additional information

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

See protective measures under point 7 and 8.

Provide adequate ventilation.

Personal protection equipment: see section 8

Remove persons to safety.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

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

6.4. Reference to other sections

See protective measures under point 7 and 8. Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

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

Advice on protection against fire and explosion

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



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7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store in a cool dry place. Keep container tightly closed.

Keep/Store only in original container.

Protect against direct sunlight.

Protect against: Frost

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
409-21-2	Silicon carbide (not whiskers), total inhalable	-	10		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL



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DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	<u> </u>		<u> </u>
Worker DNEL,	long-term	inhalation	local	0,073 mg/m³
Worker DNEL,	acute	inhalation	local	0,073 mg/m³
Consumer DNE	EL, long-term	oral	systemic	0,526 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 DNE	EL, long-term	inhalation	systemic	5,4 mg/m³
Consumer DNE	EL, acute	inhalation	systemic	27 mg/m³
Consumer DNE	EL, long-term	dermal	systemic	4 mg/kg bw/day
Consumer DNE	EL, acute	dermal	systemic	20 mg/kg bw/day
Consumer DNE	EL, long-term	oral	systemic	4 mg/kg bw/day
Consumer DNE	EL, acute	oral	systemic	20 mg/kg bw/day
,				
409-21-2	Silicon carbide			·
Worker DNEL,	acute	inhalation	systemic	94 mg/m³
Consumer DNE	EL, acute	inhalation	systemic	23 mg/m³
Consumer DNE	EL, acute	dermal	systemic	200 mg/kg bw/day
Consumer DNE	EL, acute	oral	systemic	13 mg/kg bw/day
,				
1760-24-3	N-(3-(trimethoxysilyl)propyl)ethylenediamine		<u> </u>	·
Worker DNEL,	long-term	inhalation	systemic	35,3 mg/m³
Worker DNEL,	acute	inhalation	systemic	35,3 mg/m³
Worker DNEL, long-term		dermal	systemic	5 mg/kg bw/day
Worker DNEL, acute		dermal	systemic	5 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	8,7 mg/m³
Consumer DNEL, acute		inhalation	systemic	8,7 mg/m³
Consumer DNEL, long-term		dermal	systemic	2,5 mg/kg bw/day
Consumer DNE	EL, acute	dermal	systemic	17 mg/kg bw/day
Consumer DNE	EL, long-term	oral	systemic	2,5 mg/kg bw/day



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PNEC values

CAS No	Substance	
Environmenta	l compartment	Value
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	
Freshwater		0,06 mg/l
Marine water		0,006 mg/l
Freshwater se	diment	5,784 mg/kg
Marine sedime	ent	0,578 mg/kg
Soil		1,121 mg/kg
100-51-6	benzyl alcohol	
Freshwater		1 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
1760-24-3	N-(3-(trimethoxysilyl)propyl)ethylenediamine	·
Freshwater		0,062 mg/l
Marine water		0,006 mg/l
Freshwater se	diment	0,22 mg/kg
Marine sedime	ent	0,022 mg/kg
Soil		0,009 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

goggies

Hand protection

Tested protective gloves must be worn: DIN EN 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.



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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.

Wearing time with occasional contact (splashes): max. 480 min. (NBR (Nitrile rubber))

Wearing time with permanent contact 240 - 480 min (NBR (Nitrile rubber))

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-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: red; yellow

Odour: like: Ammonia (NH3)

pH-Value: not determined

Changes in the physical state

Melting point:
Initial boiling point and boiling range:

>200 °C

Flash point:

>100 °C

Flammability

Solid: not determined
Gas: not determined

Explosive properties

No information available.

Lower explosion limits:

Upper explosion limits:

Ignition temperature:

not applicable

not applicable

Auto-ignition temperature

Solid: not determined
Gas: not determined

Decomposition temperature: not determined

Oxidizing properties

No information available.

Vapour pressure: >1 (air=1) hPa



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Density: 1,4 g/cm³

Water solubility: partially soluble

Solubility in other solvents

No information available.

Partition coefficient: not determined
Viscosity / dynamic: 10k mPa·s

(at 25 °C)

Vapour density: not determined 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. No known hazardous decomposition products.

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
2855-13-2	3-aminomethyl-3,5,5-trim	ethylcyclohex	ylamine			
	oral	LD50 mg/kg	1030	Rat		
	dermal	ATE mg/kg	1100			
100-51-6	benzyl alcohol					
	oral	LD50 mg/kg	1620	Rat		
	inhalative vapour	ATE	11 mg/l			
	inhalative (4 h) aerosol	LC50 mg/l	>4178	Rat		
162627-17-0	Fatty acids, C18, unsatd. 1,3-propanediamine	, dimers, read	ction produc	ts with N,N-dimethyl-1,3-p	ropanediamine and	
	oral	LD50 mg/kg	> 10000	Rat	OECD Guideline 401	
1760-24-3	N-(3-(trimethoxysilyl)prop	yl)ethylenedi	amine			
	inhalative vapour	ATE	11 mg/l			
	inhalative aerosol	ATE	1,5 mg/l			

Irritation and corrosivity

Causes severe skin burns and eye damage.

Sensitising effects

May cause an allergic skin reaction. (3-aminomethyl-3,5,5-trimethylcyclohexylamine; Fatty acids, C18, unsatd., dimers, reaction products with N,N-dimethyl-1,3-propanediamine and 1,3-propanediamine; N-(3-(trimethoxysilyl)propyl)ethylenediamine)

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	
2855-13-2	3-aminomethyl-3,5,5-trime	ethylcycloh	exylamine					
	Acute fish toxicity	LC50	110 mg/l	96 h				
	Acute algae toxicity	ErC50	37 mg/l	72 h				
100-51-6	benzyl alcohol							
	Acute fish toxicity	LC50	460 mg/l	96 h				
	Acute algae toxicity	ErC50	770 mg/l	72 h				
	Acute crustacea toxicity	EC50	230 mg/l	1	Daphnia magna (Big water flea)			
	Algea toxicity	NOEC	51 mg/l	3 d				
	Crustacea toxicity	NOEC	310 mg/l	21 d				

12.2. Persistence and degradability

CAS No	Chemical name					
	Method	Value	d	Source		
	Evaluation					
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine					
	OECD 301A/ ISO 7827/ EEC 92/69/V, C.4-A	8 %	28			
100-51-6	benzyl alcohol					
	OECD 301A/ ISO 7827/ EEC 92/69/V, C.4-A	95 - 97%	21			

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	0,99
100-51-6	benzyl alcohol	1,1

BCF

CAS No	Chemical name	BCF	Species	Source
100-51-6	benzyl alcohol	1		

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



according to Regulation (EC) No 1907/2006

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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)

<u>14.1. UN number:</u> UN 2735

14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (Isophorondiamine)

14.3. Transport hazard class(es): Ш 14.4. Packing group: Hazard label: 8 Classification code: C7 Special Provisions: 274 Limited quantity: 5 L Transport category: 3 Hazard No: 80 Tunnel restriction code:

Other applicable information (land transport)

E1 E2

Inland waterways transport (ADN)

14.1. UN number: UN 2735

14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (Isophorondiamine)

14.3. Transport hazard class(es):814.4. Packing group:IIIHazard label:8Classification code:C7Special Provisions:274Limited quantity:5 L

Other applicable information (inland waterways transport)

E1 E2

Marine transport (IMDG)

<u>14.1. UN number:</u> UN 2735

14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (Isophorondiamine)

 14.3. Transport hazard class(es):
 8

 14.4. Packing group:
 III

 Hazard label:
 8

 Special Provisions:
 223, 274



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Limited quantity: 5 L
EmS: F-A, S-B
Segregation group: 18 - alkalis

Other applicable information (marine transport)

E1 E2

Air transport (ICAO-TI/IATA-DGR)

<u>14.1. UN number:</u> UN 2735

14.2. UN proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (Isophorondiamine)

14.3. Transport hazard class(es):814.4. Packing group:IIIHazard label:8Special Provisions:A3 A803Limited quantity Passenger:1 L

IATA-packing instructions - Passenger:852IATA-max. quantity - Passenger:5 LIATA-packing instructions - Cargo:856IATA-max. quantity - Cargo:60 L

Other applicable information (air transport)

E1

Passenger-LQ: Y964

E2

Passenger-LQ: Y840 Passenger-LQ: Y841

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

National regulatory information

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

15.2. Chemical safety assessment

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

3-aminomethyl-3,5,5-trimethylcyclohexylamine

benzyl alcohol Silicon carbide



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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]

oldestineation for mixtures and about evaluation method decorating to Regulation (25) No. 12122000 [521]				
Classification	Classification procedure			
Skin Corr. 1B; H314	Calculation method			
Eye Dam. 1; H318	Calculation method			
Skin Sens. 1; H317	Calculation method			
Aquatic Chronic 3; H412	Calculation method			

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H412	Harmful to aquatic life with long lasting effects.

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.



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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.)