

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ARC HT-S(E) Part B

Revision date: 20.05.2020

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

##### 1.1. Product identifier

ARC HT-S(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 HT-S(E) (Part A) to provide a corrosion resistant coating for hot water/steam environment.

###### **Uses advised against**

No data available

##### 1.3. Details of the supplier of the safety data sheet

Company name:	Chesterton International GmbH	
Street:	Am Lenzenfleck 23	
Place:	DE-85737 Ismaning GERMANY	
Telephone:	+49 89 99 65 46 - 0	Telefax: +49 89 99 65 46 - 50
e-mail:	eu-sds@chesterton.com	
e-mail (Contact person):	eu-sds@chesterton.com	
Internet:	www.chesterton.com	
Responsible Department:	eu-sds@chesterton.com	

##### 1.4. Emergency telephone number:

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

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### **Regulation (EC) No. 1272/2008**

Hazard categories:

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Corr. 1

Serious eye damage/eye irritation: Eye Dam. 1

Respiratory or skin sensitisation: Skin Sens. 1

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Harmful if swallowed.

Causes severe skin burns and eye damage.

Causes serious eye damage.

May cause an allergic skin reaction.

May cause damage to organs through prolonged or repeated exposure.

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'-methylenebis(cyclohexylamine)  
Copolymer of benzenamine and formaldehyde, hydrogenated  
Amines, polyethylenepoly-, triethylenetetramine fraction  
3,6-diazaoctanethylenediamin; triethylenetetramine

**Signal word:** Danger

**Pictograms:**



#### Hazard statements

H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H412 Harmful to aquatic life with long lasting effects.

#### Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P273 Avoid release to the environment.  
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.  
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P310 Immediately call a POISON CENTER/doctor.  
P363 Wash contaminated clothing before reuse.

#### 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			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
1761-71-3	4,4'-methylenebis(cyclohexylamine)			45 - < 50 %
	217-168-8		01-2119541673-38	
	Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1, STOT RE 2; H302 H314 H317 H373			
135108-88-2	Copolymer of benzenamine and formaldehyde, hydrogenated			45 - < 50 %
	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			
90640-67-8	Amines, polyethylenepoly-, triethylenetetramine fraction			1 - < 5 %
	292-588-2		01-2119487919-13	
	Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 3; H312 H302 H314 H318 H317 H412			
112-24-3	3,6-diazaoctanethylenediamin; triethylenetetramine			1 - < 5 %
	203-950-6	612-059-00-5		
	Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 3; H312 H302 H314 H318 H317 H412			
4097-89-6	N,N-Bis(2-aminoethyl)ethylendiamine			< 1 %
	223-857-4			
	Acute Tox. 2, Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1, Aquatic Chronic 3; H310 H301 H314 H318 H412			

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).

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down. Keep away from unauthorized people

##### After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. If breathing is irregular or stopped, administer artificial respiration. Immediately call a doctor.

##### After contact with skin

Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. In case of skin irritation, consult a physician.

##### After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids

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apart and consult an ophthalmologist.

#### **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**

Processing vapours can irritate the respiratory tracts, skin and eyes. Ingestion causes nausea, weakness and central nervous system effects.

#### **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**

In case of fire may be liberated: Carbon monoxide, Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</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. Use water spray to cool containers.

#### **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**

Wear personal protection equipment (refer to section 8).

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

#### **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**

Take up mechanically, placing in appropriate containers for disposal. Treat the recovered material as prescribed in the section on waste disposal.

#### **6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

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#### SECTION 7: Handling and storage

##### 7.1. Precautions for safe handling

###### **Advice on safe handling**

Wear personal protection equipment (refer to section 8).

Avoid breathing dust/fume/gas/mist/vapours/spray. Do not contaminate with sodium nitrite or other nitrosating agents, which could cause the formation of cancer-causing nitrosamine. 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. Contaminated leather including shoes cannot be decontaminated and should be discarded. Avoid creating and breathing dust during removal, drilling, grinding, sawing or sanding.

###### **Advice on protection against fire and explosion**

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

###### **Further information on handling**

Wash hands before breaks and after work. Used working clothes should not be worn outside the work area. Street clothing should be stored separately from work clothing.

##### 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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#### DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
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
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
90640-67-8	Amines, polyethylenepoly-, triethylenetetramine fraction			
Worker DNEL, long-term		inhalation	systemic	0,54 mg/m <sup>3</sup>
Worker DNEL, acute		inhalation	systemic	5380 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	0,57 mg/kg bw/day
Worker DNEL, long-term		dermal	local	0,028 mg/cm <sup>2</sup>
Consumer DNEL, long-term		inhalation	systemic	0,096 mg/m <sup>3</sup>
Consumer DNEL, acute		inhalation	systemic	1600 mg/m <sup>3</sup>
Consumer DNEL, long-term		dermal	systemic	0,25 mg/kg bw/day
Consumer DNEL, acute		dermal	systemic	8 mg/kg bw/day
Consumer DNEL, long-term		dermal	local	0,43 mg/cm <sup>2</sup>
Consumer DNEL, acute		dermal	local	1 mg/cm <sup>2</sup>
Consumer DNEL, long-term		oral	systemic	0,14 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	20 mg/kg bw/day

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#### PNEC values

CAS No	Substance	Value
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
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
90640-67-8	Amines, polyethylenepoly-, triethylenetetramine fraction	
	Freshwater	0,027 mg/l
	Freshwater (intermittent releases)	0,2 mg/l
	Marine water	0,003 mg/l
	Freshwater sediment	8,572 mg/kg
	Marine sediment	0,857 mg/kg
	Secondary poisoning	0,18 mg/kg
	Micro-organisms in sewage treatment plants (STP)	0,13 mg/l
	Soil	1,25 mg/kg

#### 8.2. Exposure controls

##### Appropriate engineering controls

Provide adequate ventilation as well as local exhaust at critical locations. Avoid dust formation. Knock down dust with water spray jet.

##### 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.

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#### Eye/face protection

Eye glasses with side protection  
goggles

#### Hand protection

Tested protective gloves must be worn: EN ISO 374  
NBR (Nitrile rubber), Butyl caoutchouc (butyl rubber)  
Wearing time with permanent contact: Thickness of the glove material:  $\geq 0,4$  mm, Breakthrough time (maximum wearing time):  $>480$  min  
Wearing time with occasional contact (splashes):: Thickness of the glove material:  $\geq 0,1$  mm, Breakthrough time (maximum wearing time)  $> 30$  min  
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.  
Breakthrough times and swelling properties of the material must be taken into consideration.

#### Skin protection

Use protective clothing chemically resistant to this material.

#### 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

#### Environmental exposure controls

also ref. to  
Section 6: Accidental Release Measures  
Section 12: Ecological Information (non-mandatory)

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state:	viscous	
Colour:	transparent	
Odour:	characteristic	
pH-Value:		No data available

#### Changes in the physical state

Melting point:		No data available
Flash point:		$> 100$ °C
Sustaining combustion:		Not sustaining combustion

#### Flammability

Solid:		No data available
Gas:		No data available

#### Explosive properties

No information available.

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

#### **Auto-ignition temperature**

Solid: No data available

Gas: No data available

Decomposition temperature: No data available

#### **Oxidizing properties**

No information available.

Vapour pressure: No data available

Density: ~ 1 g/cm<sup>3</sup>

Water solubility: Immiscible

#### **Solubility in other solvents**

No information available.

Viscosity / dynamic:  
(at 23 °C) ~ 2000 mPa·s

Vapour density: > 1

Evaporation rate: < 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**

The product is stable under storage at normal ambient temperatures.

#### **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 acid

Strong alkali

Oxidising agent, strong

Chlorine

Oxygen,

#### **10.6. Hazardous decomposition products**

Nitric acid, Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide, Carbon dioxide (CO<sub>2</sub>), Gases/vapours, toxic

### SECTION 11: Toxicological information

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#### 11.1. Information on toxicological effects

##### **Acute toxicity**

Harmful if swallowed.

##### **ATEmix calculated**

ATE (oral) 488,9 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
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
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
90640-67-8	Amines, polyethylenepoly-, triethylenetetramine fraction				
	oral	LD50 1861,9 mg/kg	Rat	Study report (1992)	other: EPA FR Vol.50, No. 188, September
	dermal	LD50 1465,4 mg/kg	Rabbit	Study report (1993)	OECD Guideline 402
112-24-3	3,6-diazaoctanethylenediamin; triethylenetetramine				
	oral	LD50 2500 mg/kg	Rat		
	dermal	LD50 805 mg/kg	Rabbit		
4097-89-6	N,N-Bis(2-aminoethyl)ethylenediamine				
	oral	ATE 100 mg/kg			
	dermal	ATE 50 mg/kg			

##### **Irritation and corrosivity**

Causes severe skin burns and eye damage.

Causes serious eye damage.

##### **Sensitising effects**

May cause an allergic skin reaction. (4,4'-methylenebis(cyclohexylamine); Copolymer of benzenamine and formaldehyde, hydrogenated; Amines, polyethylenepoly-, triethylenetetramine fraction; 3,6-diazaoctanethylenediamin; triethylenetetramine)

##### **Carcinogenic/mutagenic/toxic effects for reproduction**

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

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#### **STOT-single exposure**

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

#### **STOT-repeated exposure**

May cause damage to organs through prolonged or repeated exposure. (4,4'-methylenebis(cyclohexylamine); Copolymer of benzenamine and formaldehyde, hydrogenated)

#### **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
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
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
90640-67-8	Amines, polyethylenepoly-, triethylenetetramine fraction					
	Acute fish toxicity	LC50 330 mg/l	96 h	Pimephales promelas	REACH Registration Dossier	other: U.S EPA-TSCA, 40 CFR Part 797.14
	Acute algae toxicity	ErC50 20 mg/l	72 h	Pseudokirchneriella subcapitata	REACH Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50 31,1 mg/l	48 h	Daphnia magna	REACH Registration Dossier	EU Method C.2
	Acute bacteria toxicity	(800 mg/l)	0,5 h	activated sludge, domestic	REACH Registration Dossier	other: EEC L133 1988 p 118-122
112-24-3	3,6-diazaoctanethylenediamin; triethylenetetramine					
	Acute algae toxicity	ErC50 > 100 mg/l	72 h			
	Acute crustacea toxicity	EC50 92 mg/l	48 h	Daphnia magna		

### 12.2. Persistence and degradability

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CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
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
1761-71-3	4,4'-methylenebis(cyclohexylamine)	2,03
135108-88-2	Copolymer of benzenamine and formaldehyde, hydrogenated	2,68
90640-67-8	Amines, polyethylenepoly-, triethylenetetramine fraction	-2,9
112-24-3	3,6-diazaoctanethylenediamin; triethylenetetramine	-1,66

#### BCF

CAS No	Chemical name	BCF	Species	Source
1761-71-3	4,4'-methylenebis(cyclohexylamine)	10,15	Cyprinus carpio	Other company data (
135108-88-2	Copolymer of benzenamine and formaldehyde, hydrogenated	> 18 - < 22	Cyprinus carpio	Study report (1997)

#### 12.4. Mobility in soil

No information available.

#### 12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

#### 12.6. Other adverse effects

No information available.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Disposal recommendations

Dispose of waste according to applicable legislation.

##### Contaminated packaging

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

### SECTION 14: Transport information

#### Land transport (ADR/RID)

<b>14.1. UN number:</b>	UN 2735
<b>14.2. UN proper shipping name:</b>	AMINES, LIQUID, CORROSIVE, N.O.S. (Cycloaliphatic Amine)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8

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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. (Cycloaliphatic Amine)
<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. (Cycloaliphatic Amine)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8
Special Provisions:	223, 274
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-A, S-B

#### Air transport (ICAO-TI/IATA-DGR)

<b>14.1. UN number:</b>	UN 2735
<b>14.2. UN proper shipping name:</b>	AMINES, LIQUID, CORROSIVE, N.O.S. (Cycloaliphatic Amine)
<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

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#### **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**

Restrictions on use (REACH, annex XVII):

Entry 3: 3,6-diazaoctanethylenediamin; triethylenetetramine

##### **National regulatory information**

Water hazard class (D): 3 - strongly hazardous to water

#### **15.2. Chemical safety assessment**

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

4,4'-methylenebis(cyclohexylamine)

Copolymer of benzenamine and formaldehyde, hydrogenated

Amines, polyethylenepoly-, triethylenetetramine fraction

### SECTION 16: Other information

#### **Changes**

This data sheet contains changes from the previous version in section(s): 1,15.

#### **Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international 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)

CLP: Classification, labelling and Packaging

REACH: Registration, Evaluation and Authorization of Chemicals

GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals

UN: United Nations

CAS: Chemical Abstracts Service

DNEL: Derived No Effect Level

DMEL: Derived Minimal Effect Level

PNEC: Predicted No Effect Concentration

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ARC HT-S(E) Part B

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ATE: Acute toxicity estimate  
 LC50: Lethal concentration, 50%  
 LD50: Lethal dose, 50%  
 LL50: Lethal loading, 50%  
 EL50: Effect loading, 50%  
 EC50: Effective Concentration 50%  
 ErC50: Effective Concentration 50%, growth rate  
 NOEC: No Observed Effect Concentration  
 BCF: Bio-concentration factor  
 PBT: persistent, bioaccumulative, toxic  
 vPvB: very persistent, very bioaccumulative  
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships  
 IBC: Intermediate Bulk Container  
 SVHC: Substance of Very High Concern

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

Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
Skin Corr. 1; H314	Calculation method
Eye Dam. 1; H318	Calculation method
Skin Sens. 1; H317	Calculation method
STOT RE 2; H373	Calculation method
Aquatic Chronic 3; H412	Calculation method

#### Relevant H and EUH statements (number and full text)

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
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.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

#### 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.

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