

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ARC CS2(E) Part A

Revision date: 11.02.2019

Page 1 of 12

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

##### 1.1. Product identifier

ARC CS2(E) Part A

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

###### **Use of the substance/mixture**

For use as a coating on properly prepared surfaces where mild chemical and abrasion exposures are anticipated.

###### **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

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory or skin sensitisation: Skin Sens. 1

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Causes skin irritation.

Causes serious eye 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**

epoxy resin (number average molecular weight  $\leq$  700), reaction product: bisphenol-A-(epichlorhydrin) oxirane, mono[(C12-14-alkyloxy)methyl] derivs.

**Signal word:** Warning

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ARC CS2(E) Part A

Revision date: 11.02.2019

Page 2 of 12

#### Pictograms:



#### Hazard statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
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.

#### 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	
25068-38-6	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-A-(epichlorhydrin)	55-65 %
	500-033-5	603-074-00-8
	01-2119456619-26	
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H315 H319 H317 H411	
68609-97-2	oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	10-15 %
	271-846-8	603-103-00-4
	01-2119485289-22	
	Skin Irrit. 2, Skin Sens. 1; H315 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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ARC CS2(E) Part A

Revision date: 11.02.2019

Page 3 of 12

(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 (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**

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.

#### **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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ARC CS2(E) Part A

Revision date: 11.02.2019

Page 4 of 12

#### **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/m <sup>3</sup>	fibres/ml	Category	Origin
13463-67-7	Titanium dioxide, total inhalable	-	10		TWA (8 h)	WEL

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ARC CS2(E) Part A

Revision date: 11.02.2019

Page 5 of 12

#### DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
25068-38-6	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-A-(epichlorhydrin)			
Worker DNEL, long-term	inhalation	systemic		12,25 mg/m <sup>3</sup>
Worker DNEL, acute	inhalation	systemic		12,25 mg/m <sup>3</sup>
Worker DNEL, long-term	dermal	systemic		8,33 mg/kg bw/day
Worker DNEL, acute	dermal	systemic		8,33 mg/kg bw/day
Consumer DNEL, long-term	dermal	systemic		3,571 mg/kg bw/day
Consumer DNEL, acute	dermal	systemic		3,571 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic		0,75 mg/kg bw/day
Consumer DNEL, acute	oral	systemic		0,75 mg/kg bw/day
68609-97-2	oxirane, mono[(C12-14-alkyloxy)methyl] derivs.			
Worker DNEL, long-term	inhalation	systemic		3,6 mg/m <sup>3</sup>
Worker DNEL, long-term	dermal	systemic		1 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic		0,87 mg/m <sup>3</sup>
Consumer DNEL, long-term	dermal	systemic		0,5 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic		0,5 mg/kg bw/day
13463-67-7	Titanium dioxide			
Worker DNEL, long-term	inhalation	local		10 mg/m <sup>3</sup>
Consumer DNEL, long-term	oral	systemic		700 mg/kg bw/day

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ARC CS2(E) Part A

Revision date: 11.02.2019

Page 6 of 12

#### PNEC values

CAS No	Substance		Value
25068-38-6	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-A-(epichlorhydrin)	Environmental compartment	
		Freshwater	0,006 mg/l
		Marine water	0,001 mg/l
		Freshwater sediment	0,996 mg/kg
		Marine sediment	0,1 mg/kg
		Secondary poisoning	11 mg/kg
		Soil	0,196 mg/kg
68609-97-2	oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	Freshwater	0,106 mg/l
		Freshwater (intermittent releases)	0,072 mg/l
		Marine water	0,011 mg/l
		Freshwater sediment	307,16 mg/kg
		Marine sediment	30,72 mg/kg
		Micro-organisms in sewage treatment plants (STP)	10 mg/l
		Soil	1,234 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

#### 8.2. Exposure controls

##### Appropriate engineering controls

Provide adequate ventilation as well as local exhaust 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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ARC CS2(E) Part A

Revision date: 11.02.2019

Page 7 of 12

#### Hand protection

Tested protective gloves must be worn (DIN EN 374)  
 Suitable gloves type: 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:  $\geq 0,4$  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.  
 Wear cotton undermitten if possible.

#### 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:	Paste	
Colour:	light grey	
Odour:	characteristic	
pH-Value:		not determined

#### Changes in the physical state

Melting point:	not determined
Initial boiling point and boiling range:	not determined
Flash point:	$>65$ °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
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## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ARC CS2(E) Part A

Revision date: 11.02.2019

Page 8 of 12

#### **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 23 °C) ~3500 mPa·s

Vapour density: not determined

Evaporation rate: not determined

#### **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.

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

Causes skin irritation.

Causes serious eye irritation.

##### **Sensitising effects**

May cause an allergic skin reaction. (epoxy resin (number average molecular weight ≤ 700), reaction product: bisphenol-A-(epichlorhydrin); oxirane, mono[(C12-14-alkyloxy)methyl] derivs.)



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ARC CS2(E) Part A

Revision date: 11.02.2019

Page 9 of 12

#### 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
25068-38-6	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-A-(epichlorhydrin)					
	Acute algae toxicity	ErC50 > 100 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (2007)	OECD Guideline 201
	Crustacea toxicity	NOEC 0,3 mg/l	21 d	Daphnia magna	Study report (1984)	OECD Guideline 211
68609-97-2	oxirane, mono[(C12-14-alkyloxy)methyl] derivs.					
	Acute fish toxicity	LC50 > 5000 mg/l	96 h	Oncorhynchus mykiss	Study report (2006)	OECD Guideline 203
	Crustacea toxicity	NOEC 56 mg/l	21 d	Daphnia magna	(2017)	OECD Guideline 211

#### 12.2. Persistence and degradability

No information available.

#### 12.3. Bioaccumulative potential

##### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
25068-38-6	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-A-(epichlorhydrin)	>= 2,64
68609-97-2	oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	3,77

#### BCF

CAS No	Chemical name	BCF	Species	Source
25068-38-6	epoxy resin (number average molecular weight <= 700), reaction product: bisphenol-A-(epichlorhydrin)	31		Study report (2010)
68609-97-2	oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	>= 160		REACH Registration D

#### 12.4. Mobility in soil

No information available.

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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ARC CS2(E) Part A

Revision date: 11.02.2019

Page 10 of 12

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)**

<b>14.1. UN number:</b>	UN 3082
<b>14.2. UN proper shipping name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (epoxy resin)
<b>14.3. Transport hazard class(es):</b>	9
<b>14.4. Packing group:</b>	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)**

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

#### **Marine transport (IMDG)**

<b>14.1. UN number:</b>	UN 3082
<b>14.2. UN proper shipping name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (epoxy resin)

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ARC CS2(E) Part A

Revision date: 11.02.2019

Page 11 of 12

<b>14.3. Transport hazard class(es):</b>	9
<b>14.4. Packing group:</b>	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)

<b>14.1. UN number:</b>	UN 3082
<b>14.2. UN proper shipping name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (epoxy resin)
<b>14.3. Transport hazard class(es):</b>	9
<b>14.4. Packing group:</b>	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:

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ARC CS2(E) Part A

Revision date: 11.02.2019

Page 12 of 12

epoxy resin (number average molecular weight  $\leq$  700), reaction product: bisphenol-A-(epichlorhydrin)  
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.  
Titanium dioxide

### 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: 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
Eye Irrit. 2; H319	Calculation method
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 2; H411	Calculation method

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

H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H411 Toxic 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.)*