

Safety Data Sheet

according to UK REACH Regulation

SIGRAPREG® C W245-TW2/2/AQ-E323/45%

Revision date: 11.08.2023

Product code: OB_WIL1902149

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

1.1. Product identifier

SIGRAPREG® C W245-TW2/2/AQ-E323/45%

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

Use of the substance/mixture

Material for CFRP-components.

1.3. Details of the supplier of the safety data sheet

Company name:	SGL epo GmbH	
	Location: Willich	
Street:	Siemensring 24	
Place:	D-47877 Willich	
Telephone:	+49 (0)2154-9238-0	Telefax: +49 (0)2154-9238-44
E-mail:	markus.wezstein@sglcarbon.com	
Contact person:	Dr. Markus Wezstein	Telephone: +49 (0)2154-9238-28
E-mail:	markus.wezstein@sglcarbon.com	
Internet:	www.sglcarbon.com	
Responsible Department:	Technical Marketing	

1.4. Emergency telephone number: +49 (0) 89 19240 (Giftnotruf - TU München)
+49 (0)2154-9238-0; 8:00 - 18:00 Uhr

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Skin Irrit. 2; H315
Eye Irrit. 2; H319
Skin Sens. 1; H317
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)
4,4'-Isopropylidenediphenol, polymer with 1-chloro-2,3-epoxypropane MW > 700
1,4-bis(2,3 epoxypropoxy)butane; butanedioldiglycidyl ether

Signal word: Warning

Pictograms:



Hazard statements

H315	Causes skin irritation.
H320	Causes eye irritation.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.

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P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

2.3. Other hazards

The product is skin resorptive.

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

SECTION 3: Composition/information on ingredients
3.2. Mixtures
Chemical characterization

Article based on Modified epoxy resin in B-stage on aramid-, carbon- or glass fabric

Relevant ingredients

CAS No	Chemical name	Quantity
	EC No	Index No
	REACH No	
	Classification (GB CLP Regulation)	
25068-38-6	reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)	25 - < 30 %
	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	
25036-25-3	4,4'-Isopropylidenediphenol, polymer with 1-chloro-2,3-epoxypropane MW > 700	10 - < 15 %
	607-500-3	
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1; H315 H319 H317	
150-68-5	monuron (ISO); 3-(4-chlorophenyl)-1,1-dimethylurea	< 1 %
	205-766-1	006-042-00-6
		01-2120768936-37
	Carc. 2, Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1; H351 H302 H400 H410	
2425-79-8	1,4-bis(2,3 epoxypropoxy)butane; butanedioldiglycidyl ether	< 1 %
	219-371-7	603-072-00-7
	Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1; H332 H312 H315 H319 H317	

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
25068-38-6	500-033-5	reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)	25 - < 30 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = 30000 mg/kg Skin Irrit. 2; H315: >= 5 - 100 Eye Irrit. 2; H319: >= 5 - 100	
150-68-5	205-766-1	monuron (ISO); 3-(4-chlorophenyl)-1,1-dimethylurea	< 1 %
		oral: ATE = 500 mg/kg	
2425-79-8	219-371-7	1,4-bis(2,3 epoxypropoxy)butane; butanedioldiglycidyl ether	< 1 %
		inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: ATE = 1100 mg/kg	

SECTION 4: First aid measures
4.1. Description of first aid measures

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General information

Change contaminated clothing. In case of irregular breathing or respiratory arrest provide artificial respiration.

After inhalation

Provide fresh air. In case of troubles or persistent symptoms, consult an ophthalmologist.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, seek medical treatment.

After contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After ingestion

Do NOT induce vomiting. Call a physician in any case!

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

none

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

none

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide (CO₂). Extinguishing powder water spray alcohol resistant foam.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Special exposure hazards arising from the substance itself, combustion products, resulting gases: Carbon dioxide (CO₂). Carbon monoxide Nitrogen oxides (NO_x). Hydrogen chloride (HCl). Pyrolysis products, toxic.

5.3. Advice for firefighters

Special protective equipment for firefighters Wear a self-contained breathing apparatus and chemical protective clothing.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Provide adequate ventilation.
Avoid contact with skin, eyes and clothes.

For non-emergency personnel

Provide adequate ventilation.
Use personal protection equipment.

For emergency responders

Use personal protection equipment.

6.2. Environmental precautions

No special environmental protection measures are necessary. Do not allow to enter into soil/subsoil.

6.3. Methods and material for containment and cleaning up**For containment**

Cover drains.

For cleaning up

Collect in closed and suitable containers for disposal.

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Other information

Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

none

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Ensure adequate ventilation of the storage area.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

Advice on general occupational hygiene

When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Additional protection measures for the hands: Protect skin by using skin protective cream. Avoid contact with skin, eyes and clothes.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Ensure adequate ventilation of the storage area.

Further information on storage conditions

Protect against: heat. Light.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
7440-44-0	Graphite, inhalable dust	-	10		TWA (8 h)	WEL

8.2. Exposure controls

Appropriate engineering controls

no restriction.

Individual protection measures, such as personal protective equipment

Eye/face protection

Tightly sealed safety glasses. (EN 166)

Hand protection

Butyl caoutchouc (butyl rubber), >120min (EN ISO 374)

Skin protection

Only wear fitting, comfortable and clean protective clothing.

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	semi-solid
Colour:	not relevant
Odour:	neutral
Odour threshold:	No data available
Melting point/freezing point:	<23 °C

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Boiling point or initial boiling point and boiling range:	not applicable
Flammability:	No data available
Lower explosion limits:	No data available
Upper explosion limits:	No data available
Flash point:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	> 300 °C
pH-Value:	not applicable
Viscosity / kinematic:	not applicable
Water solubility:	No data available
Dissolution rate:	No data available
Partition coefficient n-octanol/water:	No data available
Dispersion stability:	No data available
Vapour pressure:	0 hPa
Vapour pressure:	No data available
Density (at 20 °C):	1.45 - 1.65 g/cm ³
Relative density:	No data available
Bulk density:	not applicable
Relative vapour density:	No data available
Particle characteristics:	not applicable

9.2. Other information

Information with regard to physical hazard classes

Explosive properties	
none	
Sustaining combustion:	No data available
Self-ignition temperature	
Solid:	No data available
Gas:	No data available

Other safety characteristics

Solvent separation test:	No data available
Solvent content:	0
Solid content:	100
Sublimation point:	not applicable
Softening point:	No data available
Pour point:	No data available
Curing temperature of the prepreg::	>80 °C
Viscosity / dynamic:	not applicable
Flow time:	not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

No decomposition if used according to specifications.

10.2. Chemical stability

No decomposition if used according to specifications.

10.3. Possibility of hazardous reactions

Response: Oxidizing agents. Alkali (lye) Etchant and acids Amines
Exothermic polymerisation

10.4. Conditions to avoid

This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment).

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10.5. Incompatible materials

Oxidizing agents.
Etchant and acids
Alkali (lye)

10.6. Hazardous decomposition products

Thermal decomposition can lead to the escape of irritating gases and vapours.

Further information

No hazardous reaction when handled and stored according to provisions.
Keep in a cool place. (< 8°C)

SECTION 11: Toxicological information
11.1. Information on hazard classes as defined in GB CLP Regulation
Toxicokinetics, metabolism and distribution

No data available

Acute toxicity

Based on available data, the classification criteria are not met.
No data available

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
25068-38-6	reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)				
	oral	LD50 30000 mg/kg	Rat		
	dermal	LD50 > 2000 mg/kg	Daphnia magna		
150-68-5	monuron (ISO); 3-(4-chlorophenyl)-1,1-dimethylurea				
	oral	ATE 500 mg/kg			
2425-79-8	1,4-bis(2,3 epoxypropoxy)butane; butanedioldiglycidyl ether				
	dermal	ATE 1100 mg/kg			
	inhalation (0 h) vapour	ATE 11 mg/l			
	inhalation (0 h) dust/mist	ATE 1,5 mg/l			

Irritation and corrosivity

Causes skin irritation.
Causes serious eye irritation.
Causes eye irritation. Causes skin irritation.

Sensitising effects

May cause an allergic skin reaction. (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700); 4,4'-Isopropylidenediphenol, polymer with 1-chloro-2,3-epoxypropane MW > 700; 1,4-bis(2,3 epoxypropoxy)butane; butanedioldiglycidyl ether)
May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.
No toxic data available.

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STOT-single exposure

Based on available data, the classification criteria are not met.
No toxic data available.

STOT-repeated exposure

Based on available data, the classification criteria are not met.
No toxic data available.

Aspiration hazard

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

Information on likely routes of exposure

In case of skin contact

Practical experience

No toxic data available.

11.2. Information on other hazards

Endocrine disrupting properties

No data available

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
25068-38-6	reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700)					
	Acute fish toxicity	LC50	1.3 mg/l	96 h	Oncorhynchus mykiss	OECD 203
	Acute algae toxicity	ErC50	> 11 mg/l	72 h		
	Acute crustacea toxicity	EC50	2.1 mg/l	48 h	Daphnia magna	OECD 202
	Crustacea toxicity	NOEC	0.3 mg/l	21 d	Daphnia magna	OECD 211

12.2. Persistence and degradability

Product is biodegradable with difficulty.

12.3. Bioaccumulative potential

not determined

12.4. Mobility in soil

not determined

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.
not determined

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

none

Further information

No negative ecological effects publicized.
Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Remove according to the regulations.

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List of Wastes Code - residues/unused products

040209 WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES; wastes from the textile industry; wastes from composite materials (impregnated textile, elastomer, plastomer)

List of Wastes Code - used product

070213 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; waste plastic

List of Wastes Code - contaminated packaging

040209 WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES; wastes from the textile industry; wastes from composite materials (impregnated textile, elastomer, plastomer)

Contaminated packaging

Packing which cannot be properly cleaned must be disposed of.
Non-contaminated packages may be recycled.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.2. UN proper shipping name: No dangerous good in sense of these transport regulations.

Inland waterways transport (ADN)

14.2. UN proper shipping name: No dangerous good in sense of these transport regulations.

Marine transport (IMDG)

14.2. UN proper shipping name: No dangerous good in sense of these transport regulations.

Air transport (ICAO-TI/IATA-DGR)

14.2. UN proper shipping name: No dangerous good in sense of these transport regulations.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

none

14.7. Maritime transport in bulk according to IMO instruments

-

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 75

National regulatory information

Water hazard class (D): 1 - slightly hazardous to water

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 3,9,11.

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Abbreviations and acronyms

Acute Tox: Acute toxicity

Skin Irrit: Skin irritation

Eye Irrit: Eye irritation

Skin Sens: Skin sensitisation

Carc: Carcinogenicity

Aquatic Acute: Acute aquatic hazard

Aquatic Chronic: Chronic aquatic hazard

"A - Alveolengängig; ADR - Accord européen relatif au transport international des marchandises Dangereuses par Route; bw - Body Weight; CAS - Chemical Abstract Service; CSR - Chemical Safety Report; DFG Deutsche Forschungsgemeinschaft; DIN - Deutsche Industrie Norm; DNEL - Derived No Effect Level; E - Einatembar; EAKV - Europäischer Abfallkatalog Verordnung; EC - Effective Concentration; EC - Effect Concentration European Commission; EINECS - European Inventory of Existing Commercial Chemical Substances; ELINCS - European List of Notified Chemical Substances; EN - Europäische Norm; LC - Lethal Concentration; LD - Lethal Dosis; NOAEL - No Observed Adverse Effect Level; OECD - Organization for Economic Cooperation and Development; PBT - Persistent, Bioaccumulative and Toxic; RE - Repeated Exposure; REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals;"

Classification for mixtures and used evaluation method according to GB CLP Regulation

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)

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H320	Causes eye irritation.
H332	Harmful if inhaled.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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