

SAFETY DATA SHEET

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

1.1 Product identifier

Product Name: Epoxy Resin Grout (Part A) SG200 Series

Contains: Bis-[4-(2,3-epoxipropoxy)phenyl]propane
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.

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

Use of the substance/mixture: Modified epoxy resin containing inert fillers

Use advised against: No information available

1.3 Details of the supplier of the safety data sheet

Name of Supplier: Simmons (Mouldings) Limited

Address of Supplier: Station Street West Business Park
Coventry
CV6 5BP
UK

Telephone: +44 (0) 24 7663 7028

Email: info@epoxyworktops.com

1.4 Emergency telephone number

Emergency Telephone: +44 (0) 24 7663 7028

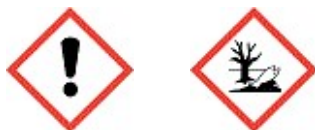
SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]: Skin Irrit. 2, H315; Skin Sens. 1, H317;
Eye Irrit. 2, H319; Aquatic Chronic 2, H411; EUH205; EUH211

Additional information: For full text of Hazard and EU Hazard statements: see section 16

2.2 Label elements



Signal Word: Warning

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

- P273 - Avoid release to the environment.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P302+P352+P333+P313 - IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.
- P337+P313 - If eye irritation persists: Get medical advice/attention.
- P362+P364 - Take off contaminated clothing and wash it before reuse.
- P501 - Dispose of contents/container to an approved hazardous/special waste disposal facility in accordance with local and national regulations

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SECTION 2: Hazards identification (....)

Supplemental Hazard information (EU)

EUH205 - Contains epoxy constituents. May produce an allergic reaction.

EUH211 - Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

2.3 Other hazards

Not a PBT according to REACH Annex XIII

Not a vPvB according to REACH Annex XIII

Bis-[4-(2,3-epoxipropoxy)phenyl]propane is being assessed for endocrine disrupting properties

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Contains the following hazardous ingredients or ingredients with a workplace exposure limit:

Chemical Name	Conc.	CAS No.	EC No.	Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]	SCL/ M-Factor/ ATE	REACH Registration Number	WEL/ OEL
Bis-[4-(2,3-epoxipropoxy) phenyl]propane	50 - 60%	1675-54-3	216-823-5	Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 Aquatic Chronic 2, H411	Eye Irrit. 2 H319: C ≥ 5 % Skin Irrit. 2 H315: C ≥ 5 %	01-2119456619-26-XXXX	No
Titanium dioxide	20 - 30%	13463-67-7	236-675-5	Carc. 2, H351 *	-	01-2119489379-17-XXXX	Yes
Aluminium hydroxide	10 - 20%	21645-51-2	244-492-7	Not classified (Substance with a workplace exposure limit)	-	01-2119529246-39-XXXX	Yes
Synthetic Amorphous Silica	< 5%	67762-90-7	-	Not classified (Substance with a workplace exposure limit)	-	-	Yes
Carbon black	< 5%	1333-86-4	215-609-9	Not classified (Substance with a workplace exposure limit)	-	-	Yes
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	< 1%	9003-36-5	500-006-8	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 3, H412	-	-	No
Iron Oxide Yellow	< 1%	51274-00-1	257-098-5	Not classified (Substance with a workplace exposure limit)	-	-	Yes
Barium sulfate	< 1%	7727-43-7	231-784-4	Not classified (Substance with a workplace exposure limit)	-	-	Yes
Propylidynetrimethanol	< 1%	77-99-6	201-074-9	Repr. 2, H361fd	-	01-2119486799-10-XXXX	No
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	< 1%	68609-97-2	271-846-8	Skin Irrit. 2, H315 Skin Sens. 1, H317	-	-	No
Diiron trioxide	< 1%	1309-37-1	215-168-2	Not classified (Substance with a workplace exposure limit)	-	-	Yes

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SECTION 3: Composition/information on ingredients (....)

* The classification of titanium dioxide as a carcinogen by inhalation applies only to the substance in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$.

SECTION 4: First aid measures

4.1 Description of first aid measures

Rescuers should put on approved personal protective equipment (PPE) before administering first aid

Rescuers should take suitable precautions to avoid becoming casualties themselves

Contact with eyes

If substance has got into eyes, immediately wash out with plenty of water for several minutes

Irrigate eyes thoroughly whilst lifting eyelids

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Contact with skin

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of soap and water

If skin irritation or rash occurs: Get medical advice/attention.

Contaminated clothing should be laundered before reuse

Ingestion

Rinse mouth with water (do not swallow)

Give small amounts of water to drink

Do not induce vomiting unless directed by medical personnel.

Never give anything by mouth to an unconscious person

Get medical advice/attention.

Inhalation

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

Keep warm and at rest, in a half upright position. Loosen clothing

Apply artificial respiration only if patient is not breathing but do not use mouth to mouth resuscitation

Get medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

Contact with eyes

Causes redness and irritation

Contact with skin

Causes redness and irritation

May cause an allergic skin reaction.

May cause skin sensitisation. Stop using product if skin sensitisation occurs.

Ingestion

May cause irritation of the throat

May cause gastro-intestinal irritation

May cause nausea/vomiting

Inhalation

May cause irritation of the throat

May cause respiratory irritation

May be harmful if inhaled.

SECTION 4: First aid measures (....)

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: In case of fire use water spray or fog, alcohol resistant foam, dry chemical or carbon dioxide

Unsuitable extinguishing media: High volume water jet

5.2 Special hazards arising from the substance or mixture

In a fire or if heated, a pressure increase will occur and the container may burst

Keep container(s) exposed to fire cool, by spraying with water

May form explosive vapour/air mixtures

Gives off irritating or toxic fumes (or gases) in a fire.

Decomposition products may include carbon oxides

5.3 Advice for firefighters

Special protective equipment: Wear self-contained breathing apparatus (SCBA). Wear full protective clothing including chemical protection suit.

Collect contaminated fire extinguishing water separately. This MUST not be discharged into drains. Prevent fire extinguishing water from contaminating surface or ground water.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

No action shall be taken involving any personal risk or without suitable training

Only trained and authorised personnel should carry out emergency response

Personal precautions for non-emergency personnel: Do not touch or walk through spilt material; Avoid contact with skin and eyes; Do not breathe spray/mists; Wash thoroughly after handling.; Remove contaminated clothing

Personal precautions for emergency responders: Evacuate the area and keep personnel upwind; Shut off all ignition sources; Wear protective clothing as per section 8

6.2 Environmental precautions

Avoid release to the environment.

Do not allow to enter public sewers and watercourses

If contamination of drainage systems or water courses is unavoidable, immediately inform appropriate authorities

6.3 Methods and material for containment and cleaning up

Stop leak if safe to do so.

Seek expert advice for removal and disposal of all contaminated materials and wastes

Small spills

Wipe up spillage with damp absorbent cloth or towel

Place in appropriate container

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SECTION 6: Accidental release measures (....)

Remove contaminated material to safe location for subsequent disposal
Wash affected area with plenty of water

Large spills

Contain the spillage using bunding
Absorb spillage in suitable inert material
Place in sealable container
Remove contaminated material to safe location for subsequent disposal
To be disposed of as hazardous waste

6.4 Reference to other sections

See section(s): 7, 8 & 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not use this product.

Ensure adequate ventilation

Do not breathe spray/mists

Do not get in eyes, on skin, or on clothing.

Wear protective clothing as per section 8

Do not eat, drink or smoke when using this product.

Keep away from heat and sources of ignition

Eyewash bottles should be available

Wash thoroughly after handling.

Contaminated work clothing should not be allowed out of the workplace.

Contaminated clothing should be laundered before reuse

7.2 Conditions for safe storage, including any incompatibilities

Keep in a cool, dry, well ventilated place

Keep only in the original container

Keep container tightly closed.

Keep away from food, drink and animal feedingstuffs

Exothermic reaction with mercaptans

Incompatible with acids, bases, oxidizing agents, amines

7.3 Specific end use(s)

Epoxy resin

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Reference should be made to monitoring standards, such as the following: European Standard EN 689

SECTION 8: Exposure controls/personal protection (....)

(Workplace exposure - Measurement of exposure by inhalation to chemical agents - Strategy for testing compliance with occupational exposure limit values). European Standard EN 14042 (Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents). European Standard EN 482 (Workplace exposure. General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Bis-[4-(2,3-epoxipropoxy)phenyl]propane

DNEL (inhalational) 4.93 mg/m³ Industry, Long Term, Systemic Effects
DNEL (dermal) 750 µg/kg bw/day Industry, Long Term, Systemic Effects
DNEL (inhalational) 870 µg/m³ Consumer, Long Term, Systemic Effects
DNEL (dermal) 89.3 µg/kg bw/day Consumer, Long Term, Systemic Effects
DNEL (oral) 500 µg/kg bw/day Consumer, Long Term, Systemic Effects
PNEC aqua (freshwater) 6 µg/L
PNEC aqua (intermittent releases, freshwater) 18 µg/L
PNEC aqua (marine water) 600 ng/L
PNEC aqua (intermittent releases, marine water) 1.8 µg/L
PNEC (STP) 10 mg/L
PNEC sediment (freshwater) 341 µg/kg
PNEC sediment (marine water) 34.1 µg/kg
PNEC terrestrial (soil) 64.7 µg/kg
PNEC secondary poisoning (food) 11 mg/kg

Titanium dioxide

WEL (long term) 10 mg/m³ (UK, total inhalable)
WEL (long term) 4 mg/m³ (UK, respirable)

Aluminium hydroxide

WEL (long term) 2 mg/m³ (UK, as aluminium salts, soluble)
DNEL (inhalational) 10.76 mg/m³ Industry, Long Term, Systemic Effects
DNEL (inhalational) 10.76 mg/m³ Industry, Long Term, Local Effects
DNEL (oral) 4.74 mg/kg bw/day Consumer, Long Term, Systemic Effects

Synthetic Amorphous Silica

WEL (long term) 6 mg/m³ (UK, inhalable dust)
WEL (long term) 2.4 mg/m³ (UK, respirable dust)
DNEL (inhalational) 4 mg/m³ (derived by Synthetic Amorphous Silica REACH Consortium)

Carbon black

WEL (long term) 3.5 mg/m³ (UK)
WEL (short term) 7 mg/m³ (UK)
DNEL (inhalational) 1 mg/m³ Industry, Long Term, Systemic Effects
DNEL (inhalational) 60 µg/m³ Consumer, Long Term, Systemic Effects
PNEC aqua (freshwater) 50 mg/L

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol

No exposure limits have been set for this substance

Iron Oxide Yellow

WEL (long term) 5 mg/m³ (UK. Iron(III) oxide, fume or respirable dust, as Fe)
WEL (short term) 10 mg/m³ (UK. Iron(III) oxide, fume or respirable dust, as Fe)
WEL (long term) 1 mg/m³ (UK. Iron salts, as Fe)
WEL (short term) 2 mg/m³ (UK. Iron salts, as Fe)

Barium sulfate

WEL (long term) 10 mg/m³ (UK, inhalable dust)
WEL (long term) 4 mg/m³ (UK, respirable dust)
DNEL (inhalational) 10 mg/m³ Industry, Long Term, Systemic Effects
DNEL (inhalational) 10 mg/m³ Industry, Long Term, Local Effects

SECTION 8: Exposure controls/personal protection (....)

DNEL (inhalational) 10 mg/m³ Consumer, Long Term, Systemic Effects
DNEL (oral) 13 000 mg/kg bw/day Consumer, Long Term, Systemic Effects
PNEC aqua (freshwater) 115 µg/L
PNEC (STP) 62.2 mg/L
PNEC sediment (freshwater) 600.4 mg/kg
PNEC terrestrial (soil) 207.7 mg/kg

Propylidynetrimethanol

DNEL (inhalational) 3.3 mg/m³ Industry, Long Term, Systemic Effects
DNEL (dermal) 940 µg/kg bw/day Industry, Long Term, Systemic Effects
DNEL (inhalational) 580 µg/m³ Consumer, Long Term, Systemic Effects
DNEL (dermal) 340 µg/kg bw/day Consumer, Long Term, Systemic Effects
DNEL (oral) 340 µg/kg bw/day Consumer, Long Term, Systemic Effects

Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.

DNEL (inhalational) 3.6 mg/m³ Industry, Long Term, Systemic Effects
DNEL (dermal) 1 mg/kg bw/day Industry, Long Term, Systemic Effects
DNEL (inhalational) 870 µg/m³ Consumer, Long Term, Systemic Effects
DNEL (dermal) 500 µg/kg bw/day Consumer, Long Term, Systemic Effects
DNEL (oral) 500 µg/kg bw/day Consumer, Long Term, Systemic Effects
PNEC aqua (freshwater) 105.8 µg/L
PNEC aqua (intermittent releases, freshwater) 72 µg/L
PNEC aqua (marine water) 10.58 µg/L
PNEC (STP) 10 mg/L
PNEC sediment (freshwater) 307.16 mg/kg
PNEC sediment (marine water) 30.72 mg/kg
PNEC terrestrial (soil) 1.234 mg/kg

Diiron trioxide

WEL (long term) 5 mg/m³ (UK. Iron(III) oxide, fume or respirable dust, as Fe)
WEL (short term) 10 mg/m³ (UK. Iron(III) oxide, fume or respirable dust, as Fe)
WEL (long term) 1 mg/m³ (UK. Iron salts, as Fe)
WEL (short term) 2 mg/m³ (UK. Iron salts, as Fe)

8.2 Exposure controls

Selection and use of personal protective equipment should be based on a risk assessment of exposure potential

Engineering controls

Engineering controls should be provided which maintain airborne concentrations below the relevant guidelines
Use local exhaust ventilation and/or enclosures.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment
Where a reusable half mask respirator is required, use EN 140, with gas/vapour filter EN 14387 type ABEK, or EN 405; EN 1827 and EN 143 particle filter
Where a full face mask respirator is required, use EN 136, with gas/vapour filter EN 14387 type ABEK and particle filter EN 143

Eye/face protection

Wear safety glasses or goggles giving complete eye protection approved to standard EN 166

Skin protection

Wear suitable protective clothing
Wear protective gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and standard EN 374.
The selection of a suitable glove depends on work conditions and whether the product is present on its own or in combination with other substances. Breakthrough time is dependent on the characteristics of the brand of glove used and the supplier should be consulted.

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SECTION 8: Exposure controls/personal protection (....)

PVC or rubber gloves are recommended

Thermal hazards

Not applicable

Hygiene measures

Do not eat, drink or smoke when using this product.

Use good personal hygiene practices

Contaminated work clothing should not be allowed out of the workplace.

Ensure eyewash stations and safety showers are close to hand.

Environmental exposure controls

Avoid release to the environment.

Do not allow to penetrate the ground/soil.

Do not empty into drains



SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Liquid, paste
Colour:	Various
Odour:	No data available
Melting point/freezing point:	No data available
Boiling point or initial boiling point and boiling range:	> 200 °C
Flammability:	Not flammable
Lower and upper explosion limit:	Not applicable
Flash point:	> 150 °C
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH:	No data available
Kinematic viscosity:	No data available
Solubility:	Insoluble in water
Partition coefficient n-octanol/water (log value):	No data available
Vapour pressure:	No data available
Density and/or relative density:	1.6
Relative vapour density:	No data available
Particle characteristics:	Not applicable

9.2 Other information

None

SECTION 10: Stability and reactivity

10.1 Reactivity

Reacts with amines and oxidizing agents

Exothermic reaction with mercaptans

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SECTION 10: Stability and reactivity (....)

10.2 Chemical stability

Considered stable under normal conditions

10.3 Possibility of hazardous reactions

May form explosive vapour/air mixtures

10.4 Conditions to avoid

Avoid extremes of temperature

10.5 Incompatible materials

Incompatible with acids, bases, oxidizing agents, amines

10.6 Hazardous decomposition products

Decomposition products may include carbon oxides

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute Toxicity

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

Substances

Chemical Name	LD ₅₀ (oral, rat)	LC ₅₀ (inhalation, rat)	LD ₅₀ (dermal, rabbit)
Bis-[4-(2,3-epoxipropoxy)phenyl]propane	2 000 - 15 000 mg/kg	LC ₅₀ (5 h) 0 ppm	20 mL/kg
Titanium dioxide	2 000 - 25 000 mg/kg	(4 h) 3.43 - 6.82 mg/L	No data available
Aluminium hydroxide	2 000 mg/kg	(4 h) 888 - 2 300 mg/m ³	No data available
Synthetic Amorphous Silica	> 5 000 mg/kg	No data available	> 2 000 mg/kg
Carbon black	2 000 - 10 000 mg/kg	LC ₅₀ (4 h) 4.6 mg/m ³	2 000 mg/kg
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	> 2 000 mg/kg	No data available	> 400 mg/kg (rat)
Iron Oxide Yellow	5 000 - 10 000 mg/kg	(4 h) 5.05 mg/L	No data available
Barium sulfate	No data available	No data available	No data available
Propylidynetrimethanol	14 700 mg/kg	(4 h) 850 mg/m ³	10 000 mg/kg
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	30.1 mL/kg	LC ₅₀ (7 h) 150 mg/m ³	4 000 mg/kg
Diiron trioxide	5 000 - 10 000 mg/kg	(4 h) 5.05 mg/L	No data available

Skin corrosion/irritation

Causes skin irritation.

Classification based on calculation and concentration thresholds

Substances

Chemical Name	Irritation/corrosion
Bis-[4-(2,3-epoxipropoxy)phenyl]propane	Adverse effect observed (irritating)
Titanium dioxide	No adverse effect observed (not irritating)
Aluminium hydroxide	No adverse effect observed (not irritating)

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SECTION 11: Toxicological information (....)

Synthetic Amorphous Silica	No adverse effect observed (not irritating)
Carbon black	No adverse effect observed (not irritating)
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	No data available
Iron Oxide Yellow	No adverse effect observed (not irritating)
Barium sulfate	No adverse effect observed (not irritating)
Propylidynetrimethanol	No adverse effect observed (not irritating)
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	Adverse effect observed (irritating)
Diiron trioxide	No adverse effect observed (not irritating)

Serious eye damage/irritation

Causes serious eye irritation.

Classification based on calculation and concentration thresholds

Substances

Chemical Name	Irritation/corrosion
Bis-[4-(2,3-epoxipropoxy)phenyl]propane	Adverse effect observed (irritating)
Titanium dioxide	No adverse effect observed (not irritating)
Aluminium hydroxide	No adverse effect observed (not irritating)
Synthetic Amorphous Silica	No adverse effect observed (not irritating)
Carbon black	No adverse effect observed (not irritating)
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	No data available
Iron Oxide Yellow	No adverse effect observed (not irritating)
Barium sulfate	No adverse effect observed (not irritating)
Propylidynetrimethanol	No adverse effect observed (not irritating)
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	Adverse effect observed (irritating)
Diiron trioxide	No adverse effect observed (not irritating)

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Classification based on calculation and concentration thresholds

Substances

Chemical Name	Skin sensitisation	Respiratory sensitisation
Bis-[4-(2,3-epoxipropoxy)phenyl]propane	Adverse effect observed (sensitising)	No study available
Titanium dioxide	No adverse effect observed (not sensitising)	No adverse effect observed (not sensitising)
Aluminium hydroxide	No adverse effect observed (not sensitising)	No adverse effect observed (not sensitising)
Synthetic Amorphous Silica	No data available	No data available
Carbon black	No adverse effect observed (not sensitising)	No study available
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	No data available	No data available
Iron Oxide Yellow	No adverse effect observed (not sensitising)	No study available
Barium sulfate	No adverse effect observed (not sensitising)	No adverse effect observed (not sensitising)
Propylidynetrimethanol	No adverse effect observed (not sensitising)	No study available

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SECTION 11: Toxicological information (....)

Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	Adverse effect observed (sensitising)	No study available
Diiron trioxide	No adverse effect observed (not sensitising)	No study available

Germ cell mutagenicity

Based on available data, the classification criteria are not met

Substances

Chemical Name	Toxicity - In Vitro	Toxicity - In Vivo
Bis-[4-(2,3-epoxipropoxy)phenyl]propane	Adverse effect observed (positive)	No adverse effect observed (negative)
Titanium dioxide	No adverse effect observed (negative)	No adverse effect observed (negative)
Aluminium hydroxide	No data available	No data available
Synthetic Amorphous Silica	No data available	No data available
Carbon black	No adverse effect observed (negative)	No adverse effect observed (negative)
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	No data available	No data available
Iron Oxide Yellow	No adverse effect observed (negative)	No adverse effect observed (negative)
Barium sulfate	No adverse effect observed (negative)	No study available
Propylidynetrimethanol	No data available	No data available
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	Adverse effect observed (positive)	No adverse effect observed (negative)
Diiron trioxide	No adverse effect observed (negative)	No adverse effect observed (negative)

Carcinogenicity

Bis-[4-(2,3-epoxipropoxy)phenyl]propane is classified by IARC as Group 3 (Not classifiable as to its carcinogenicity to humans)

Titanium dioxide is classified by IARC as Group 2B (possibly carcinogenic to human. The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter $\leq 10 \mu\text{m}$

Carbon black, when inhaled as dust, is classified by IARC as Group 2B (possibly carcinogenic to humans)

Substances

Chemical Name	NOAEL (oral, rat)	NOAEC (inhalation, rat)	NOAEL (dermal, rat)
Bis-[4-(2,3-epoxipropoxy)phenyl]propane	No data available	No data available	No data available
Titanium dioxide	No data available	No data available	No data available
Aluminium hydroxide	No data available	No data available	No data available
Synthetic Amorphous Silica	No data available	No data available	No data available
Carbon black	No data available	No data available	No data available
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	No data available	No data available	No data available
Iron Oxide Yellow	No data available	No data available	No data available
Barium sulfate	No data available	No data available	No data available
Propylidynetrimethanol	No data available	No data available	No data available
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	No data available	No data available	No data available
Diiron trioxide	No data available	No data available	No data available

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SECTION 11: Toxicological information (....)

Reproductive toxicity

Based on available data, the classification criteria are not met

Substances

Chemical Name	NOAEL (oral, rat)	NOAEC (inhalation, rat)	NOAEL (dermal, rat)
Bis-[4-(2,3-epoxipropoxy)phenyl]propane	750 mg/kg bw/day (Effect on fertility) 180 mg/kg bw/day (Effect on developmental toxicity)	No data available	300 mg/kg bw/day (Effect on developmental toxicity)
Titanium dioxide	1 000 mg/kg bw/day (Effect on developmental toxicity)	No data available	No data available
Aluminium hydroxide	No data available	No data available	No data available
Synthetic Amorphous Silica	No data available	No data available	No data available
Carbon black	No data available	No data available	No data available
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	No data available	No data available	No data available
Iron Oxide Yellow	No data available	No data available	No data available
Barium sulfate	95.5 mg/kg bw/day (Effect on developmental toxicity)	No data available	No data available
Propylidynetrimethanol	225 mg/kg bw/day (Effect on fertility)	No data available	No data available
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	375 mg/kg bw/day (rabbit) (Effect on developmental toxicity)	No data available	100 mg/kg bw/day (Effect on fertility) 200 mg/kg bw/day (Effect on developmental toxicity)
Diiron trioxide	No data available	No data available	No data available

Specific target organ toxicity (STOT) - single exposure

Based on available data, the classification criteria are not met

Substances

Chemical Name	Route	Remarks
Bis-[4-(2,3-epoxipropoxy)phenyl]propane	Respiratory	No study available
Titanium dioxide	Respiratory	No data available
Aluminium hydroxide	Respiratory	No adverse effect observed (not irritating)
Synthetic Amorphous Silica	Respiratory	No data available
Carbon black	Respiratory	No adverse effect observed (not irritating)
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	Respiratory	No data available
Iron Oxide Yellow	Respiratory	No study available
Barium sulfate	Respiratory	No adverse effect observed (not irritating)
Propylidynetrimethanol	Respiratory	No study available
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	Respiratory	No data available
Diiron trioxide	Respiratory	No study available

Specific target organ toxicity (STOT) - repeated exposure

Based on available data, the classification criteria are not met

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SECTION 11: Toxicological information (....)

Substances

Chemical Name	NOAEL (oral, rat)	NOAEC (inhalation, rat)	NOAEL (dermal, rat)
Bis-[4-(2,3-epoxipropoxy)phenyl]propane	50 mg/kg bw/day	No data available	100 mg/kg bw/day
Titanium dioxide	No data available	2.1 mg/m ³	No data available
Aluminium hydroxide	200 - 3 225 mg/kg bw/day	3 - 70 mg/m ³	No data available
Synthetic Amorphous Silica	2 500 mg/kg bw/day	1 - 31 mg/m ³	No data available
Carbon black	1 000 mg/kg bw/day	1 - 52.8 mg/m ³	No data available
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	No data available	No data available	No data available
Iron Oxide Yellow	1 000 mg/kg bw/day	4.7 - 10.1 mg/m ³	No data available
Barium sulfate	61.1 - 80.9 mg/kg bw/day	No data available	No data available
Propylidynetrimethanol	67 mg/kg bw/day	No data available	No data available
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	100 mg/kg bw/day	No data available	100 mg/kg bw/day
Diiron trioxide	1 000 mg/kg bw/day	4.7 - 10.1 mg/m ³	No data available

Aspiration hazard

Based on available data, the classification criteria are not met

Contact with eyes

Causes redness and irritation

Contact with skin

May cause an allergic skin reaction.

May cause skin sensitisation. Stop using product if skin sensitisation occurs.

Ingestion

May cause irritation of the throat

May cause gastro-intestinal irritation

May cause nausea/vomiting

Inhalation

May cause respiratory irritation

May be harmful if inhaled.

11.2 Information on other hazards

Bis-[4-(2,3-epoxipropoxy)phenyl]propane is being assessed for endocrine disrupting properties

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Classification based on calculation and concentration thresholds

Substances

Chemical Name	LC ₅₀ (fish)	EC ₅₀ (aquatic invertebrates)	EC ₅₀ (aquatic algae)
Bis-[4-(2,3-epoxipropoxy)phenyl]propane	(4 days) 1.2 - 3.6 mg/L	(48 h) 1.1 - 2.8 mg/L	(72 h) 9.4 - 11 mg/L
Titanium dioxide	(72 h) 1 mg/L	(48 h) 2.41 - 103.9 mg/L	(72 h) 100 mg/L
Aluminium hydroxide	(4 days) 570 - 218 644.1 µg/L	(48 h) 1.5 - 2.56 mg/L	(72 h) 16.9 - 1 799 µg/L

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SECTION 12: Ecological information (....)

Synthetic Amorphous Silica	(4 days) 1.033 - 5 g/L	(48 h) 5 g/L	(72 h) 173.1 - 500 mg/L
Carbon black	(4 days) 100 - 10 000 mg/L	(48 h) 100 - 1 000 mg/L	(72 h) 100 - 10 000 mg/L
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	(4 days) 2.54 mg/L	(48 h) 2.55 mg/L	(72 h) > 1 000 mg/L
Iron Oxide Yellow	(4 days) 100 g/L	(48 h) 100 mg/L	(72 h) 20 mg/L
Barium sulfate	(4 days) 3.5 - 174 mg/L	LC ₅₀ (48 h) 14.5 mg/L	(72 h) 1.15 - 100 mg/L
Propylidynetrimethanol	(4 days) 1 - 10 g/L	(48 h) 13 g/L	(72 h) 1 g/L
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	LL ₅₀ (4 days) 100 mg/L	EL ₅₀ (48 h) 7.2 mg/L	No data available
Diiron trioxide	(4 days) 100 g/L	(48 h) 100 mg/L	(72 h) 20 mg/L

12.2 Persistence and degradability

Not readily biodegradable

Substances

Chemical Name	Biodegradation
Bis-[4-(2,3-epoxipropoxy) phenyl]propane	Under test conditions no biodegradation observed (100%)
Titanium dioxide	Not applicable, inorganic
Aluminium hydroxide	Not applicable, inorganic
Synthetic Amorphous Silica	Not applicable, inorganic
Carbon black	Not readily biodegradable
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	No data available
Iron Oxide Yellow	Not applicable, inorganic
Barium sulfate	No data available
Propylidynetrimethanol	Inherently biodegradable in water (100%)
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	Readily biodegradable (100%)
Diiron trioxide	Not applicable, inorganic

12.3 Bioaccumulative potential

Potential bioaccumulation

Substances

Chemical Name	Bioconcentration Factor (BCF)	Log Kow
Bis-[4-(2,3-epoxipropoxy) phenyl]propane	31 L/kg ww	3.242 @ 25 °C
Titanium dioxide	Low potential for bioaccumulation	Not applicable, inorganic
Aluminium hydroxide	No bioaccumulation potential	Not applicable, inorganic
Synthetic Amorphous Silica	Bioaccumulation is not expected	Not applicable, inorganic
Carbon black	Bioaccumulation is not expected	Not applicable, inorganic
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	No data available	No data available
Iron Oxide Yellow	No data available	Not applicable, inorganic
Barium sulfate	Low potential for bioaccumulation	No data available
Propylidynetrimethanol	Low potential for bioaccumulation (Log Pow < 3)	(Log Pow) -0.47 @ 26 °C
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	263 (dimensionless)	6 @ 20 °C

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SECTION 12: Ecological information (....)

Diiron trioxide	No data available	Not applicable, inorganic
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12.4 Mobility in soil

May absorb onto soils and sediments

Substances

Chemical Name	Adsorption/desorption
Bis-[4-(2,3-epoxipropoxy)phenyl]propane	Koc 445 @ 20°C
Titanium dioxide	No data available
Aluminium hydroxide	Low potential for adsorption
Synthetic Amorphous Silica	Insoluble in water
Carbon black	Koc 589 - 4 300 (dimensionless) @ 20 °C and 1.3 - 3.6 % organic carbon
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	No data available
Iron Oxide Yellow	Low potential for adsorption
Barium sulfate	No data available
Propylidynetrimethanol	Koc 1.5 @ 20°C
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	No data available
Diiron trioxide	Low potential for adsorption

12.5 Results of PBT and vPvB assessment

Not a PBT according to REACH Annex XIII

Not a vPvB according to REACH Annex XIII

12.6 Endocrine disrupting properties

Bis-[4-(2,3-epoxipropoxy)phenyl]propane is being assessed for endocrine disrupting properties

12.7 Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and/or its container must be disposed of as hazardous waste

Disposal should be in accordance with local, state or national legislation

Do not discharge into drains or the environment, dispose to an authorised waste collection point

Do not reuse empty containers without commercial cleaning or reconditioning

13.2 Classification

The waste must be identified according to the List of Wastes (2000/532/EC)

Hazardous Property Code(s): HP 4 Irritant; HP 13 Sensitising; HP 14 Ecotoxic

SECTION 14: Transport information

UN 3077 and UN 3082, when carried in single or combination packagings containing a net quantity per single or inner packaging of 5L/kg or less, are not subject to the provisions of ADR, RID, IMDG or IATA, provided the

SECTION 14: Transport information (....)

package meets the general packing quality provisions.



14.1 UN number or ID number

UN No.: 3082

14.2 UN proper shipping name

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)

14.3 Transport hazard class(es)

Hazard Class: 9

14.4 Packing group

Packing Group: III

14.5 Environmental hazards

Marine pollutant

14.6 Special precautions for user

No information available

14.7 Maritime transport in bulk according to IMO instruments

Not applicable

14.8 Road/Rail (ADR/RID)

ADR UN No.: 3082

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)

ADR Hazard Class: 9

ADR Packing Group: III

Tunnel Code: (-)

14.9 Sea (IMDG)

IMDG UN No.: 3082

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)

IMDG Hazard Class: 9

IMDG Packing Group.: III

14.10 Air (ICAO/IATA)

ICAO UN No.: 3082

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)

ICAO Hazard Class: 9

ICAO Packing Group: III

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SECTION 15: Regulatory information (....)

This safety data sheet is provided in compliance with REACH Regulation (EC) No 1907/2006 (as amended by Regulation (EU) 2020/878) and UK REACH

The GB Classification, Labelling and Packaging Regulation (GB CLP) applies in Great Britain

Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) applies in Europe

UN 3077 and UN 3082, when carried in single or combination packagings containing a net quantity per single or inner packaging of 5L/kg or less, are not subject to the provisions of ADR, RID, IMDG or IATA, provided the package meets the general packing quality provisions.

The Hazardous Waste (England and Wales) Regulations 2005 apply in the UK

This product is covered by EU Directive 2012/18/EU (the Seveso III Directive)

15.2 Chemical safety assessment

No information available

SECTION 16: Other information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

Sources of data: Information from published literature and supplier safety data sheets

Revision No. 3.0.0. Revised January 2021.

Changes made: Revisions to all sections to conform to Regulation (EU) 2020/878 and UK REACH

Revision No. 4.0.0. Revised May 2024.

Changes made: Addition of ingredients in section 3, slight change to classification and label data in section 2, and addition of data in all other sections

Training advice

Workers must be informed of the presence of hazardous ingredients and trained in the proper use and handling of this product as required under applicable regulations

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Skin Irrit. 2, H315: Classification based on calculation and concentration thresholds

Eye Irrit. 2, H319: Classification based on calculation and concentration thresholds

Skin Sens. 1, H317: Classification based on calculation and concentration thresholds

Aquatic Chronic 2, H411: Classification based on calculation and concentration thresholds

Text not given with phrase codes where they are used elsewhere in this safety data sheet:

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H351: Suspected of causing cancer

H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.

H411: Toxic to aquatic life with long lasting effects

H412: Harmful to aquatic life with long lasting effects

EUH205: Contains epoxy constituents. May produce an allergic reaction.

SECTION 16: Other information (....)

EUH211: Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

Acronyms

ATE: Acute Toxicity Estimate

CAS: Chemical Abstracts Service

DNEL: Derived No-Effect Level

EC: European Community

EC₅₀: Effective Concentration, 50%

EL₅₀: Effective Loading Rate resulting in 50% effect.

GHS: Globally Harmonised System

IARC: International Agency for Research on Cancer

IOELV: Indicative Occupational Exposure Limit Value

LC₅₀: Lethal Concentration, 50%

LD₅₀: Lethal Dose, 50%

LL₅₀: Lethal Loading Rate resulting in 50% effect.

NOAEC: No Observed Adverse Effect Concentration

NOAEL: No Observed Adverse Effect Level

OEL: Occupational Exposure Limit

PBT: Persistent, Bioaccumulative and Toxic

PNEC: Predicted No-Effect Concentration

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals

SCL: Specific Concentration Limit

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

WEL: Workplace Exposure Limit