

SD GREENCOAT INCOLORE STANDARD - 2426



SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 2015/830)

SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : SD GREENCOAT INCOLORE STANDARD

Product code : 2426.

Hardener for epoxy resin

UFI : 51M5-303W-P00H-0Y6A

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

Recommended use : Hardener

Uses advised against : data not available

1.3. Details of the supplier of the safety data sheet

Registered company name : SICOMIN Composites.

Address : 31 avenue de la Lardiere - BP 23.13161.Chateauneuf les Martigues.France.

Telephone : +33 (0)4 42 42 30 20. Fax : +33 (0)4 42 81 29 29.

e-mail: composites@sicomin.com

Site web : <http://www.sicomin.com>

1.4. Emergency telephone number : .

Association/Organisation : INRS / ORFILA tél: +33(0)1.45.42.59.59 - (FRANCE) .

Other emergency numbers

Health and Safety Executive (HSE) Chemicals Regulation Directorate - Telephone: +44 151 951 3317 - USA : +1/ 800/ 424.9300 - AUSTRALIA : Emergency Poison Advice : 131 126

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

Acute oral toxicity, Category 4 (Acute Tox. 4, H302).

Acute dermal toxicity, Category 4 (Acute Tox. 4, H312).

Skin corrosion, Category 1B (Skin Corr. 1B, H314).

Serious eye damage, Category 1 (Eye Dam. 1, H318).

Skin sensitisation, Category 1 (Skin Sens. 1, H317).

Hazardous to the aquatic environment - Chronic hazard, Category 3 (Aquatic Chronic 3, H412).

This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

2.2. Label elements

In compliance with EC regulation No. 1272/2008 and its amendments.

Hazard pictograms :



GHS05



GHS07

Signal Word :

DANGER

Product identifiers :

EC 220-666-8

3-AMINOMETHYL-3,5,5-TRIMETHYL-CYCLOHEXYLAMINE

EC 217-168-8

4,4' METHYLENEBIS (CYCLOHEXYLAMINE)

EC 216-823-5

2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE

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EC 249-237-3 METHYL TOLUENESULFONATE
EC 500-006-8 FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH
1-CHLORO-2,3-EPOXYPROPANE AND PHENOL

Hazard statements :

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

Precautionary statements - Prevention :

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/ ...

Precautionary statements - Response :

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor/...
P361 + P364 Take off immediately all contaminated clothing and wash it before reuse.

2.3. Other hazards

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC) $\geq 0.1\%$ published by the European Chemicals Agency (ECHA) under article 57 of REACH: <http://echa.europa.eu/fr/candidate-list-table>

The mixture fulfils neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Composition :

Identification	(EC) 1272/2008	Note	%
CAS: 2855-13-2 EC: 220-666-8 REACH: 01-2119514687-32-XXXX 3-AMINOMETHYL-3,5,5-TRIMETHYL-CYCLOHEXYLAMINE	GHS07, GHS05 Dgr Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Skin Sens. 1, H317 Eye Dam. 1, H318 Aquatic Chronic 3, H412		50 \leq x % < 100
INDEX: 603-057-00-5 CAS: 100-51-6 EC: 202-859-9 REACH: 01-2119492630-38-XXXX BENZYL ALCOHOL	GHS07 Wng Acute Tox. 4, H332 Acute Tox. 4, H302	[1]	10 \leq x % < 25
CAS: 1761-71-3 EC: 217-168-8 REACH: 01-2119541673-38-XXXX 4,4' METHYLENEBIS (CYCLOHEXYLAMINE)	GHS07, GHS05, GHS08 Dgr Acute Tox. 4, H302 Skin Corr. 1B, H314 Skin Sens. 1, H317 Eye Dam. 1, H318 STOT RE 2, H373		2.5 \leq x % < 10
CAS: 1675-54-3 EC: 216-823-5 REACH: 01-2119456619-26-XXXX 2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE	GHS07, GHS09 Wng Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 Aquatic Chronic 2, H411		1 \leq x % < 2.5

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INDEX: 612-074-00-7 CAS: 103-83-3 EC: 203-149-1 REACH: 01-2119529232-48-XXXX BENZYLDMETHYLAMINE	GHS02, GHS05, GHS07 Dgr Flam. Liq. 3, H226 Acute Tox. 4, H332 Acute Tox. 4, H312 Acute Tox. 4, H302 Skin Corr. 1B, H314 Aquatic Chronic 3, H412		1 <= x % < 2.5
CAS: 28804-47-9 EC: 249-237-3 REACH: 02-2114675466-36-XXXX METHYL TOLUENESULFONATE	GHS06 Dgr Acute Tox. 4, H302 Acute Tox. 3, H311 Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319		1 <= x % < 2.5
CAS: 9003-36-5 EC: 500-006-8 REACH: 01-2119454392-40-XXXX FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE AND PHENOL	GHS07, GHS09 Wng Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411		0 <= x % < 1

(Full text of H-phrases: see section 16)

Information on ingredients :

[1] Substance for which maximum workplace exposure limits are available.

SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

4.1. Description of first aid measures

In the event of exposure by inhalation :

If inhaled, move the patient to fresh air and keep warm and rest.

Consult a doctor.

In the event of splashes or contact with eyes :

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

Regardless of the initial state, refer the patient to an ophthalmologist and show him the label.

Flush with large amounts of water. Remove contact lenses if the victim is. Continue to rinse. Seek medical attention if symptoms persist.

In the event of splashes or contact with skin :

Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner.

Remove any soiled or splashed clothing immediately.

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

In the event of an allergic reaction, seek medical attention.

If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.

In the event of swallowing :

Do not give the patient anything orally.

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water, administer activated medical charcoal and consult a doctor.

Seek medical attention immediately, showing the label.

If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show the label.

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

No data available.

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

Information for the doctor :

In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to remain under medical supervision for 48 hours.

Contact a specialist for treatment poisoning if large quantities have been ingested or inhaled.

SECTION 5 : FIREFIGHTING MEASURES

Non-flammable.

5.1. Extinguishing media

Suitable methods of extinction

In the event of a fire, use :

- sprayed water or water mist

Unsuitable methods of extinction

In the event of a fire, do not use :

- water jet

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)
- carbon dioxide (CO₂)
- nitrogen oxide (NO)
- nitrogen dioxide (NO₂)

5.3. Advice for firefighters

Firefighters should wear suitable protective clothing and a respirator mask with self- full operated in positive pressure mode.

Wear conform with the European standard EN 469.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

For non first aid worker

Avoid any contact with the skin and eyes.

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

6.3. Methods and material for containment and cleaning up

Neutralise with an acidic decontaminant.

Clean preferably with a detergent, do not use solvents.

6.4. Reference to other sections

No data available.

SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

Individuals with a history of skin sensitisation should not, under any circumstance, handle this mixture.

7.1. Precautions for safe handling

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

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Emergency showers and eye wash stations will be required in facilities where the mixture is handled constantly.

Fire prevention :

Prevent access by unauthorised personnel.

Recommended equipment and procedures :

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the mixture is used.

7.2. Conditions for safe storage, including any incompatibilities

No data available.

Storage

Keep away from food and drink, including those for animals.

Store in original container protected from direct sunlight in a dry, cool and well ventilated area away from heat sources.

Keep container tightly closed in a dry place.

Store away from heat and cold.

Packaging

Always keep in packaging made of an identical material to the original.

7.3. Specific end use(s)

Recommended application area: Coating, frosting

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits :

- Germany - AGW (BAuA - TRGS 900, 29/01/2018) :

CAS	VME :	VME :	Excess	Notes
100-51-6		5 ppm 22 mg/m ³		2(I)

Derived no effect level (DNEL) or derived minimum effect level (DMEL):

FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE AND PHENOL
(CAS: 9003-36-5)

Final use:

Exposure method:
Potential health effects:
DNEL :

Exposure method:
Potential health effects:
DNEL :

Exposure method:
Potential health effects:
DNEL :

Final use:

Exposure method:
Potential health effects:
DNEL :

Exposure method:
Potential health effects:
DNEL :

Workers.

Dermal contact.
Short term local effects.
8.3 µg of substance/cm²

Dermal contact.
Long term systemic effects.
104.15 mg/kg body weight/day

Inhalation.
Long term systemic effects.
29.39 mg of substance/m³

Man exposed via the environment.

Ingestion.
Long term systemic effects.
6.25 mg/kg body weight/day

Dermal contact.
Long term systemic effects.
62.5 mg/kg body weight/day

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Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 8.7 mg of substance/m3

2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE (CAS: 1675-54-3)

Final use:

Workers.

Exposure method: Dermal contact.
Potential health effects: Short term systemic effects.
DNEL : 8.3 mg/kg body weight/day

Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 8.3 mg/kg body weight/day

Exposure method: Inhalation.
Potential health effects: Short term systemic effects.
DNEL : 12.3 mg of substance/m3

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 12.3 mg of substance/m3

Final use:

Man exposed via the environment.

Exposure method: Ingestion.
Potential health effects: Short term systemic effects.
DNEL : 0.75 mg/kg body weight/day

Exposure method: Ingestion.
Potential health effects: Long term systemic effects.
DNEL : 0.75 mg/kg body weight/day

Exposure method: Dermal contact.
Potential health effects: Short term systemic effects.
DNEL : 3.6 mg/kg body weight/day

Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 3.6 mg/kg body weight/day

Exposure method: Inhalation.
Potential health effects: Short term systemic effects.
DNEL : 0.75 mg of substance/m3

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 0.75 mg of substance/m3

4.4' METHYLENEBIS (CYCLOHEXYLAMINE) (CAS: 1761-71-3)

Final use:

Workers.

Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 0.1 mg/kg body weight/day

Exposure method: Inhalation.

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Potential health effects: Long term systemic effects.
DNEL : 1 mg of substance/m3

Final use: Man exposed via the environment.

Exposure method: Ingestion.
Potential health effects: Long term systemic effects.
DNEL : 0.06 mg/kg body weight/day

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 0.21 mg of substance/m3

3-AMINOMETHYL-3,5,5-TRIMETHYL-CYCLOHEXYLAMINE (CAS: 2855-13-2)

Final use: Workers.

Exposure method: Inhalation.
Potential health effects: Short term systemic effects.
DNEL : 20.1 mg of substance/m3

Exposure method: Inhalation.
Potential health effects: Short term local effects.
DNEL : 20.1 mg of substance/m3

Final use: Man exposed via the environment.

Exposure method: Ingestion.
Potential health effects: Long term systemic effects.
DNEL : 0.526 mg/kg body weight/day

Predicted no effect concentration (PNEC):

FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE AND PHENOL (CAS: 9003-36-5)

Environmental compartment: Soil.
PNEC : 0.237 mg/kg

Environmental compartment: Fresh water.
PNEC : 0.003 mg/l

Environmental compartment: Sea water.
PNEC : 0.0003 mg/l

Environmental compartment: Intermittent waste water.
PNEC : 0.0254 mg/l

Environmental compartment: Fresh water sediment.
PNEC : 0.294 mg/kg

Environmental compartment: Marine sediment.
PNEC : 0.0294 mg/kg

Environmental compartment: Waste water treatment plant.
PNEC : 10 mg/l

2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE (CAS: 1675-54-3)

Environmental compartment: Soil.

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PNEC :	0.05 mg/kg
Environmental compartment: PNEC :	Fresh water. 3 µg/l
Environmental compartment: PNEC :	Sea water. 0.3 µg/l
Environmental compartment: PNEC :	Intermittent waste water. 0.013 mg/l
Environmental compartment: PNEC :	Fresh water sediment. 0.5 mg/kg
Environmental compartment: PNEC :	Marine sediment. 0.5 mg/kg
Environmental compartment: PNEC :	Waste water treatment plant. 10 mg/l

4.4' METHYLENEBIS (CYCLOHEXYLAMINE) (CAS: 1761-71-3)

Environmental compartment: PNEC :	Soil. 27.2 mg/kg
Environmental compartment: PNEC :	Fresh water. 0.08 mg/l
Environmental compartment: PNEC :	Sea water. 0.008 mg/l
Environmental compartment: PNEC :	Intermittent waste water. 0.08 mg/l
Environmental compartment: PNEC :	Fresh water sediment. 137 mg/kg
Environmental compartment: PNEC :	Marine sediment. 13.7 mg/kg
Environmental compartment: PNEC :	Waste water treatment plant. 3.2 mg/l

3-AMINOMETHYL-3,5,5-TRIMETHYL-CYCLOHEXYLAMINE (CAS: 2855-13-2)

Environmental compartment: PNEC :	Soil. 1.121 mg/kg
Environmental compartment: PNEC :	Fresh water. 0.06 mg/l
Environmental compartment: PNEC :	Sea water. 0.006 mg/l
Environmental compartment: PNEC :	Intermittent waste water. 0.23 mg/l

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Environmental compartment: PNEC :	Fresh water sediment. 5.784 mg/kg
Environmental compartment: PNEC :	Marine sediment. 0.578 mg/kg
Environmental compartment: PNEC :	Waste water treatment plant. 3.18 mg/l

8.2. Exposure controls

Use only with adequate ventilation or provided with ventilation at the source.

Personal protection measures, such as personal protective equipment

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :



Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles with protective sides accordance with standard EN166.

In the event of high danger, protect the face with a face shield.

Prescription glasses are not considered as protection.

Individuals wearing contact lenses should wear prescription glasses during work where they may be exposed to irritant vapours.

Provide eyewash stations in facilities where the product is handled constantly.

- Hand protection

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN374.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question : other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Type of gloves recommended :

- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))

- Butyl Rubber (Isobutylene-isoprene copolymer)

Recommended properties :

- Impervious gloves in accordance with standard EN374

- Body protection

Avoid skin contact.

Wear suitable protective clothing.

In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605 to prevent skin contact.

In the event of a risk of splashing, wear protective clothing against chemical risks (type 6) in accordance with EN13034 to prevent skin contact.

Wear suitable protective clothing and, in particular, an apron and boots. These items of clothing shall be maintained in good condition and cleaned after use.

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

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- Respiratory protection

Anti-gas and vapour filter(s) (Combined filters) in accordance with standard EN14387 :

Mask with filter type A, B, E, K, P

Attention! If the protection group is insufficient.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

General information :

Physical state :	Viscous liquid.
Color:	colorless
Aspect :	Gel

Important health, safety and environmental information

pH :	Not stated. Slightly basic.
Boiling point/boiling range :	Not relevant.
Flash Point Interval :	FP > 100°C.
Vapour pressure (50°C) :	Not relevant.
Density :	1.05 ± 0.02 @ 20 °C
Water solubility :	Insoluble.
Melting point/melting range :	Not relevant.
Self-ignition temperature :	Not relevant.
Decomposition point/decomposition range :	Not relevant.

9.2. Other information

No data available.

SECTION 10 : STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

Keep away from :
- strong oxidising agents

10.6. Hazardous decomposition products

The thermal decomposition may release/form :
- carbon monoxide (CO)
- carbon dioxide (CO₂)

SECTION 11 : TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Harmful if swallowed.

Harmful in contact with skin.

May cause irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis, following exposure between three minutes and one hour.

Corrosive reactions are typified by ulcers, bleeding, bloody scabs, and, by the end of observation at 14 days, by discolouration due to blanching of the skin, complete areas of alopecia, and scars.

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May cause an allergic reaction by skin contact.

11.1.1. Substances

Acute toxicity :

FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE AND PHENOL
(CAS: 9003-36-5)

Oral route : LD50 > 2000 mg/kg
Species : Rat

Dermal route : LD50 > 2000 mg/kg
Species : Rabbit

METHYL TOLUENESULFONATE (CAS: 28804-47-9)

Oral route : LD50 = 341 mg/kg
Species : Rat

2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE (CAS: 1675-54-3)

Oral route : LD50 = 11400 mg/kg
Species : Rat

Dermal route : LD50 = 2000 mg/kg
Species : Rat

4,4' METHYLENEBIS (CYCLOHEXYLAMINE) (CAS: 1761-71-3)

Oral route : LD50 = 625 mg/kg
Species : Rat

Dermal route : LD50 = 2110 mg/kg
Species : Rabbit
OECD Guideline 402 (Acute Dermal Toxicity)

3-AMINOMETHYL-3,5,5-TRIMETHYL-CYCLOHEXYLAMINE (CAS: 2855-13-2)

Oral route : LD50 = 1030 mg/kg
Species : Rat

Dermal route : LD50 > 2000 mg/kg
Species : Rat
OECD Guideline 402 (Acute Dermal Toxicity)

Inhalation route (Dusts/mist) : LC50 > 5.01 mg/l
Species : Rat
OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/skin irritation :

FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE AND PHENOL
(CAS: 9003-36-5)

Species : Rabbit
OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE (CAS: 1675-54-3)

Species : Rabbit
OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

4,4' METHYLENEBIS (CYCLOHEXYLAMINE) (CAS: 1761-71-3)

Corrosivity : Causes severe skin burns.

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Species : Rabbit
OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Species : Rabbit
OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious damage to eyes/eye irritation :

FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE AND PHENOL
(CAS: 9003-36-5)

Conjunctival redness : Average score = 0
Species : Rabbit

Conjunctival oedema : Average score = 0
Species : Rabbit
OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitisation :

4.4' METHYLENEBIS (CYCLOHEXYLAMINE) (CAS: 1761-71-3)
Species : Guinea pig
OECD Guideline 406 (Skin Sensitisation)

Species : Guinea pig

3-AMINOMETHYL-3,5,5-TRIMETHYL-CYCLOHEXYLAMINE (CAS: 2855-13-2)
Species : Rabbit
OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity :

4.4' METHYLENEBIS (CYCLOHEXYLAMINE) (CAS: 1761-71-3)
No mutagenic effect.
OECD Guideline 471 (Bacterial Reverse Mutation Assay)

Ames test (in vitro) : Negative.

11.1.2. Mixture

No toxicological data available for the mixture.

Monograph(s) from the IARC (International Agency for Research on Cancer) :

CAS 1675-54-3 : IARC Group 3 : The agent is not classifiable as to its carcinogenicity to humans.

SECTION 12 : ECOLOGICAL INFORMATION

Harmful to aquatic life with long lasting effects.

The product must not be allowed to run into drains or waterways.

12.1. Toxicity

12.1.1. Substances

2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE (CAS: 1675-54-3)

Fish toxicity : LC50 = 1.3 mg/l
Duration of exposure : 96 h

Crustacean toxicity : EC50 = 2.1 mg/l
Species : Daphnia sp.
Duration of exposure : 48 h

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	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Algae toxicity :	ECr50 > 11 mg/l Duration of exposure : 72 h
3-AMINOMETHYL-3,5,5-TRIMETHYL-CYCLOHEXYLAMINE (CAS: 2855-13-2)	
Fish toxicity :	LC50 = 110 mg/l Species : <i>Leuciscus idus</i> Duration of exposure : 96 h
Crustacean toxicity :	EC50 = 23 mg/l Species : <i>Daphnia magna</i> Duration of exposure : 48 h OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
	NOEC = 3 mg/l Species : <i>Daphnia magna</i> Duration of exposure : 21 days OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Algae toxicity :	ECr50 > 50 mg/l Species : <i>Desmodesmus subspicatus</i> Duration of exposure : 72 h
	NOEC = 1.5 mg/l Species : <i>Desmodesmus subspicatus</i> Duration of exposure : 72 h Other guideline
FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE AND PHENOL (CAS: 9003-36-5)	
Fish toxicity :	LC50 = 2.54 mg/l Duration of exposure : 96 h
Crustacean toxicity :	EC50 = 2.55 mg/l Species : <i>Daphnia sp.</i> Duration of exposure : 48 h OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Algae toxicity :	ECr50 > 1000 mg/l Species : <i>Selenastrum capricornutum</i> Duration of exposure : 72 h OECD Guideline 201 (Alga, Growth Inhibition Test)
METHYL TOLUENESULFONATE (CAS: 28804-47-9)	
Fish toxicity :	LC50 >= 4.6 mg/l Species : <i>Leuciscus idus</i> Duration of exposure : 96 h
4.4' METHYLENEBIS (CYCLOHEXYLAMINE) (CAS: 1761-71-3)	
Fish toxicity :	LC50 > 100 mg/l Species : <i>Leuciscus idus melanotus</i> Duration of exposure : 96 h

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Crustacean toxicity :	EC50 = 6.84 mg/l Species : Daphnia magna Duration of exposure : 48 h
	NOEC = 4 mg/l Species : Daphnia magna Duration of exposure : 21 days OECD Guideline 211 (Daphnia magna Reproduction Test)
Algae toxicity :	ECr50 > 140 mg/l Species : Desmodesmus subspicatus Duration of exposure : 72 h Other guideline

12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

12.2. Persistence and degradability

12.2.1. Substances

FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE AND PHENOL
(CAS: 9003-36-5)

Biodegradability : Non-rapidly degradable.

METHYL TOLUENESULFONATE (CAS: 28804-47-9)

Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE (CAS: 1675-54-3)

Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

4,4' METHYLENEBIS (CYCLOHEXYLAMINE) (CAS: 1761-71-3)

Biodegradability : Non-rapidly degradable.

3-AMINOMETHYL-3,5,5-TRIMETHYL-CYCLOHEXYLAMINE (CAS: 2855-13-2)

Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

12.3. Bioaccumulative potential

12.3.1. Substances

FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE AND PHENOL
(CAS: 9003-36-5)

Octanol/water partition coefficient : log K_{ow} = 3.3

Bioaccumulation : BCF = 150

2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE (CAS: 1675-54-3)

Octanol/water partition coefficient : log K_{ow} = 4

3-AMINOMETHYL-3,5,5-TRIMETHYL-CYCLOHEXYLAMINE (CAS: 2855-13-2)

Octanol/water partition coefficient : log K_{ow} = 0.99
OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

12.4. Mobility in soil

No data available.

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12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

German regulations concerning the classification of hazards for water (WGK, AwSV vom 18/04/2017, KBws) :

WGK 3 : Extremely hazardous for water.

SECTION 13 : DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

Codes of wastes (Decision 2014/955/EC, Directive 2008/98/EEC on hazardous waste) :

07 01 08 * other still bottoms and reaction residues

SECTION 14 : TRANSPORT INFORMATION

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2019 - IMDG 2018 - ICAO/IATA 2019).

14.1. UN number

2735

14.2. UN proper shipping name

UN2735=AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.

(3-aminomethyl-3,5,5-trimethyl-cyclohexylamine, 4,4' methylenebis (cyclohexylamine))

14.3. Transport hazard class(es)

- Classification :



8

14.4. Packing group

III

14.5. Environmental hazards

-

14.6. Special precautions for user

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	8	C7	III	8	80	5 L	274	E1	3	E

IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ	Stowage Handling	Segregation
	8	-	III	5 L	F-A, S-B	223 274	E1	Category A	SGG18 SG35

IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ
	8	8	III	852	5 L	856	60 L	A3 A803	E1

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	8	8	III	Y841	1 L	-	-	A3 A803	E1
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For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No data available.

SECTION 15 : REGULATORY INFORMATION

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

- Classification and labelling information included in section 2:

The following regulations have been used:

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2018/1480 (ATP 13)

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2019/521 (ATP 12)

- Container information:

No data available.

- Particular provisions :

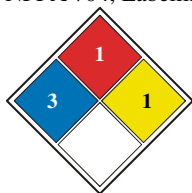
No data available.

- German regulations concerning the classification of hazards for water (WGK, AwSV vom 18/04/2017, KBws) :

WGK 3 : Extremely hazardous for water.

- Standardised American system for the identification of hazards presented by the product in view of emergency procedures (NFPA 704) :

NFPA 704, Labelling: Health=3 Inflammability=1 Instability/Reactivity=1 Specific Risk=none



15.2. Chemical safety assessment

No data available.

SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

Wording of the phrases mentioned in section 3 :

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure .
H411	Toxic to aquatic life with long lasting effects.

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H412

Harmful to aquatic life with long lasting effects.

Abbreviations :

DNEL : Derived No-Effect Level

PNEC : Predicted No-Effect Concentration

UFI : Unique Formula Identifier

ADR : European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

WGK : Wassergefährdungsklasse (Water Hazard Class).

GHS05 : Corrosion

GHS07 : Exclamation mark

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.

SVHC : Substances of very high concern.

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SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 2015/830)

SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : SG GREENCOAT INCOLORE

Product code : 2413.

EPOXY RESIN

UFI : SUK5-20R4-200J-P916

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

Recommended use : Epoxy resin

Uses advised against : data not available

1.3. Details of the supplier of the safety data sheet

Registered company name : SICOMIN Composites.

Address : 31 avenue de la Lardiere - BP 23.13161.Chateauneuf les Martigues.France.

Telephone : +33 (0)4 42 42 30 20. Fax : +33 (0)4 42 81 29 29.

e-mail: composites@sicomin.com

Site web : <http://www.sicomin.com>

AUSTRALIAN Importer : Lavender CE Pty Ltd - 108 Westgate Street - Wacol, Qld, 4076 AUSTRALIA / M: 0409 892 032 / Ph: +61 7 3255 6924 / Fax: +61 7 3255 6923 / Web: www.lavender-ce.com / Email: sheading@lavender-ce.com

1.4. Emergency telephone number : .

Association/Organisation : INRS / ORFILA tél: +33(0)1.45.42.59.59 - (FRANCE) .

Other emergency numbers

Health and Safety Executive (HSE) Chemicals Regulation Directorate - Telephone: +44 151 951 3317 - USA : +1/ 800/ 424.9300 - AUSTRALIA : Emergency Poison Advice : 131 126

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

Skin irritation, Category 2 (Skin Irrit. 2, H315).

Eye irritation, Category 2 (Eye Irrit. 2, H319).

Skin sensitisation, Category 1 (Skin Sens. 1, H317).

Specific target organ toxicity (single exposure), Category 3 (STOT SE 3, H335).

Hazardous to the aquatic environment - Chronic hazard, Category 2 (Aquatic Chronic 2, H411).

This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

2.2. Label elements

In compliance with EC regulation No. 1272/2008 and its amendments.

Hazard pictograms :



GHS07



GHS09

Signal Word :

WARNING

Product identifiers :

EC 216-823-5

2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE

EC 236-211-1

1,2,3-TRIS (2,3-EPOXYPROPOXY) PROPANE

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EC 500-006-8 **FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH
1-CHLORO-2,3-EPOXYPROPANE AND PHENOL**

Additional labeling :

EUH205 Contains epoxy constituents. May produce an allergic reaction.

Hazard statements :

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements - Prevention :

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face
protection/hearing protection/ ...

Precautionary statements - Response :

P302 + P352 IF ON SKIN: Wash with plenty of water/...
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact
lenses, if present and easy to do. Continue rinsing.
P362 + P364 Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC) $\geq 0.1\%$ published by the European Chemicals Agency (ECHA) under article 57 of REACH: <http://echa.europa.eu/fr/candidate-list-table>

The mixture fulfils neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Composition :

Identification	(EC) 1272/2008	Note	%
CAS: 1675-54-3 EC: 216-823-5 REACH: 01-2119456619-26-XXXX 2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE	GHS07, GHS09 Wng Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 Aquatic Chronic 2, H411		50 \leq x % < 100
CAS: 13236-02-7 EC: 236-211-1 REACH: 01-2120804934-53-XXXX 1,2,3-TRIS (2,3-EPOXYPROPOXY) PROPANE	GHS07 Wng Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 STOT SE 3, H335		25 \leq x % < 50
CAS: 9003-36-5 EC: 500-006-8 REACH: 01-2119454392-40-XXXX FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE AND PHENOL	GHS07, GHS09 Wng Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411		0 \leq x % < 1

(Full text of H-phrases: see section 16)

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SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

4.1. Description of first aid measures

In the event of exposure by inhalation :

In the event of massive inhalation, remove the person exposed to fresh air. Keep warm and at rest.

If the person is unconscious, place in recovery position. Notify a doctor in all events, to ascertain whether observation and supportive hospital care will be necessary.

If breathing is irregular or has stopped, effect mouth-to-mouth resuscitation and call a doctor.

In the event of splashes or contact with eyes :

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

If there is any redness, pain or visual impairment, consult an ophthalmologist.

Flush with large amounts of water. Remove contact lenses if the victim is. Continue to rinse. Seek medical attention if symptoms persist.

In the event of splashes or contact with skin :

Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner.

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

In the event of an allergic reaction, seek medical attention.

If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.

In the event of swallowing :

Do not give the patient anything orally.

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Seek medical attention immediately, showing the label.

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

No data available.

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

Information for the doctor :

In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to remain under medical supervision for 48 hours.

Contact a specialist for treatment poisoning if large quantities have been ingested or inhaled.

SECTION 5 : FIREFIGHTING MEASURES

Non-flammable.

5.1. Extinguishing media

Suitable methods of extinction

In the event of a fire, use :

- sprayed water or water mist
- foam
- powder

Unsuitable methods of extinction

In the event of a fire, do not use :

- water jet

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)
- carbon dioxide (CO₂)

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5.3. Advice for firefighters

Firefighters should wear suitable protective clothing and a respirator mask with self- full operated in positive pressure mode.
Wear conform with the European standard EN 469.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

For non first aid worker

Avoid inhaling the vapors.

Avoid any contact with the skin and eyes.

If a large quantity has been spilt, evacuate all personnel and only allow intervention by trained operators equipped with safety apparatus.

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

6.3. Methods and material for containment and cleaning up

Clean preferably with a detergent, do not use solvents.

6.4. Reference to other sections

No data available.

SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

Individuals with a history of skin sensitisation should not, under any circumstance, handle this mixture.

7.1. Precautions for safe handling

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

Fire prevention :

Handle in well-ventilated areas.

Prevent access by unauthorised personnel.

Recommended equipment and procedures :

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Avoid inhaling vapors.

Avoid inhaling vapors. Carry out any industrial operation which may give rise to this in a sealed apparatus.

Provide vapor extraction at the emission source and also general ventilation of the premises.

Also provide breathing apparatus for certain short tasks of an exceptional nature and for emergency interventions.

In all cases, recover emissions at source.

Avoid skin and eye contact with this mixture.

Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the mixture is used.

7.2. Conditions for safe storage, including any incompatibilities

No data available.

Storage

Keep the container tightly closed in a dry, well-ventilated place.

Store in original container protected from direct sunlight in a dry, cool and well ventilated area away from heat sources.

Store away from heat and cold.

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Packaging

Always keep in packaging made of an identical material to the original.

7.3. Specific end use(s)

Recommended application area: Coating, frosting

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

No data available.

Derived no effect level (DNEL) or derived minimum effect level (DMEL):

FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE AND PHENOL
(CAS: 9003-36-5)

Final use:

Exposure method:
Potential health effects:
DNEL :

Workers.

Dermal contact.
Short term local effects.
8.3 µg of substance/cm2

Exposure method:
Potential health effects:
DNEL :

Dermal contact.
Long term systemic effects.
104.15 mg/kg body weight/day

Exposure method:
Potential health effects:
DNEL :

Inhalation.
Long term systemic effects.
29.39 mg of substance/m3

Final use:

Exposure method:
Potential health effects:
DNEL :

Man exposed via the environment.

Ingestion.
Long term systemic effects.
6.25 mg/kg body weight/day

Exposure method:
Potential health effects:
DNEL :

Dermal contact.
Long term systemic effects.
62.5 mg/kg body weight/day

Exposure method:
Potential health effects:
DNEL :

Inhalation.
Long term systemic effects.
8.7 mg of substance/m3

2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE (CAS: 1675-54-3)

Final use:

Exposure method:
Potential health effects:
DNEL :

Workers.

Dermal contact.
Short term systemic effects.
8.3 mg/kg body weight/day

Exposure method:
Potential health effects:
DNEL :

Dermal contact.
Long term systemic effects.
8.3 mg/kg body weight/day

Exposure method:
Potential health effects:
DNEL :

Inhalation.
Short term systemic effects.
12.3 mg of substance/m3

Exposure method:
Potential health effects:

Inhalation.
Long term systemic effects.

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DNEL : 12.3 mg of substance/m3

Final use: Man exposed via the environment.

Exposure method: Ingestion.
Potential health effects: Short term systemic effects.
DNEL : 0.75 mg/kg body weight/day

Exposure method: Ingestion.
Potential health effects: Long term systemic effects.
DNEL : 0.75 mg/kg body weight/day

Exposure method: Dermal contact.
Potential health effects: Short term systemic effects.
DNEL : 3.6 mg/kg body weight/day

Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 3.6 mg/kg body weight/day

Exposure method: Inhalation.
Potential health effects: Short term systemic effects.
DNEL : 0.75 mg of substance/m3

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 0.75 mg of substance/m3

Predicted no effect concentration (PNEC):

FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE AND PHENOL
(CAS: 9003-36-5)

Environmental compartment: Soil.
PNEC : 0.237 mg/kg

Environmental compartment: Fresh water.
PNEC : 0.003 mg/l

Environmental compartment: Sea water.
PNEC : 0.0003 mg/l

Environmental compartment: Intermittent waste water.
PNEC : 0.0254 mg/l

Environmental compartment: Fresh water sediment.
PNEC : 0.294 mg/kg

Environmental compartment: Marine sediment.
PNEC : 0.0294 mg/kg

Environmental compartment: Waste water treatment plant.
PNEC : 10 mg/l

2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE (CAS: 1675-54-3)

Environmental compartment: Soil.

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PNEC :	0.05 mg/kg
Environmental compartment: PNEC :	Fresh water. 3 µg/l
Environmental compartment: PNEC :	Sea water. 0.3 µg/l
Environmental compartment: PNEC :	Intermittent waste water. 0.013 mg/l
Environmental compartment: PNEC :	Fresh water sediment. 0.5 mg/kg
Environmental compartment: PNEC :	Marine sediment. 0.5 mg/kg
Environmental compartment: PNEC :	Waste water treatment plant. 10 mg/l

8.2. Exposure controls

Use only with adequate ventilation or provided with ventilation at the source.

Personal protection measures, such as personal protective equipment

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :



Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles with protective sides accordance with standard EN166.

In the event of high danger, protect the face with a face shield.

Prescription glasses are not considered as protection.

Individuals wearing contact lenses should wear prescription glasses during work where they may be exposed to irritant vapours.

Provide eyewash stations in facilities where the product is handled constantly.

- Hand protection

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN374.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question : other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Type of gloves recommended :

- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))
- Butyl Rubber (Isobutylene-isoprene copolymer)

Recommended properties :

- Impervious gloves in accordance with standard EN374

- Body protection

Avoid skin contact.

Wear suitable protective clothing.

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In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605 to prevent skin contact.

In the event of a risk of splashing, wear protective clothing against chemical risks (type 6) in accordance with EN13034 to prevent skin contact.

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

- Respiratory protection

Avoid breathing vapours.

If the ventilation is insufficient, wear appropriate breathing apparatus.

When workers are confronted with concentrations that are above occupational exposure limits, they must wear a suitable, approved, respiratory protection device.

Anti-gas and vapour filter(s) (Combined filters) in accordance with standard EN14387 :

- A1 (Brown)

Attention! If the protection group is insufficient.

Mask with filter type A, B, E, K, P for mixing with the hardener

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

General information :

Physical state : Viscous liquid.

Important health, safety and environmental information

pH :	Not relevant.
Boiling point/boiling range :	Not relevant.
Flash point interval :	Not relevant.
Vapour pressure (50°C) :	Not relevant.
Density :	1.17 ± 0.02 @ 20 °C
Water solubility :	Insoluble.
Melting point/melting range :	Not relevant.
Self-ignition temperature :	Not relevant.
Decomposition point/decomposition range :	Not relevant.

9.2. Other information

No data available.

SECTION 10 : STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

The thermal decomposition may release/form :

- carbon monoxide (CO)

- carbon dioxide (CO₂)

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SECTION 11 : TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

May cause irreversible damage to the skin; namely inflammation of the skin or the formation of erythema and eschar or oedema following exposure up to four hours.

May have reversible effects on the eyes, such as eye irritation which is totally reversible by the end of observation at 21 days.

Respiratory tract irritation may occur, together with symptoms such as coughing, choking and breathing difficulties.

May cause an allergic reaction by skin contact.

Based on the properties of the epoxy constituent(s) and considering toxicological data on similar preparations, this preparation may be a skin sensitiser and a respiratory tract sensitiser as well as an irritant.

Constituents with a low molecular weight irritate the eyes, mucous membranes and the skin

Repeated contact with the skin may cause irritation and hypersensitisation, possibly in combination with other epoxide compounds.

11.1.1. Substances

Acute toxicity :

FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE AND PHENOL
(CAS: 9003-36-5)

Oral route : LD50 > 2000 mg/kg
Species : Rat

Dermal route : LD50 > 2000 mg/kg
Species : Rabbit

2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE (CAS: 1675-54-3)

Oral route : LD50 = 11400 mg/kg
Species : Rat

Dermal route : LD50 = 2000 mg/kg
Species : Rat

Skin corrosion/skin irritation :

FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE AND PHENOL
(CAS: 9003-36-5)

Species : Rabbit
OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE (CAS: 1675-54-3)

Species : Rabbit
OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious damage to eyes/eye irritation :

FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE AND PHENOL
(CAS: 9003-36-5)

Conjunctival redness : Average score = 0
Species : Rabbit

Conjunctival oedema : Average score = 0
Species : Rabbit
OECD Guideline 405 (Acute Eye Irritation / Corrosion)

11.1.2. Mixture

Respiratory or skin sensitisation :

Contains epoxy compounds. May cause an allergic reaction.

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Monograph(s) from the IARC (International Agency for Research on Cancer) :

CAS 1675-54-3 : IARC Group 3 : The agent is not classifiable as to its carcinogenicity to humans.

SECTION 12 : ECOLOGICAL INFORMATION

Toxic to aquatic life with long lasting effects.

The product must not be allowed to run into drains or waterways.

12.1. Toxicity

12.1.1. Substances

1,2,3-TRIS (2,3-EPOXYPROPOXY) PROPANE (CAS: 13236-02-7)

Fish toxicity : LC50 = 73300 mg/l
Duration of exposure : 96 h
Other guideline

Crustacean toxicity : EC50 = 2524.72 mg/l
Duration of exposure : 48 h
Other guideline

Algae toxicity : ECr50 = 47973.73 mg/l
Duration of exposure : 96 h
Other guideline

2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE (CAS: 1675-54-3)

Fish toxicity : LC50 = 1.3 mg/l
Duration of exposure : 96 h

Crustacean toxicity : EC50 = 2.1 mg/l
Species : Daphnia sp.
Duration of exposure : 48 h
OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Algae toxicity : ECr50 > 11 mg/l
Duration of exposure : 72 h

FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE AND PHENOL (CAS: 9003-36-5)

Fish toxicity : LC50 = 2.54 mg/l
Duration of exposure : 96 h

Crustacean toxicity : EC50 = 2.55 mg/l
Species : Daphnia sp.
Duration of exposure : 48 h
OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Algae toxicity : ECr50 > 1000 mg/l
Species : Selenastrum capricornutum
Duration of exposure : 72 h
OECD Guideline 201 (Alga, Growth Inhibition Test)

12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

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12.2. Persistence and degradability

12.2.1. Substances

FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE AND PHENOL
(CAS: 9003-36-5)

Biodegradability : Non-rapidly degradable.

1,2,3-TRIS (2,3-EPOXYPROPOXY) PROPANE (CAS: 13236-02-7)

Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE (CAS: 1675-54-3)

Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

12.3. Bioaccumulative potential

12.3.1. Substances

FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROPANE AND PHENOL
(CAS: 9003-36-5)

Octanol/water partition coefficient : $\log K_{ow} = 3.3$

Bioaccumulation : BCF = 150

1,2,3-TRIS (2,3-EPOXYPROPOXY) PROPANE (CAS: 13236-02-7)

Octanol/water partition coefficient : $\log K_{ow} = -1.94$

Bioaccumulation : BCF = 3.16

2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE (CAS: 1675-54-3)

Octanol/water partition coefficient : $\log K_{ow} = 4$

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

German regulations concerning the classification of hazards for water (WGK, AwSV vom 18/04/2017, KBws) :

WGK 2 : Hazardous for water.

SECTION 13 : DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

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SECTION 14 : TRANSPORT INFORMATION

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2019 - IMDG 2018 - ICAO/IATA 2019).

14.1. UN number

3082

14.2. UN proper shipping name

UN3082=ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane, 1,2,3-tris (2,3-epoxypropoxy) propane)

14.3. Transport hazard class(es)

- Classification :



9

14.4. Packing group

III

14.5. Environmental hazards

- Environmentally hazardous material :



14.6. Special precautions for user

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	9	M6	III	9	90	5 L	274 335 375 601	E1	3	-

Not subject to this regulation if Q <= 5 l / 5 kg (ADR 3.3.1 - DS 375)

IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ	Stowage Handling	Segregation
	9	-	III	5 L	F-A, S-F	274 335 969	E1	Category A	-

Not subject to this regulation if Q <= 5 l / 5 kg (IMDG 3.3.1 - 2.10.2.7)

IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ
	9	9	III	964	450 L	964	450 L	A97 A158 A197	E1
	9	9	III	Y964	30 kg G	-	-	A97 A158 A197	E1

Not subject to this regulation if Q <= 5 l / 5 kg (IATA 4.4.4 - DS A197)

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No data available.

SECTION 15 : REGULATORY INFORMATION

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

- Classification and labelling information included in section 2:

The following regulations have been used:

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2018/1480 (ATP 13)

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- EU Regulation No. 1272/2008 amended by EU Regulation No. 2019/521 (ATP 12)

- Container information:

No data available.

- Particular provisions :

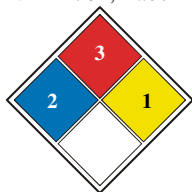
No data available.

- German regulations concerning the classification of hazards for water (WGK, AwSV vom 18/04/2017, KBws) :

WGK 2 : Hazardous for water.

- Standardised American system for the identification of hazards presented by the product in view of emergency procedures (NFPA 704) :

NFPA 704, Labelling: Health=2 Inflammability=3 Instability/Reactivity=1 Specific Risk=none



15.2. Chemical safety assessment

No data available.

SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

Wording of the phrases mentioned in section 3 :

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.

Abbreviations :

DNEL : Derived No-Effect Level

PNEC : Predicted No-Effect Concentration

UFI : Unique Formula Identifier

ADR : European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

WGK : Wassergefährdungsklasse (Water Hazard Class).

GHS07 : Exclamation mark

GHS09 : Environment

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.

SVHC : Substances of very high concern.