

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Supersedes date 19-Jul-2022

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Revision Number 7.01

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

1.1. Product identifier

Product Code(s) 13314

Safety data sheet number 13314

Product Name D.E.R. 3531 EPOXY RESIN

Pure substance/mixture Mixture

Contains 2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE; OXIRANE, MONO [(C12-14-ALKYLOXY)METHYL] DERIVS; REACTION MASS OF 2,2'-[METHYLENEBIS(2,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2,2'-[METHYLENEBIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2-[(4-(OXIRAN-2-YLMETHOXY)BENZYL]PHENOXY} METHYL)OXIRANE

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

Recommended use Civil Engineering
Composites

1.3. Details of the supplier of the safety data sheet

Supplier

Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
GBR

For further information, please contact

E-mail address SDS.EMEA@univarsolutions.com

Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone SGS - +32 (0)3 575 55 55 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)
Skin sensitisation	Category 1 - (H317)
Reproductive toxicity	Category 1B - (H360F)

Chronic aquatic toxicity

Category 2 - (H411)

2.2. Label elements

Contains 2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE; OXIRANE, MONO [(C12-14-ALKYLOXY)METHYL] DERIVS; REACTION MASS OF
 2,2'-[METHYLENEBIS(2,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND
 2,2'-[METHYLENEBIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2-({
 2-[4-(OXIRAN-2-YLMETHOXY)BENZYL]PHENOXY} METHYL)OXIRANE

**Signal word**

Danger

Hazard statements

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

H360F - May damage fertility

H411 - Toxic to aquatic life with long lasting effects

Precautionary statements

P201 - Obtain special instructions before use

P261 - Avoid breathing mist/vapours/spray

P273 - Avoid release to the environment

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P391 - Collect spillage

Unknown aquatic toxicity

Contains 0 % of components with unknown hazards to the aquatic environment.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Not applicable

3.2 Mixtures

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE)	>= 50 - < 75%	216-823-5 (603-073-00-2)	-	Skin Irrit. 2 (H315) Skin Sens. 1B (H317) Eye Irrit. 2 (H319)	Skin Irrit. 2, H315 ::C>=5% Eye Irrit. 2,	-	-

ETHYLENE)]BISOXIRANE 1675-54-3				Aquatic Chronic 2 (H411)	H319 :C>=5%		
REACTION MASS OF 2,2'-[METHYLENEBIS(2,1-PHENYLENE OXYMETHYLENE)] BIS(OXIRANE) AND 2,2'-[METHYLENEBIS(4,1-PHENYLENE OXYMETHYLENE)] BIS(OXIRANE) AND 2-({ 2-[4-(OXIRAN-2-YL METHOXY)BENZYL]PHENOXY METHYL)OXIRANE -	>= 10 - < 20%	701-263-0	-	Skin Irrit. 2 (H315) Skin Sens. 1A (H317) Aquatic Chronic 2 (H411)	-	-	-
OXIRANE, MONO [(C12-14-ALKYLOXY)METHYL] DERIVS 68609-97-2	>= 10 - < 20%	271-846-8 (603-103-00-4)	-	Skin Irrit. 2 (H315) Skin Sens. 1 (H317) Repr. 1B (H360F)	-	-	-

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (UK REACH Article 59)

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

General advice	First aid personnel should wear appropriate protective equipment during any rescue. Use personal protection recommended in Section 8.
Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Get medical attention if symptoms occur.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms occur.
Skin contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Get medical attention if symptoms occur.
Ingestion	Rinse mouth thoroughly with water. Do not induce vomiting without medical advice. Get medical attention if symptoms occur.

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

Symptoms	May damage fertility.
Eyes	Causes serious eye irritation.
Dermal	Causes skin irritation. May cause an allergic skin reaction.

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

Note to doctors	Treat symptomatically. Treat any burns as thermal burns, after decontamination. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
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SECTION 5: Firefighting measures**5.1. Extinguishing media**

Suitable Extinguishing Media	Dry chemical, CO ₂ , alcohol-resistant foam or water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	When heated and in case of fire, toxic vapours/gases may be formed. Containers can burst violently when heated, due to excess pressure build-up. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids..
Hazardous combustion products	Carbon oxides.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Personal precautions	Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with skin, eyes and inhalation of vapours. Evacuate personnel to safe areas. Keep unnecessary and unprotected personnel from entering.
Other information	Refer to protective measures listed in Sections 7 and 8.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions	Prevent further leakage or spillage if safe to do so.
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6.3. Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Pick up and transfer to properly labelled containers.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections	See section 8 for more information. See section 13 for more information.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with skin, eyes and inhalation of vapours. Wash skin thoroughly after handling. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

General hygiene considerations Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Keep at temperatures between 5 and 30 °C.

7.3. Specific end use(s)

Specific use(s)
See section 1 for more information.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical name	United Kingdom
2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE 1675-54-3	TWA: 2 mg/m ³

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE 1675-54-3		0.75 mg/kg [4] [6]	4.93 mg/m ³ [4] [6]
OXIRANE, MONO [(C12-14-ALKYLOXY)METHYL] DERIVS 68609-97-2		1 mg/kg bw/day [4] [6]	3.6 mg/m ³ [4] [6]

[4] Systemic health effects.
[5] Local health effects.
[6] Long term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE 1675-54-3	0.5 mg/kg [4] [6]	0.0893 mg/kg [4] [6]	0.87 mg/m ³ [4] [6]
OXIRANE, MONO [(C12-14-ALKYLOXY)METHYL] DERIVS 68609-97-2	0.5 mg/kg bw/day [4] [6]		0.87 mg/m ³ [4] [6]

[4] Systemic health effects.
 [5] Local health effects.
 [6] Long term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE 1675-54-3	0.006 mg/L	0.018 mg/L	0.001 mg/L	0.002 mg/L	
OXIRANE, MONO [(C12-14-ALKYLOXY)METHYL] DERIVS 68609-97-2	0.1058 mg/L	0.072 mg/L	0.00072 mg/L		

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE 1675-54-3	0.341 mg/kg	0.034 mg/kg	10 mg/l	0.065 mg/kg	11 mg/kg food
OXIRANE, MONO [(C12-14-ALKYLOXY)METHYL] DERIVS 68609-97-2	66.77 mg/kg	6.677 mg/kg	10 mg/L	80.12 mg/kg	10 mg/L

8.2. Exposure controls

Engineering controls No information available.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Use eye protection according to EN 166.

Hand protection Wear suitable gloves. Gloves must conform to standard EN 374.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
	Polyvinyl alcohol (PVA)	> 0.35 mm	>= 480 minutes
	Wear protective butyl rubber gloves	> 0.35 mm	>= 480 minutes
	Wear protective Viton™ gloves	> 0.35 mm	>= 480 minutes

Skin and body protection Wear appropriate clothing to prevent reasonably probable skin contact.

Respiratory protection Use appropriate respiratory protection.
Recommended filter type: Organic gases and vapours filter conforming to EN 14387. Type A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Liquid
Colour	Colourless to pale yellow
Odour	Characteristic.
Odour threshold	Not applicable

Property	Values	Remarks • Method
Melting point / freezing point		Not applicable.
Initial boiling point and boiling range	> 100 °C	Read-across.
Flammability		Not applicable.
Flammability Limit in Air		No information available.
Upper flammability or explosive limits		
Lower flammability or explosive limits		
Flash point	> 100 °C	Closed cup.
Autoignition temperature		No information available.
Decomposition temperature		No information available.
pH		Not applicable.
pH (as aqueous solution)		No information available.
Kinematic viscosity		No information available.
Dynamic viscosity	1300 mPa s	@ 20 °C. Calculation method.
Water solubility	Insoluble in water	
Solubility(ies)		No information available.
Partition coefficient		No information available.
Vapour pressure	< 5 hPa	@ 50 °C. Read-across.
Relative density	1.12	@ 25 °C. Calculation method.
Bulk density		No information available
Liquid Density	No information available	No information available
Relative vapour density		No information available.
Particle characteristics		No information available.
Particle Size	No information available	
Particle Size Distribution	No information available	
Explosive properties	Not considered to be explosive.	
Oxidising properties	Does not meet the criteria for classification as oxidising	

9.2. Other information

SECTION 10: Stability and reactivity**10.1. Reactivity**

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Will not occur by itself. Masses of more than one pound (0.5 kg) of product plus an aliphatic amine will cause irreversible polymerization with considerable heat build-up.

10.4. Conditions to avoid

Conditions to avoid Avoid short term exposures to temperatures above 300°C (572°F). Potentially violent decomposition can occur above 350°C (662°). Avoid prolonged exposure to temperatures above 250°C (482°F). Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid.

10.5. Incompatible materials

Incompatible materials Acids. Bases. Avoid unintended contact with:. Amines.

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon oxides. Phenolic. Uncontrolled exothermic reaction of epoxy resins release phenolics, carbon monoxide, and water.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Information on likely routes of exposure****Product Information**

Inhalation Inhalation of vapours in high concentration may cause irritation of respiratory system.

Eye contact Corneal injury is unlikely.

Skin contact Causes skin irritation. Brief contact may cause moderate skin irritation with local redness. May cause an allergic skin reaction.

Ingestion May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May damage fertility.

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

Oral LD50

Oral LD50 > 10000 mg/kg

Dermal LD50

Dermal LD50 > 5000 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
2,2'-[(1-METHYLETHYLIDENE) BIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE)	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat) > 23000 mg/kg (Rabbit)	-
REACTION MASS OF 2,2'-[METHYLENEBIS(2,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2,2'-[METHYLENEBIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2-({2-[4-(OXIRAN-2-YLMETHOXY) BENZYL]PHENOXY} METHYL)OXIRANE	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-
OXIRANE, MONO [(C12-14-ALKYLOXY)METHYL] DERIVS	26000 mg/kg (Rat)	> 3987 mg/kg (Rabbit)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation

Causes skin irritation. Brief contact may cause moderate skin irritation with local redness.

REACTION MASS OF 2,2'-[METHYLENEBIS(2,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2,2'-[METHYLENEBIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2-({2-[4-(OXIRAN-2-YLMETHOXY) BENZYL]PHENOXY} METHYL)OXIRANE (-)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Causes skin irritation
					Brief contact may cause moderate skin irritation with local redness. Effects may be slow to heal. Repeated exposure may cause irritation, even a burn May cause more severe response if skin is abraded (scratched or cut).

Serious eye damage/eye irritation

Causes serious eye irritation. Corneal injury is unlikely. Vapor may cause eye irritation experienced as mild discomfort and redness.

REACTION MASS OF 2,2'-[METHYLENEBIS(2,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2,2'-[METHYLENEBIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2-({2-[4-(OXIRAN-2-YLMETHOXY) BENZYL]PHENOXY} METHYL)OXIRANE (-)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					May cause slight eye irritation

Respiratory or skin sensitisation

May cause an allergic skin reaction.

REACTION MASS OF 2,2'-[METHYLENEBIS(2,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2,2'-[METHYLENEBIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2-({2-[4-(OXIRAN-2-YLMETHOXY)BENZYL]PHENOXY} METHYL)OXIRANE (-)

Method	Species	Exposure route	Results
	Guinea pig Mouse	Dermal	May cause an allergic skin reaction

Germ cell mutagenicity No information available.

Component Information

REACTION MASS OF 2,2'-[METHYLENEBIS(2,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2,2'-[METHYLENEBIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2-({2-[4-(OXIRAN-2-YLMETHOXY)BENZYL]PHENOXY} METHYL)OXIRANE (-)

Method	Species	Results
	in vitro	Positive
		Negative Did not show mutagenic effects in animal experiments

Carcinogenicity

Many studies have been conducted to assess the potential carcinogenicity of diglycidyl ether of bisphenol A (DGEBA). Indeed, the most recent review of the available data by the International Agency for Research on Cancer (IARC) has concluded that DGEBA is not classified as a carcinogen. Although some weak evidence of carcinogenicity has been reported in animals, when all of the data are considered, the weight of evidence does not show that DGEBA is carcinogenic.

Reproductive toxicity

May damage fertility.
Resins based on the diglycidyl ether of bisphenol A (DGEBA) did not cause birth defects or other adverse effects on the foetus when pregnant rabbits were exposed by skin contact, the most likely route of exposure, or when pregnant rats or rabbits were exposed orally.

REACTION MASS OF 2,2'-[METHYLENEBIS(2,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2,2'-[METHYLENEBIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2-({2-[4-(OXIRAN-2-YLMETHOXY)BENZYL]PHENOXY} METHYL)OXIRANE (-)

Method	Species	Results
		In animal studies, did not interfere with reproduction
		Did not cause birth defects or any other foetal effects in laboratory animals.

STOT - single exposure

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

REACTION MASS OF 2,2'-[METHYLENEBIS(2,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2,2'-[METHYLENEBIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2-({2-[4-(OXIRAN-2-YLMETHOXY)BENZYL]PHENOXY} METHYL)OXIRANE (-)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Data is for major component in product. Except for skin sensitization, repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects.

Component Information

REACTION MASS OF 2,2'-[METHYLENEBIS(2,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2,2'-[METHYLENEBIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2-([4-(OXIRAN-2-YLMETHOXY)BENZYL]PHENOXY) METHYL OXIRANE (-)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.

Aspiration hazard

Based on available data the classification criteria are not met.

Other adverse effects

No information available.

SECTION 12: Ecological information

12.1. Toxicity**Ecotoxicity**

Toxic to aquatic life with long lasting effects.

Unknown aquatic toxicity

Contains 0 % of components with unknown hazards to the aquatic environment.

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

Method	Species	Endpoint type	Effective dose	Exposure time	Results
	aquatic invertebrates	NOEC	300 µg/l	21 days	

REACTION MASS OF 2,2'-[METHYLENEBIS(2,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2,2'-[METHYLENEBIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2-([4-(OXIRAN-2-YLMETHOXY)BENZYL]PHENOXY) METHYL OXIRANE (-)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
	Freshwater Fish	LC50	2.54 mg/L	96 hours	
OECD Test No. 202: Daphnia sp., Acute Immobilisation Test or Equivalent.	Daphnia magna	EC50	> 1000 mg/L	48 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Selenastrum capricornutum	EC50	> 1.8 mg/L	72 hours	
	activated sludge		> 100 mg/L	3 hours	
OECD Test No. 211: Daphnia magna Reproduction Test	Daphnia magna	NOEC	0.3 mg/L	21 days	

12.2. Persistence and degradability**Persistence and degradability**

No information available.

REACTION MASS OF 2,2'-[METHYLENEBIS(2,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND
2,2'-[METHYLENEBIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2-({
2-[4-(OXIRAN-2-YLMETHOXY)BENZYL]PHENOXY} METHYL)OXIRANE (-)

Method	Exposure time	Value	Results
	28 days	Biodegradation 0%	Not readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulation

There is no data for this product.

Component Information

Chemical name	Partition coefficient
2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE)	3.242
REACTION MASS OF 2,2'-[METHYLENEBIS(2,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2,2'-[METHYLENEBIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2-({ 2-[4-(OXIRAN-2-YLMETHOXY)BENZYL]PHENOXY} METHYL)OXIRANE	3.6
OXIRANE, MONO [(C12-14- ALKYLOXY)METHYL] DERIVS	3.77

12.4. Mobility in soil

Mobility in soil

Insoluble.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE)	The substance is not PBT / vPvB
OXIRANE, MONO [(C12-14- ALKYLOXY)METHYL] DERIVS	The substance is not PBT / vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging

Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number

UN3082

14.2 UN proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S.
(2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE),
REACTION MASS OF
2,2'-[METHYLENEBIS(2,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND

	2,2'-[METHYLENEBIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2-({2-[4-(OXIRAN-2-YLMETHOXY)BENZYL]PHENOXY} METHYL)OXIRANE)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	A97, A158, A197
ERG Code	9L
IMDG	
14.1 UN number or ID number	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE, REACTION MASS OF 2,2'-[METHYLENEBIS(2,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2,2'-[METHYLENEBIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2-({2-[4-(OXIRAN-2-YLMETHOXY)BENZYL]PHENOXY} METHYL)OXIRANE)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	274, 335, 969
EmS-No	F-A, S-F
14.7 Maritime transport in bulk according to IMO instruments	No information available
RID	
14.1 UN number or ID number	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE, REACTION MASS OF 2,2'-[METHYLENEBIS(2,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2,2'-[METHYLENEBIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2-({2-[4-(OXIRAN-2-YLMETHOXY)BENZYL]PHENOXY} METHYL)OXIRANE)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	274, 335, 375, 601
Classification code	M6
ADR	
14.1 UN number or ID number	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE, REACTION MASS OF 2,2'-[METHYLENEBIS(2,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2,2'-[METHYLENEBIS(4,1-PHENYLENEOXYMETHYLENE)]BIS(OXIRANE) AND 2-({2-[4-(OXIRAN-2-YLMETHOXY)BENZYL]PHENOXY} METHYL)OXIRANE)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	274, 335, 601, 375
Classification code	M6
Tunnel restriction code	(-)

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**National regulations****Authorisations and/or restrictions on use:**

This product contains one or more substances subject to restriction (UK REACH - Annex XVII).

This product does not contain substances subject to authorisation (UK REACH - Annex XIV).

Product restricted per REACH Annex XVII: 75, 3

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLE NEOXYMETHYLENE)]BISOXIRANE - 1675-54-3	75	-
OXIRANE, MONO [(C12-14- ALKYLOXY)METHYL] DERIVS - 68609-97-2	75.	-

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Dangerous substance category per COMAH Regulations 2015 (as amended)

E2 - Hazardous to the Aquatic Environment in Category Chronic 2

Named dangerous substances per COMAH Regulations 2015 (as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECI	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report

Chemical Safety Assessments have been carried out for these substances

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

H360F - May damage fertility

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

H411 - Toxic to aquatic life with long lasting effects

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling Maximum limit value

*

Skin designation

+ Sensitisers

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Classification procedure

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute oral toxicity

Method Used

Calculation method

Acute dermal toxicity

Calculation method

Acute inhalation toxicity - gas

Calculation method

Acute inhalation toxicity - vapour

Calculation method

Acute inhalation toxicity - dust/mist

Calculation method

Skin corrosion/irritation

Calculation method

Serious eye damage/eye irritation

Calculation method

Respiratory sensitisation

Calculation method

Skin sensitisation

Calculation method

Mutagenicity

Calculation method

Carcinogenicity

Calculation method

STOT - single exposure

Calculation method

STOT - repeated exposure

Calculation method

Acute aquatic toxicity

Calculation method

Chronic aquatic toxicity

Calculation method

Aspiration hazard

Calculation method

Ozone

Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)

European Chemicals Agency (ECHA) (ECHA_API)

Environmental Protection Agency

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Prepared By Lisa Bland
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This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet