



## SAFETY DATA SHEET

Epoxy Tooling Gelcoat

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Compilation date: 22/05/2015

Revision date: 22/05/2015

Revision No: 4

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

#### 1.1. Product identifier

**Product name:** Epoxy Tooling Gelcoat

**Product code:**

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

**Use of substance / mixture:** PC1: Adhesives, sealants. PC9a: Coatings and paints, thinners, paint removers. PC9b: Fillers, putties, plasters, modelling clay. PC32: Polymer preparations and compounds. PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations\* and articles (multistage and/or significant contact) PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC19: Hand-mixing with intimate contact and only PPE available ERC2: Formulation of preparations\* ERC3: Formulation in materials ERC5: Industrial use resulting in inclusion into or onto a matrix ERC6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers

#### 1.3. Details of the supplier of the safety data sheet

**Company name:** Easy Composites Ltd  
Unit 39, Park Hall Business Village  
Longton, Stoke on Trent  
Staffordshire  
ST3 5XA  
United Kingdom  
**Tel:** +44 (0) 1782 454499  
**Fax:** +44 (0) 1782 596868  
**Email:** sales@easycomposites.co.uk

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## 1.4. Emergency telephone number

**Emergency tel:** +44 (0) 1782 454499  
(office hours only)

## Section 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Classification under CLP:** Aquatic Chronic 2: H411; Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317

**Most important adverse effects:** Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.  
Toxic to aquatic life with long lasting effects.

### 2.2. Label elements

#### Label elements:

**Hazard statements:** H315: Causes skin irritation.  
H317: May cause an allergic skin reaction.  
H319: Causes serious eye irritation.  
H411: Toxic to aquatic life with long lasting effects.

**Hazard pictograms:** GHS07: Exclamation mark  
GHS09: Environmental



**Signal words:** Warning

**Precautionary statements:** P261: Avoid breathing dust/fumes/gas/mist/vapours/spray.  
P264: Wash hands thoroughly after handling.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P302+352: IF ON SKIN: Wash with plenty of water/.  
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P321: Specific treatment (see instructions on this label).

### 2.3. Other hazards

**PBT:** This product is not identified as a PBT/vPvB substance.

## Section 3: Composition/information on ingredients

### 3.2. Mixtures

[cont...]

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BISPHENOL A-(EPICHLORHYDRIN) {REACTION PRODUCT} - REACH registered number(s): 01-2119456619-26

500-033-5	25068-38-6	-	Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317; Aquatic Chronic 2: H411	25-50%
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FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROANE AND PHENOL -  
REACH registered number(s): 01-2119454392-40

500-006-8	9003-36-5	-	Aquatic Chronic 2: H411; Skin Irrit. 2: H315; Skin Sens. 1: H317	1-25%
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OXIRANE, MONO[(C12-14ALKYLOXY)METHYL] DERIVATIVES - REACH registered number(s): 01-21194852289-22

271-846-8	68609-97-2	-	Skin Irrit. 2: H315; Skin Sens. 1: H317	1-25%
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## Section 4: First aid measures

### 4.1. Description of first aid measures

**Skin contact:** Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash immediately with plenty of soap and water.

**Eye contact:** Bathe the eye with running water for 15 minutes. Consult a doctor.

**Ingestion:** Wash out mouth with water. Consult a doctor.

**Inhalation:** Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

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

**Skin contact:** There may be irritation and redness at the site of contact.

**Eye contact:** There may be irritation and redness. The eyes may water profusely.

**Ingestion:** There may be soreness and redness of the mouth and throat.

**Inhalation:** There may be irritation of the throat with a feeling of tightness in the chest. Exposure may cause coughing or wheezing.

**Delayed / immediate effects:** Immediate effects can be expected after short-term exposure.

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

**Immediate / special treatment:** Eye bathing equipment should be available on the premises.

## Section 5: Fire-fighting measures

### 5.1. Extinguishing media

**Extinguishing media:** Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

### 5.2. Special hazards arising from the substance or mixture

**Exposure hazards:** In combustion emits toxic fumes.

### 5.3. Advice for fire-fighters

**Advice for fire-fighters:** Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

[cont...]

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## Section 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions:** Refer to section 8 of SDS for personal protection details. If outside do not approach from downwind. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Turn leaking containers leak-side up to prevent the escape of liquid.

### 6.2. Environmental precautions

**Environmental precautions:** Do not discharge into drains or rivers. Contain the spillage using bunding.

### 6.3. Methods and material for containment and cleaning up

**Clean-up procedures:** Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

### 6.4. Reference to other sections

**Reference to other sections:** Refer to section 8 of SDS.

## Section 7: Handling and storage

### 7.1. Precautions for safe handling

**Handling requirements:** Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage conditions:** Store in a cool, well ventilated area. Keep container tightly closed. The floor of the storage room must be impermeable to prevent the escape of liquids.

### 7.3. Specific end use(s)

**Specific end use(s):** No data available.

## Section 8: Exposure controls/personal protection

### 8.1. Control parameters

**Workplace exposure limits:** No data available.

### DNEL/PNEC Values

**Hazardous ingredients:**

#### OXIRANE, MONO[(C12-14ALKYLOXY)METHYL] DERIVATIVES

Type	Exposure	Value	Population	Effect
DNEL	Dermal	3.9mg/kg bw/day	Workers	Systemic
DNEL	Inhalation	13.8 mg/m3	Workers	Systemic

[cont...]

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PNEC	STP	10 mg/l	-	-
PNEC	Fresh water	0.0072 mg/l	-	-
PNEC	Fresh water sediments	66.77 mg/kg sediment	-	-
PNEC	Marine water	0.00072 mg/l	-	-
PNEC	Marine sediments	6.677 mg/kg sediment	-	-
PNEC	Soil (agricultural)	80.12 mg/kg soil dw	-	-

## 8.2. Exposure controls

**Engineering measures:** Ensure there is sufficient ventilation of the area. The floor of the storage room must be impermeable to prevent the escape of liquids.

**Respiratory protection:** Self-contained breathing apparatus must be available in case of emergency.

**Hand protection:** Protective gloves.

**Eye protection:** Safety glasses. Ensure eye bath is to hand.

**Skin protection:** Protective clothing.

## Section 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

**State:** Liquid

**Colour:** Green

**Odour:** Characteristic odour

**Evaporation rate:** No data available.

**Oxidising:** No data available.

**Solubility in water:** No data available.

**Viscosity:** 90000 mPas (25°C)

**Boiling point/range°C:** No data available.

**Flammability limits %: lower:** No data available.

**Flash point°C:** No data available.

**Autoflammability°C:** No data available.

**Relative density:** 1.63 - 1.68

**VOC g/l:** No data available.

**Melting point/range°C:** No data available.

**upper:** No data available.

**Part.coeff. n-octanol/water:** No data available.

**Vapour pressure:** No data available.

**pH:** No data available.

### 9.2. Other information

**Other information:** No data available.

## Section 10: Stability and reactivity

### 10.1. Reactivity

**Reactivity:** Stable under recommended transport or storage conditions.

[cont...]

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## 10.2. Chemical stability

**Chemical stability:** Stable under normal conditions.

## 10.3. Possibility of hazardous reactions

**Hazardous reactions:** Hazardous reactions will not occur under normal transport or storage conditions.  
Decomposition may occur on exposure to conditions or materials listed below.

## 10.4. Conditions to avoid

**Conditions to avoid:** Heat.

## 10.5. Incompatible materials

**Materials to avoid:** Strong oxidising agents. Strong acids.

## 10.6. Hazardous decomposition products

**Haz. decomp. products:** In combustion emits toxic fumes.

## Section 11: Toxicological information

### 11.1. Information on toxicological effects

#### Hazardous ingredients:

#### BISPHENOL A-(EPICHLORHYDRIN) {REACTION PRODUCT}

ORL	MUS	LD50	15600	mg/kg
ORL	RAT	LD50	11400	mg/kg
SKN	RBT	LD50	>20	ml/kg

#### FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROANE AND PHENOL

ORAL	RAT	LD50	> 2000	mg/l
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#### OXIRANE, MONO[(C12-14ALKYLOXY)METHYL] DERIVATIVES

DERMAL	RAT	LD50	> 26800	mg/kg
ORL	RAT	LD50	17100	mg/kg

#### Relevant hazards for substance:

Hazard	Route	Basis
Skin corrosion/irritation	DRM	Hazardous: calculated
Serious eye damage/irritation	OPT	Hazardous: calculated
Respiratory/skin sensitisation	DRM	Hazardous: calculated

## Symptoms / routes of exposure

**Skin contact:** There may be irritation and redness at the site of contact.

**Eye contact:** There may be irritation and redness. The eyes may water profusely.

**Ingestion:** There may be soreness and redness of the mouth and throat.

**Inhalation:** There may be irritation of the throat with a feeling of tightness in the chest. Exposure may cause coughing or wheezing.

[cont...]

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**Delayed / immediate effects:** Immediate effects can be expected after short-term exposure.

## Section 12: Ecological information

### 12.1. Toxicity

**Hazardous ingredients:**

**FORMALDEHYDE, OLIGOMERIC REACTION PRODUCTS WITH 1-CHLORO-2,3-EPOXYPROANE AND PHENOL**

Daphnia magna	96H LC50	> 100	mg/l
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**OXIRANE, MONO[(C12-14ALKYLOXY)METHYL] DERIVATIVES**

ALGAE	72H IC50	843.75	mg/l
DAPHNIA	48H EC50	6.07	mg/l
Leuciscus idus	96H LC50	>5000	mg/l

### 12.2. Persistence and degradability

**Persistence and degradability:** Not biodegradable.

### 12.3. Bioaccumulative potential

**Bioaccumulative potential:** Bioaccumulation potential.

### 12.4. Mobility in soil

**Mobility:** Readily absorbed into soil.

### 12.5. Results of PBT and vPvB assessment

**PBT identification:** This product is not identified as a PBT/vPvB substance.

### 12.6. Other adverse effects

**Other adverse effects:** Toxic to aquatic organisms. Toxic to soil organisms.

## Section 13: Disposal considerations

### 13.1. Waste treatment methods

**Disposal operations:** Transfer to a suitable container and arrange for collection by specialised disposal company.

**NB:** The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

## Section 14: Transport information

### 14.1. UN number

**UN number:** UN3082

### 14.2. UN proper shipping name

**Shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Epoxy resin)

[cont...]

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## 14.3. Transport hazard class(es)

Transport class: 9

## 14.4. Packing group

Packing group: III

## 14.5. Environmental hazards

Environmentally hazardous: Yes

Marine pollutant: No

## 14.6. Special precautions for user

Special precautions: No special precautions.

Tunnel code: E

Transport category: 3

## Section 15: Regulatory information

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

Specific regulations: Not applicable.

### 15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

## Section 16: Other information

### Other information

**Other information:** This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

\* indicates text in the SDS which has changed since the last revision.

**Phrases used in s.2 and s.3:** H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H411: Toxic to aquatic life with long lasting effects.

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

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

### 1.1. Product identifier

**Product name:** Epoxy Tooling Gelcoat Hardener

**Product code:**

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

**Use of substance / mixture:** PC1: Adhesives, sealants. PC9a: Coatings and paints, thinners, paint removers. PC9b: Fillers, putties, plasters, modelling clay. PC32: Polymer preparations and compounds. PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations\* and articles (multistage and/or significant contact) PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC19: Hand-mixing with intimate contact and only PPE available ERC2: Formulation of preparations\* ERC3: Formulation in materials ERC5: Industrial use resulting in inclusion into or onto a matrix ERC6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers

### 1.3. Details of the supplier of the safety data sheet

**Company name:** Easy Composites Ltd  
Unit 39, Park Hall Business Village  
Longton, Stoke on Trent  
Staffordshire  
ST3 5XA  
United Kingdom  
**Tel:** +44 (0) 1782 454499  
**Fax:** +44 (0) 1782 596868  
**Email:** sales@easycomposites.co.uk

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### 1.4. Emergency telephone number

**Emergency tel:** +44 (0) 1782 454499  
(office hours only)

## Section 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Classification under CLP:** Repr. 2: H361f; Acute Tox. 3: H331; Acute Tox. 4: H302; Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Skin Corr. 1B: H314; Skin Sens. 1: H317

**Most important adverse effects:** Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Toxic if inhaled. Suspected of damaging fertility. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

### 2.2. Label elements

#### Label elements:

**Hazard statements:** H302: Harmful if swallowed.  
H314: Causes severe skin burns and eye damage.  
H317: May cause an allergic skin reaction.  
H331: Toxic if inhaled.  
H361f: Suspected of damaging fertility.  
H400: Very toxic to aquatic life.  
H410: Very toxic to aquatic life with long lasting effects.

**Hazard pictograms:** GHS05: Corrosion  
GHS06: Skull and crossbones  
GHS08: Health hazard  
GHS09: Environmental



**Signal words:** Danger

**Precautionary statements:** P260: Do not breathe dust/fumes/gas/mist/vapours/spray.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P301+312: IF SWALLOWED: Call a POISON CENTER/doctor/ if you feel unwell.  
P301+330+331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P302+352: IF ON SKIN: Wash with plenty of water/.  
P303+361+353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

### 2.3. Other hazards

**Other hazards:** Danger of serious damage to health by prolonged exposure.  
**PBT:** This product is not identified as a PBT/vPvB substance.

[cont...]

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**Section 3: Composition/information on ingredients**

**3.2. Mixtures**

**Hazardous ingredients:**

PENTAETHYLENEHEXAMINE - REACH registered number(s): 01-2119485826-22

EINECS	CAS	PBT / WEL	CLP Classification	Percent
223-775-9	4067-16-7	-	Skin Corr. 1B: H314; Skin Sens. 1: H317; Aquatic Chronic 1: H410; Aquatic Acute 1: H400	>50%

HEPA

268-626-9	68131-73-7	-	Acute Tox. 4: H312; Acute Tox. 4: H302; Skin Corr. 1B: H314; Skin Sens. 1: H317; Aquatic Chronic 1: H410; Aquatic Acute 1: H400	1-25%
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DIETHYLENETRIAMINE - REACH registered number(s): 01-2119473793-27

203-865-4	111-40-0	-	Acute Tox. 4: H302; Skin Sens. 1: H317; Acute Tox. 2: H330; Skin Corr. 1B: H314; Eye Dam. 1: H318; STOT SE 3: H335; Acute Tox. 4: H312	1-25%
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4,4'-ISOPROPYLIDENEDIPHENOL - REACH registered number(s): 01-2119457856-23

201-245-8	80-05-7	-	Repr. 2: H361f; STOT SE 3: H335; Eye Dam. 1: H318; Skin Sens. 1: H317	1-25%
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**Section 4: First aid measures**

**4.1. Description of first aid measures**

- Skin contact:** Remove all contaminated clothes and footwear immediately unless stuck to skin. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Consult a doctor.
- Eye contact:** Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.
- Ingestion:** Do not induce vomiting. Wash out mouth with water. If conscious, give half a litre of water to drink immediately. Transfer to hospital as soon as possible.
- Inhalation:** Move to fresh air in case of accidental inhalation of vapours. Remove casualty from exposure ensuring one's own safety whilst doing so. If conscious, ensure the casualty sits or lies down. If unconscious, check for breathing and apply artificial respiration if necessary. Consult a doctor.

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

- Skin contact:** Severe burns may occur. There may be irritation and redness at the site of contact.
- Eye contact:** There may be severe pain. Corneal burns may occur. May cause permanent damage.
- Ingestion:** Corrosive burns may appear around the lips. There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur.

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**Inhalation:** There may be a feeling of tightness in the chest with shortness of breath. Exposure may cause coughing or wheezing.

**Delayed / immediate effects:** Immediate effects can be expected after short-term exposure.

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

**Immediate / special treatment:** Show this safety data sheet to the doctor in attendance.

## Section 5: Fire-fighting measures

### 5.1. Extinguishing media

**Extinguishing media:** Carbon dioxide. Dry chemical powder. Alcohol or polymer foam. Water spray. Use water spray to cool containers.

### 5.2. Special hazards arising from the substance or mixture

**Exposure hazards:** In combustion emits toxic fumes.

### 5.3. Advice for fire-fighters

**Advice for fire-fighters:** Wear protective clothing to prevent contact with skin and eyes. Wear self-contained breathing apparatus.

## Section 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions:** Refer to section 8 of SDS for personal protection details. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Turn leaking containers leak-side up to prevent the escape of liquid.

### 6.2. Environmental precautions

**Environmental precautions:** Do not discharge into drains or rivers. Contain the spillage using bunding.

### 6.3. Methods and material for containment and cleaning up

**Clean-up procedures:** Mix with sand or vermiculite. Clean-up should be dealt with only by qualified personnel familiar with the specific substance. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

### 6.4. Reference to other sections

**Reference to other sections:** Refer to section 8 of SDS. Refer to section 13 of SDS.

## Section 7: Handling and storage

### 7.1. Precautions for safe handling

**Handling requirements:** Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage conditions:** Keep container tightly closed. Avoid incompatible materials and conditions - see section 10 of SDS.

[cont...]

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**Suitable packaging:** Must only be kept in original packaging.

**7.3. Specific end use(s)**

**Specific end use(s):** No data available.

**Section 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Hazardous ingredients:**

**DIETHYLENETRIAMINE**

**Workplace exposure limits:**

**Respirable dust**

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
EU	4.3 mg/m <sup>3</sup>	-	-	-

**4,4'-ISOPROPYLIDENEDIPHENOL**

UK	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	-	-
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**DNEL/PNEC Values**

**Hazardous ingredients:**

**PENTAETHYLENEHEXAMINE**

Type	Exposure	Value	Population	Effect
PNEC	Fresh water	2.5 µg/l	-	-
PNEC	Marine water	2.5 µg/l	-	-
PNEC	Fresh water sediments	0.22 mg/kg dwt	-	-
PNEC	Marine sediments	0.14 mg/kg dwt	-	-
PNEC	Soil (agricultural)	0.18 mg/kg dwt	-	-
PNEC	Microorganisms in sewage treatment	1.64 mg/l	-	-
DNEL	Dermal	0.91 mg/kg bw/day	Workers	Systemic
DNEL	Inhalation	1.59 mg/m <sup>3</sup>	Workers	Systemic
DNEL	Dermal	0.044 mg/cm <sup>2</sup>	Workers	Local

**DIETHYLENETRIAMINE**

Type	Exposure	Value	Population	Effect
DNEL	Inhalation	0.87 mg/m <sup>3</sup>	Workers	Local
DNEL	Inhalation	15.4 mg/m <sup>3</sup>	Workers	Systemic
DNEL	Dermal	11.4 mg/kg bw/day	Workers	Systemic
DNEL	Dermal	1.1 mg/cm <sup>2</sup>	Workers	Local
DNEL	Dermal	4.88 mg/kg bw/day	Consumers	Systemic

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DNEL	Inhalation	4.6 mg/m <sup>3</sup>	Consumers	Systemic
PNEC	Fresh water	0.56 mg/l	-	-
PNEC	Marine water	0.056 mg/l	-	-
PNEC	Fresh water sediments	1072 mg/kg	-	-
PNEC	Marine sediments	107.2 mg/kg	-	-
PNEC	Soil (agricultural)	214 mg/kg	-	-
PNEC	Intermittent	0.32 mg/l	-	-

### 8.2. Exposure controls

**Engineering measures:** Ensure there is sufficient ventilation of the area.

**Respiratory protection:** Self-contained breathing apparatus must be available in case of emergency. Gas/vapour filter, type K: ammonia and derivatives (EN141).

**Hand protection:** Impermeable gloves.

**Eye protection:** Safety glasses with side-shields. Ensure eye bath is to hand.

**Skin protection:** Impermeable protective clothing.

**Environmental:** Ensure all engineering measures mentioned in section 7 of SDS are in place.

## Section 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

**State:** Liquid

**Colour:** Yellow-orange

**Odour:** Unpleasant

**Evaporation rate:** No data available.

**Oxidising:** No data available.

**Solubility in water:** No data available.

**Viscosity:** 350 mPas (25°C)

**Boiling point/range°C:** No data available.

**Melting point/range°C:** No data available.

**Flammability limits %: lower:** No data available.

**upper:** No data available.

**Flash point°C:** No data available.

**Part.coeff. n-octanol/water:** No data available.

**Autoflammability°C:** No data available.

**Vapour pressure:** No data available.

**Relative density:** 1.00 - 1.05

**pH:** No data available.

**VOC g/l:** No data available.

### 9.2. Other information

**Other information:** No data available.

## Section 10: Stability and reactivity

### 10.1. Reactivity

**Reactivity:** Stable under recommended transport or storage conditions.

[cont...]

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**10.2. Chemical stability**

**Chemical stability:** Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

**Hazardous reactions:** Hazardous reactions will not occur under normal transport or storage conditions.  
Decomposition may generate enough heat and gases for fires/explosions.  
Decomposition may occur on exposure to conditions or materials listed below.

**10.4. Conditions to avoid**

**Conditions to avoid:** Direct sunlight. Heat. Sources of ignition.

**10.5. Incompatible materials**

**Materials to avoid:** Acids. Oxidising agents. Metals.

**10.6. Hazardous decomposition products**

**Haz. decomp. products:** In combustion emits toxic fumes.

**Section 11: Toxicological information**

**11.1. Information on toxicological effects**

**Hazardous ingredients:**

**PENTAETHYLENEHEXAMINE**

ORL	RAT	LD50	1600	mg/kg
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**DIETHYLENETRIAMINE**

DERMAL	RBT	LD50	1045	mg/kg
DUST/MIST	RAT	4H LC50	0.185	mg/l
ORAL	RAT	LD50	1620	mg/kg

**4,4'-ISOPROPYLIDENEDIPHENOL**

ORL	MUS	LD50	2400	mg/kg
ORL	RAT	LD50	3250	mg/kg

**Relevant hazards for substance:**

Hazard	Route	Basis
Acute toxicity (ac. tox. 4)	ING	Hazardous: calculated
Acute toxicity (ac. tox. 3)	INH	Hazardous: calculated
Skin corrosion/irritation	DRM	Hazardous: calculated
Serious eye damage/irritation	OPT	Hazardous: calculated
Respiratory/skin sensitisation	DRM	Hazardous: calculated

[cont...]

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Reproductive toxicity	--	Hazardous: calculated
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**Symptoms / routes of exposure**

**Skin contact:** Severe burns may occur. There may be irritation and redness at the site of contact.

**Eye contact:** There may be severe pain. Corneal burns may occur. May cause permanent damage.

**Ingestion:** Corrosive burns may appear around the lips. There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur.

**Inhalation:** There may be a feeling of tightness in the chest with shortness of breath. Exposure may cause coughing or wheezing.

**Delayed / immediate effects:** Immediate effects can be expected after short-term exposure.

**Section 12: Ecological information**

**12.1. Toxicity**

**Hazardous ingredients:**

**PENTAETHYLENEHEXAMINE**

ALGAE	72H EC50	0.7	mg/l
DAPHNIA	48H EC50	17.35	mg/l
FISH	96H LC50	180	mg/l

**DIETHYLENETRIAMINE**

ALGAE	72H EbC50 (Biomass)	1164	mg/l
Bacteria	Chronic NOEC 3 hours	6	mg/l
DAPHNIA	48H EC50	32	mg/l
DAPHNIA	Chronic NOEC 21 days	5.6	mg/l
FISH	96H LC50	430	mg/l
FISH	Chronic NOEC 28 days	10	mg/l

**12.2. Persistence and degradability**

**Persistence and degradability:** No data available.

**12.3. Bioaccumulative potential**

**Bioaccumulative potential:** No data available.

**12.4. Mobility in soil**

**Mobility:** No data available.

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

**PBT identification:** This product is not identified as a PBT/vPvB substance.

[cont...]

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**12.6. Other adverse effects**

**Other adverse effects:** No data available.

**Section 13: Disposal considerations**

**13.1. Waste treatment methods**

**Disposal operations:** Transfer to a suitable container and arrange for collection by specialised disposal company.

**Disposal of packaging:** Arrange for collection by specialised disposal company.

**NB:** The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

**Section 14: Transport information**

**14.1. UN number**

**UN number:** UN2079

**14.2. UN proper shipping name**

**Shipping name:** DIETHYLENETRIAMINE  
(Contains: 3,6,9,12-Tetra-azatetradecamethylenediamine;  
Diethylenetriamine)

**14.3. Transport hazard class(es)**

**Transport class:** 8

**14.4. Packing group**

**Packing group:** II

**14.5. Environmental hazards**

**Environmentally hazardous:** Yes

**Marine pollutant:** No

**14.6. Special precautions for user**

**Special precautions:** No special precautions.

**Tunnel code:** E

**Transport category:** 2

**Section 15: Regulatory information**

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

**Specific regulations:** Not applicable.

**15.2. Chemical Safety Assessment**

**Chemical safety assessment:** A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

[cont...]

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**Section 16: Other information**

**Other information**

**Other information:** This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

\* indicates text in the SDS which has changed since the last revision.

**Phrases used in s.2 and s.3:** H302: Harmful if swallowed.  
H312: Harmful in contact with skin.  
H314: Causes severe skin burns and eye damage.  
H317: May cause an allergic skin reaction.  
H318: Causes serious eye damage.  
H330: Fatal if inhaled.  
H331: Toxic if inhaled.  
H335: May cause respiratory irritation.  
H361f: Suspected of damaging fertility.  
H400: Very toxic to aquatic life.  
H410: Very toxic to aquatic life with long lasting effects.

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