

## LB2 Epoxy Laminating Bio Resin

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

#### 1.1. Product identifier

Product name : LB2 Epoxy Laminating  
 Bio Resin Product code : LB2-A  
 EPOXY RESIN

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

Recommended use : resin  
 Uses advised against : data not available

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

Company : Easy Composites Ltd  
 Unit 39 Park Hall Business Village,  
 Longton, Stoke-on-Trent, ST3 5XA

Telephone 01782454499

E-mail address sales@easycomposites.co.uk

**1.4. Emergency telephone number :** . 01782 454499 (office hours only)

#### Other emergency numbers

Health and Safety Executive (HSE) Chemicals Regulation Directorate - Telephone: +44 151 951 3317 -

### 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).  
 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 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 :



GHS05



GHS07



GHS09

Signal Word :

DANGER

Product identifiers :

EC 216-823-5

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

EC 219-371-7

BUTANEDIOLDIGLYCIDYL ETHER

Additional labeling :

EUH205

Contains epoxy constituents. May produce an allergic reaction.

Hazard statements :

H315

Causes skin irritation.

H317

May cause an allergic skin reaction.

## LB2 Epoxy Laminating Bio Resin

H318	Causes serious eye damage.
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.
P310	Immediately call a POISON CENTER/doctor/...

**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: 2425-79-8 EC: 219-371-7 REACH: 01-2119494060-45-XXXX BUTANEDIOLDIGLYCIDYL ETHER	GHS07, GHS05 Dgr Acute Tox. 4, H312 Skin Irrit. 2, H315 Skin Sens. 1A, H317 Eye Dam. 1, H318 Acute Tox. 4, H332		10 $\leq$ x % < 25

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

**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.

**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.

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.

## 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
- dry chemical agents
- carbon dioxide (CO<sub>2</sub>)
- foam

#### 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 (CO<sub>2</sub>)

### 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

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.

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.

Avoid eye contact with this mixture at all times.

#### 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**

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)**

Scope advised: Stratification

**SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters**

No data available.

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

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 de poids corporel/jour

Exposure method:

Potential health effects:

DNEL :

Dermal contact.

Long term systemic effects.

8.3 mg/kg de poids corporel/jour

Exposure method:

Potential health effects:

DNEL :

Inhalation.

Short term systemic effects.

12.3 mg de substance/m3

Exposure method:

Potential health effects:

DNEL :

Inhalation.

Long term systemic effects.

12.3 mg de substance/m3

**Final use:**

Exposure method:

Potential health effects:

DNEL :

**Man exposed via the environment.**

Ingestion.

Short term systemic effects.

0.75 mg/kg de poids corporel/jour

Exposure method:

Potential health effects:

DNEL :

Ingestion.

Long term systemic effects.

0.75 mg/kg de poids corporel/jour

Exposure method:

Potential health effects:

DNEL :

Dermal contact.

Short term systemic effects.

3.6 mg/kg de poids corporel/jour

Exposure method:

Potential health effects:

DNEL :

Dermal contact.

Long term systemic effects.

3.6 mg/kg de poids corporel/jour

Exposure method:

Potential health effects:

DNEL :

Inhalation.

Short term systemic effects.

0.75 mg de substance/m3

Exposure method:

Potential health effects:

DNEL :

Inhalation.

Long term systemic effects.

0.75 mg de substance/m3

**Predicted no effect concentration (PNEC):**

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

Environmental compartment:

Soil.

## LB2 Epoxy Laminating Bio Resin

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

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

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

Attention! If the protection group is insufficient.

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

**SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES****9.1. Information on basic physical and chemical properties****General information :**

Physical state :	Viscous liquid.
Color:	colorless to pale yellow

**Important health, safety and environmental information**

pH :	Not relevant.
Boiling point/boiling range :	Not relevant.
Flash Point Interval :	FP > 100°C.
Vapour pressure (50°C) :	Not relevant.
Density :	1.16 ± 0.02 @ 20°C
Water solubility :	Insoluble.
Viscosity :	1 770 ± 370 mPa.s @ 25°C
Melting point/melting range :	Not relevant.
Self-ignition temperature :	Not relevant.
Decomposition point/decomposition range :	Not relevant.
Index of refraction :	1.5560 ± 0.002 @ 25 °C

**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 (CO<sub>2</sub>)

**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 irreversible effects on the eyes, such as tissue damage in the eye, or serious physical decay of sight, which is not fully reversible by the end of observation at 21 days.

Serious eye damage is typified by the destruction of cornea, persistent corneal opacity and iritis.

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 :**

BUTANEDIOLDIGLYCIDYL ETHER (CAS: 2425-79-8)

Oral route : LD50 = 1134 mg/kg  
Species : Rat

Dermal route : LD50 = 1130 mg/kg

Species : Rabbit

Inhalation route (Vapours) : LC50 = 10 mg/l  
Duration of exposure : 4 h2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE (CAS: 1675-54-3)  
Oral route : LD50 = 11400 mg/kg  
Species : RatDermal route : LD50 = 2000 mg/kg  
Species : Rat**Skin corrosion/skin irritation :**2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXYMETHYLENE)]BISOXIRANE (CAS: 1675-54-3)  
Species : Rabbit  
OCDE Ligne directrice 404 (Effet irritant/corrosif aigu sur la peau.)**11.1.2. Mixture****Respiratory or skin sensitisation :**

Contains epoxy compounds. May cause an allergic reaction.

**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**

BUTANEDIOLDIGLYCIDYL ETHER (CAS: 2425-79-8)

Fish toxicity : LC50 = 13 mg/l  
Species : *Oryzias latipes*  
Duration of exposure : 96 hCrustacean toxicity : EC50 = 223 mg/l  
Species : *Daphnia magna*  
Duration of exposure : 48 hAquatic plant toxicity : ECr50 > 93 mg/l  
Species : Others  
Duration of exposure : 72 h

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

Fish toxicity : LC50 = 1.3 mg/l  
Duration of exposure : 96 hCrustacean toxicity : EC50 = 2.1 mg/l  
Species : *Daphnia sp.*  
Duration of exposure : 48 h  
OCDE Ligne directrice 202 (*Daphnia sp.*, essai d'immobilisation immédiate)Algae toxicity : ECr50 > 11 mg/l  
Duration of exposure : 72 h**12.1.2. Mixtures**

No aquatic toxicity data available for the mixture.

**12.2. Persistence and degradability****12.2.1. Substances**

BUTANEDIOLDIGLYCIDYL ETHER (CAS: 2425-79-8)

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

BUTANEDIOLDIGLYCIDYL ETHER (CAS: 2425-79-8)

Octanol/water partition coefficient : log K<sub>ow</sub> = 0.01

Bioaccumulation : BCF = 3.162

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

Octanol/water partition coefficient : log K<sub>ow</sub> = 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.

#### 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

3082

### 14.2. UN proper shipping name

UN3082=ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane, butanedioldiglycidyl ether)

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

**- Container information:**

No data available.

**- Particular provisions :**

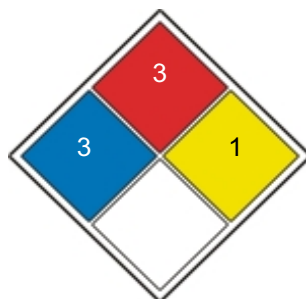
No data available.

**- 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=3 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 :**

H312	Harmful in contact with skin.
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.
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 : Wassergefahrdungskategorie (Water Hazard Class).

GHS05 : Corrosion

GHS07 : Exclamation mark

GHS09 : Environment

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.

SVHC : Substances of very high concern.

## LB2 Epoxy Laminating Bio Hardener

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

#### 1.1. Product identifier

Product name : LB2 Epoxy Laminating Bio Hardener  
 Product code : LB2-B  
 HARDENER FOR EPOXY RESIN

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

Recommended use : resin  
 Uses advised against : data not available

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

Company : Easy Composites Ltd  
 Unit 39 Park Hall Business Village,  
 Longton, Stoke-on-Trent, ST3 5XA

Telephone : 01782454499

E-mail address : sales@easycomposites.co.uk

**1.4. Emergency telephone number :** . 01782 454499 (office hours only)

#### Other emergency numbers

Health and Safety Executive (HSE) Chemicals Regulation Directorate - Telephone: +44 151 951 3317

### SECTION 2 : HAZARDS IDENTIFICATION

#### 2.1. Classification of the substance or mixture

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

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).  
 Reproductive toxicity, Category 2 (Repr. 2, H361d).  
 Hazardous to the aquatic environment - Chronic hazard, Category 1 (Aquatic Chronic 1, H410).  
 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

GHS08

GHS09

Signal Word :

DANGER

Product identifiers :

EC 268-626-9

EC 618-561-0

EC 223-775-9

EC 200-712-3

POLYETHYLENEDIAMINES

REACTION PRODUCTS OF DI-, TRI AND TETRA-PROPOXYLATED PROPANE-1,2-DIOL WITH AMMONIA

3,6,9,12-TETRA-AZATETRADECAMETHYLENEDIAMINE

SALICYLIC ACID

## LB2 Epoxy Laminating Bio Hardener

## Hazard statements :

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H361d	Suspected of damaging the unborn child.
H410	Very toxic to aquatic life with long lasting effects.

## Precautionary statements - Prevention :

P202	Do not handle until all safety precautions have been read and understood.
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/...

**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: 68131-73-7 EC: 268-626-9 REACH: 01-2119485823-28-XXXX  POLYETHYLENEPOLYAMINES	GHS07, GHS05, GHS09 Dgr Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Skin Sens. 1, H317 Eye Dam. 1, H318 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1		25 $\leq$ x % < 50
CAS: 9046-10-0 EC: 618-561-0 REACH: 01-2119557899-12-XXXX  REACTION PRODUCTS OF DI-, TRI AND TETRA-PROPOXYLATED PROPANE-1.2-DIOL WITH AMMONIA	GHS05 Dgr Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Chronic 3, H412		25 $\leq$ x % < 50
CAS: 4067-16-7 EC: 223-775-9 REACH: 01-219485826-22-XXXX  3,6,9,12-TETRA-AZATETRADECAMETH YLENEDIAMINE	GHS07, GHS05, GHS09 Dgr Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Skin Sens. 1, H317 Eye Dam. 1, H318 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1		10 $\leq$ x % < 25
CAS: 100-51-6 EC: 202-859-9 REACH: 01-2119492630-38-XXXX  BENZYL ALCOHOL	GHS07 Wng Acute Tox. 4, H302 Eye Irrit. 2, H319 Acute Tox. 4, H332	[1]	2.5 $\leq$ x % < 10

## LB2 Epoxy Laminating Bio Hardener

CAS: 69-72-7 EC: 200-712-3 REACH: 01-2119486984-17-XXXX  SALICYLIC ACID	GHS07, GHS05, GHS08 Dgr Acute Tox. 4, H302 Eye Dam. 1, H318 Repr. 2, H361d	[2]	2.5 <= x % < 10
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(Full text of H-phrases: see section 16)

**Information on ingredients :**

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

[2] Carcinogenic, mutagenic or reprotoxic (CMR) substance.

**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.

Never give anything by mouth. If unconscious, place in recovery position and call an ambulance.

**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 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

**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 (CO<sub>2</sub>)
- nitrogen oxide (NO)
- nitrogen dioxide (NO<sub>2</sub>)

**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.

If the ground is contaminated, once the product has been recovered by sponging with an inert and non-combustible absorbent material, wash the contaminated area in plenty of water.

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.

Avoid exposure to pregnant women and warn women of child-bearing age of the possible risks

**7.1. Precautions for safe handling**

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

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.

Avoid exposure - obtain special instructions before use.

**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**

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.

**Packaging**

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

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

Scope advised: Stratification

Scope advised: Fire

**SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters****Occupational exposure limits :**

- Germany - AGW (BAuA - TRGS 900, 08/08/2019) :

CAS	VME :	VME :	Excess	Notes
100-51-6		5 ppm		2 (I)

22 mg/m<sup>3</sup>**Derived no effect level (DNEL) or derived minimum effect level (DMEL):**

BENZYL ALCOHOL (CAS: 100-51-6)

**Final use:**Exposure method:  
Potential health effects:  
DNEL :**Workers.**Dermal contact.  
Short term systemic effects.  
40 mg/kg de poids corporel/jourExposure method:  
Potential health effects:  
DNEL :Dermal contact.  
Long term systemic effects.  
8 mg/kg de poids corporel/jourExposure method:  
Potential health effects:  
DNEL :Inhalation.  
Short term systemic effects.  
110 mg de substance/m<sup>3</sup>Exposure method:  
Potential health effects:  
DNEL :Inhalation.  
Long term systemic effects.  
22 mg de substance/m<sup>3</sup>**Final use:**Exposure method:  
Potential health effects:  
DNEL :**Consumers.**Ingestion.  
Long term systemic effects.  
4 mg/kg de poids corporel/jourExposure method:  
Potential health effects:  
DNEL :Ingestion.  
Short term systemic effects.  
20 mg/kg de poids corporel/jourExposure method:  
Potential health effects:  
DNEL :Dermal contact.  
Long term systemic effects.  
4 mg/kg de poids corporel/jourExposure method:  
Potential health effects:  
DNEL :Dermal contact.  
Short term systemic effects.  
20 mg/kg de poids corporel/jourExposure method:  
Potential health effects:  
DNEL :Inhalation.  
Long term systemic effects.  
5.4 mg de substance/m<sup>3</sup>Exposure method:  
Potential health effects:  
DNEL :Inhalation.  
Short term systemic effects.  
27 mg de substance/m<sup>3</sup>

3,6,9,12-TETRA-AZATETRADECAMETHYLENEDIAMINE (CAS: 4067-16-7)

**Final use:**Exposure method:  
Potential health effects:  
DNEL :**Workers.**Dermal contact.  
Long term systemic effects.  
0.91 mg/kg de poids corporel/jourExposure method:  
Potential health effects:  
DNEL :Dermal contact.  
Long term local effects.  
0.044 mg de substance/cm<sup>2</sup>Exposure method:  
Potential health effects:  
DNEL :Inhalation.  
Short term systemic effects.  
8550 mg de substance/m<sup>3</sup>Exposure method:  
Potential health effects:  
DNEL :Inhalation.  
Long term systemic effects.  
1.59 mg de substance/m<sup>3</sup>

**Final use:**

Exposure method:  
Potential health effects:  
DNEL :

**Consumers.**

Ingestion.  
Short term systemic effects.  
32 mg/kg de poids corporel/jour

Exposure method:  
Potential health effects:  
DNEL :

Ingestion.  
Long term systemic effects.  
0.65 mg/kg de poids corporel/jour

Exposure method:  
Potential health effects:  
DNEL :

Dermal contact.  
Short term systemic effects.  
13 mg/kg de poids corporel/jour

Exposure method:  
Potential health effects:  
DNEL :

Dermal contact.  
Short term local effects.  
1.59 mg de substance/cm2

Exposure method:  
Potential health effects:  
DNEL :

Dermal contact.  
Long term systemic effects.  
0.4 mg/kg de poids corporel/jour

Exposure method:  
Potential health effects:  
DNEL :

Dermal contact.  
Long term local effects.  
0.68 mg de substance/cm2

Exposure method:  
Potential health effects:  
DNEL :

Inhalation.  
Short term systemic effects.  
2542 mg de substance/m3

Exposure method:  
Potential health effects:  
DNEL :

Inhalation.  
Long term systemic effects.  
0.46 mg de substance/m3

## REACTION PRODUCTS OF DI-, TRI AND TETRA-PROPOXYLATED PROPANE-1,2-DIOL WITH AMMONIA (CAS: 9046-10-0)

**Final use:**

Exposure method:  
Potential health effects:  
DNEL :

**Workers.**

Dermal contact.  
Long term systemic effects.  
2.5 mg/kg de poids corporel/jour

Exposure method:  
Potential health effects:  
DNEL :

Dermal contact.  
Long term local effects.  
0.623 mg de substance/cm2

**Final use:**

Exposure method:  
Potential health effects:  
DNEL :

**Consumers.**

Ingestion.  
Long term systemic effects.  
0.04 mg/kg de poids corporel/jour

Exposure method:  
Potential health effects:  
DNEL :

Dermal contact.  
Long term systemic effects.  
1.25 mg/kg de poids corporel/jour

Exposure method:  
Potential health effects:  
DNEL :

Dermal contact.  
Long term local effects.  
0.311 mg de substance/cm2

## POLYETHYLENEPOLYAMINES (CAS: 68131-73-7)

**Final use:**

Exposure method:  
Potential health effects:  
DNEL :

**Workers.**

Dermal contact.  
Long term systemic effects.  
0.91 mg/kg de poids corporel/jour

Exposure method:  
Potential health effects:

Dermal contact.  
Long term local effects.



DNEL :	0.44 mg de substance/cm2
Exposure method:	Inhalation.
Potential health effects:	Short term systemic effects.
DNEL :	8550 mg de substance/m3
Exposure method:	Inhalation.
Potential health effects:	Long term systemic effects.
DNEL :	1.59 mg de substance/m3
<b>Final use:</b>	<b>Consumers.</b>
Exposure method:	Ingestion.
Potential health effects:	Short term systemic effects.
DNEL :	32 mg/kg de poids corporel/jour
Exposure method:	Ingestion.
Potential health effects:	Long term systemic effects.
DNEL :	0.65 mg/kg de poids corporel/jour
Exposure method:	Dermal contact.
Potential health effects:	Short term systemic effects.
DNEL :	13 mg/kg de poids corporel/jour
Exposure method:	Dermal contact.
Potential health effects:	Short term local effects.
DNEL :	1.59 mg de substance/cm2
Exposure method:	Dermal contact.
Potential health effects:	Long term systemic effects.
DNEL :	0.4 mg/kg de poids corporel/jour
Exposure method:	Dermal contact.
Potential health effects:	Long term local effects.
DNEL :	0.68 mg de substance/cm2
Exposure method:	Inhalation.
Potential health effects:	Short term systemic effects.
DNEL :	2542 mg de substance/m3
Exposure method:	Inhalation.
Potential health effects:	Long term systemic effects.
DNEL :	0.46 mg de substance/m3

**Predicted no effect concentration (PNEC):**

BENZYL ALCOHOL (CAS: 100-51-6)	
Environmental compartment:	Soil.
PNEC :	0.456 mg/kg
Environmental compartment:	Fresh water.
PNEC :	1 mg/l
Environmental compartment:	Sea water.
PNEC :	0.1 mg/l
Environmental compartment:	Intermittent waste water.
PNEC :	2.3 mg/l
Environmental compartment:	Fresh water sediment.
PNEC :	5.27 mg/kg
Environmental compartment:	Marine sediment.
PNEC :	0.527 mg/kg

Environmental compartment: Waste water treatment plant.  
PNEC : 39 mg/l

3,6,9,12-TETRA-AZATETRADECAMETHYLENEDIAMINE (CAS: 4067-16-7)

Environmental compartment: Soil.  
PNEC : 0.18 mg/kg

Environmental compartment: Fresh water.  
PNEC : 2.5 µg/l

Environmental compartment: Sea water.  
PNEC : 2.5 µg/l

Environmental compartment: Fresh water sediment.  
PNEC : 0.22 mg/kg

Environmental compartment: Marine sediment.  
PNEC : 0.14 mg/kg

Environmental compartment: Waste water treatment plant.  
PNEC : 1.64 mg/l

REACTION PRODUCTS OF DI-, TRI AND TETRA-PROPOXYLATED PROPANE-1,2-DIOL WITH AMMONIA (CAS: 9046-10-0)

Environmental compartment: Soil.  
PNEC : 0.0176 mg/kg

Environmental compartment: Fresh water.  
PNEC : 0.015 mg/l

Environmental compartment: Sea water.  
PNEC : 0.0143 mg/l

Environmental compartment: Intermittent waste water.  
PNEC : 0.15 mg/l

Environmental compartment: Fresh water sediment.  
PNEC : 0.132 mg/kg

Environmental compartment: Marine sediment.  
PNEC : 0.125 mg/kg

Environmental compartment: Waste water treatment plant.  
PNEC : 7.5 mg/l

POLYETHYLENEPOLYAMINES (CAS: 68131-73-7)

Environmental compartment: Soil.  
PNEC : 10 mg/kg

Environmental compartment: Fresh water.  
PNEC : 1.6 µg/l

Environmental compartment: Sea water.  
PNEC : 1.6 µg/l

Environmental compartment: Fresh water sediment.  
PNEC : 0.14 mg/kg

Environmental compartment: Marine sediment.  
PNEC : 0.14 mg/kg

Environmental compartment: Waste water treatment plant.  
PNEC : 3.19 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.

**- 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 :	Fluid liquid.
Color:	yellow

**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 :	1.01 ± 0.02 @ 20 °C
Water solubility :	Soluble.
Viscosity :	132.5 ± 27.5 mPa.s @ 25°C
Melting point/melting range :	Not relevant.

Self-ignition temperature :	Not relevant.
Decomposition point/decomposition range :	Not relevant.
Index of refraction :	1.4979 ± 0.002 @ 25 °C

**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 (CO<sub>2</sub>)
- nitrogen oxide (NO)
- nitrogen dioxide (NO<sub>2</sub>)

**SECTION 11 : TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects**

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.

May cause an allergic reaction by skin contact.

Suspected human reproductive toxicant.

Suspected of damaging the unborn child.

**11.1.1. Substances****Acute toxicity :**

SALICYLIC ACID (CAS: 69-72-7)

Oral route :

LD50 = 891 mg/kg

Species : Rat

OCDE Ligne directrice 401 (Toxicité aiguë par voie orale)

BENZYL ALCOHOL (CAS: 100-51-6)

Oral route :

LD50 = 1620 mg/kg

Species : Rat

Dermal route :

LD50 = 2000 mg/kg

Species : Rat

Inhalation route (Dusts/mist) :

LC50 = 4.178 mg/l

Species : Rat

OCDE Ligne directrice 403 (Toxicité aiguë par inhalation)

Duration of exposure : 4 h

3,6,9,12-TETRA-AZATETRADECAMETHYLENEDIAMINE (CAS: 4067-16-7)

Oral route :

LD50 = 1600 mg/kg

Species : Rat

Dermal route :

LD50 = 1465.4 mg/kg

Species : Rabbit

OCDE Ligne directrice 402 (Toxicité aiguë par voie cutanée)

REACTION PRODUCTS OF DI-, TRI AND TETRA-PROPOXYLATED PROPANE-1.2-DIOL WITH AMMONIA (CAS: 9046-10-0)

Oral route : LD50 = 2885.3 mg/kg  
Species : Rat

Dermal route : LD50 = 2979.7 mg/kg  
Species : Rabbit

POLYETHYLENEPOLYAMINES (CAS: 68131-73-7)

Oral route : LD50 = 1716.2 mg/kg  
Species : Rat  
OCDE Ligne directrice 401 (Toxicité aiguë par voie orale)

Dermal route : LD50 = 1465.4 mg/kg  
Species : Rabbit  
OCDE Ligne directrice 402 (Toxicité aiguë par voie cutanée)

**Skin corrosion/skin irritation :**

REACTION PRODUCTS OF DI-, TRI AND TETRA-PROPOXYLATED PROPANE-1.2-DIOL WITH AMMONIA (CAS: 9046-10-0)

Corrosivity : Causes severe skin burns.  
Species : Rabbit  
OCDE Ligne directrice 404 (Effet irritant/corrosif aigu sur la peau.)

**Respiratory or skin sensitisation :**

BENZYL ALCOHOL (CAS: 100-51-6)

Guinea Pig Maximisation Test (GMPT) : Non-sensitiser.  
Species : Guinea pig  
OCDE Ligne directrice 406 (Sensibilisation de la peau)

**Germ cell mutagenicity :**

3,6,9,12-TETRA-AZATETRADECAMETHYLENEDIAMINE (CAS: 4067-16-7)

No mutagenic effect.

Mutagenesis (in vivo) : Negative.

REACTION PRODUCTS OF DI-, TRI AND TETRA-PROPOXYLATED PROPANE-1.2-DIOL WITH AMMONIA (CAS: 9046-10-0)

No mutagenic effect.

POLYETHYLENEPOLYAMINES (CAS: 68131-73-7)

No mutagenic effect.

Mutagenesis (in vivo) : Negative.  
OCDE Ligne directrice 474 (Le test de micronoyaux sur les érythrocytes de mammifères)

**Carcinogenicity :**

BENZYL ALCOHOL (CAS: 100-51-6)

Carcinogenicity Test : Negative.  
No carcinogenic effect.  
Species : Mouse  
OCDE Ligne directrice 453 (Études combinées de toxicité chronique et de cancérogénèse)

**Reproductive toxicant :**

REACTION PRODUCTS OF DI-, TRI AND TETRA-PROPOXYLATED PROPANE-1.2-DIOL WITH AMMONIA (CAS: 9046-10-0)

No toxic effect for reproduction

Study on development : Species : Rat  
OCDE Ligne directrice 421 (Essai de dépistage de la toxicité pour la reproduction et le développement)

POLYETHYLENEPOLYAMINES (CAS: 68131-73-7)

OCDE Ligne directrice 414 (Étude de la toxicité pour le développement prénatal)

**Specific target organ systemic toxicity - repeated exposure :**

BENZYL ALCOHOL (CAS: 100-51-6)

Oral route : C = 400 mg/kg poids corporel/jour  
Species : Rat  
Duration of exposure : 90 jours

REACTION PRODUCTS OF DI-, TRI AND TETRA-PROPOXYLATED PROPANE-1.2-DIOL WITH AMMONIA (CAS: 9046-10-0)

Oral route : C = 239 mg/kg poids corporel/jour  
Species : Rat  
Duration of exposure : 28 jours  
OCDE Ligne directrice 407 (Toxicité orale à doses répétées - pendant 28 jours sur les rongeurs)

Dermal route : C = 250 mg/kg poids corporel/jour  
Duration of exposure : 90 jours  
OCDE Ligne directrice 411 (Toxicité cutanée subchronique: 90 jours)

POLYETHYLENEPOLYAMINES (CAS: 68131-73-7)

Species : Rat

**11.1.2. Mixture**

No toxicological data available for the mixture.

**SECTION 12 : ECOLOGICAL INFORMATION**

Very 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**

3,6,9,12-TETRA-AZATETRADECAMETHYLENEDIAMINE (CAS: 4067-16-7)

Fish toxicity : Duration of exposure : 96 h

Crustacean toxicity : Duration of exposure : 48 h

NOEC = 0.8 mg/l  
Species : Daphnia magna  
Duration of exposure : 21 jours

Algae toxicity : ECr50 = 0.7 mg/l  
Factor M = 1  
Species : Pseudokirchnerella subcapitata  
Duration of exposure : 72 h  
OCDE Ligne directrice 201 (Algues, Essai d'inhibition de la croissance)

NOEC = 0.25 mg/l  
Duration of exposure : 72 h

REACTION PRODUCTS OF DI-, TRI AND TETRA-PROPOXYLATED PROPANE-1.2-DIOL WITH AMMONIA (CAS: 9046-10-0)

Fish toxicity : LC50 > 15 mg/l  
Species : Others  
Duration of exposure : 96 h  
OCDE Ligne directrice 203 (Poisson, essai de toxicité aiguë)

Crustacean toxicity : EC50 = 80 mg/l  
Species : Others  
Duration of exposure : 48 h  
OCDE Ligne directrice 202 (Daphnia sp., essai d'immobilisation immédiate)

BENZYL ALCOHOL (CAS: 100-51-6)

Fish toxicity : LC50 = 460 mg/l

Species : Pimephales promelas  
Duration of exposure : 96 h  
OCDE Ligne directrice 203 (Poisson, essai de toxicité aiguë)

Crustacean toxicity :  
EC50 = 230 mg/l  
Species : Daphnia magna  
Duration of exposure : 48 h  
OCDE Ligne directrice 202 (Daphnia sp., essai d'immobilisation immédiate)

NOEC = 51 mg/l  
Species : Daphnia magna  
Duration of exposure : 21 jours  
OCDE Ligne directrice 211 (Daphnia magna, essai de reproduction)

Algae toxicity :  
ECr50 = 770 mg/l  
Duration of exposure : 72 h  
OCDE Ligne directrice 201 (Algues, Essai d'inhibition de la croissance)

NOEC = 310 mg/l  
Duration of exposure : 72 h  
OCDE Ligne directrice 201 (Algues, Essai d'inhibition de la croissance)

POLYETHYLENEPOLYAMINES (CAS: 68131-73-7)  
Fish toxicity :

LC50 = 100 mg/l  
Species : Poecilia reticulata  
Duration of exposure : 96 h

Crustacean toxicity :  
EC50 = 2.2 mg/l  
Species : Daphnia magna  
Duration of exposure : 48 h

Algae toxicity :  
ECr50 = 0.23 mg/l  
Species : Pseudokirchnerella subcapitata  
Duration of exposure : 72 h

#### 12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

#### 12.2. Persistence and degradability

##### 12.2.1. Substances

BENZYL ALCOHOL (CAS: 100-51-6)

Biodegradability : Rapidly degradable.

3,6,9,12-TETRA-AZATETRADECAMETHYLENEDIAMINE (CAS: 4067-16-7)

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

REACTION PRODUCTS OF DI-, TRI AND TETRA-PROPOXYLATED PROPANE-1.2-DIOL WITH AMMONIA (CAS: 9046-10-0)

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

POLYETHYLENEPOLYAMINES (CAS: 68131-73-7)

Biodegradability : Non-rapidly degradable.

#### 12.3. Bioaccumulative potential

##### 12.3.1. Substances

BENZYL ALCOHOL (CAS: 100-51-6)

Octanol/water partition coefficient : log K<sub>ow</sub> = 1.1

REACTION PRODUCTS OF DI-, TRI AND TETRA-PROPOXYLATED PROPANE-1.2-DIOL WITH AMMONIA (CAS: 9046-10-0)

Octanol/water partition coefficient : log K<sub>ow</sub> = 1.34

POLYETHYLENEPOLYAMINES (CAS: 68131-73-7)

Octanol/water partition coefficient : log K<sub>ow</sub> = -3.67**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 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 2020).

**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.

(polyethylenepolyamines, reaction products of di-, tri and tetra-propoxylated propane-1.2-diol with ammonia)

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

- Classification :



8

**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
	8	C7	III	8	80	5 L	274	E1	3	E
IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ	Stowage Handling	Segregation	



## LB2 Epoxy Laminating Bio Hardener

	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	-	III	852	5 L	856	60 L	A3 A803	E1
	8	-	III	Y841	1 L	-	-	A3 A803	E1

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. 2020/217 (ATP 14)

#### - Container information:

No data available.

#### - Particular provisions :

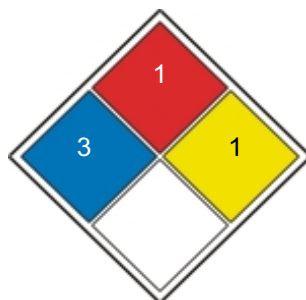
No data available.

#### - 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 :

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.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H361d	Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

#### Abbreviations :

DNEL : Derived No-Effect Level

PNEC : Predicted No-Effect Concentration

CMR: Carcinogenic, mutagenic or reprotoxic.

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

GHS08 : Health hazard

GHS09 : Environment

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.

SVHC : Substances of very high concern.