

Safety data sheet

according to 1907/2006/EC, Article 31

Date Printed 23.02.2022

Version number 1

Revision Date 23.02.2022

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

- **1.1 Product identifier**
- **Trade name: EpoThin 2 Resin**
- **Article number:** AGB8187
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Mounting material for metallographic specimens.
- **Sector of Use**
EpoThin® 2 is a free flowing, low viscosity, low shrinkage epoxy resin that is ideal for use with porous and heat sensitive samples. It produces a clear, bubble free mount, offering an unobstructed view of embedded samples. It has a typical cure time of nine hours at 27°C and is excellent for vacuum impregnation.
- **Application of the substance / the preparation:** No further relevant information.
- **1.3 Details of the supplier of the safety data sheet**
- **Supplier.**
Agar Scientific Ltd
Parsonage Lane
Stansted CM24 8GF
United Kingdom
sales@agarscientific.com
Tel: +44 (0) 1279 813 519
- **Further information obtainable from:** Technical Support
- **1.4 Emergency telephone number:** 24 hours: +44 (0)1856 407333

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



Skin Irrit. 2	H315 Causes skin irritation.
Eye Irrit. 2	H319 Causes serious eye irritation.
Skin Sens. 1	H317 May cause an allergic skin reaction.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS07 GHS09

- **Signal word** Warning
- **Hazard-determining components of labelling:**
Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700)
[[[(2-ethylhexyl)oxy]methyl]oxirane
1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Date Printed 23.02.2022

Version number 1

Revision Date 23.02.2022

Trade name: EpoThin 2 Resin

(Contd. of page 1)

Trimethylolpropane triacrylate

Hazard statements

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

Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read carefully and follow all instructions.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P273 Avoid release to the environment.
- P280 Wear protective gloves / eye protection / face protection.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards
Results of PBT and vPvB assessment

- PBT:** Not applicable.
- vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

- Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 25068-38-6 NLP: 500-033-5	Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700) ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	70.0%
CAS: 2461-15-6 EINECS: 219-553-6	[[[(2-ethylhexyl)oxy]methyl]oxirane ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	14.0%
CAS: 17557-23-2 EINECS: 241-536-7	1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317	14.0%
CAS: 15625-89-5 EINECS: 239-701-3	Trimethylolpropane triacrylate ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	2.0%

- Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures
General information:

- Immediately remove any clothing soiled by the product.
- Take off contaminated clothing and wash before reuse.

After inhalation:

- Supply fresh air.
- No adverse effects are anticipated from inhalation.
- Ensure supply of fresh air.
- In the event of symptoms seek for medical treatment.

After skin contact:

- Wash with water and soap and rinse thoroughly.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Date Printed 23.02.2022

Version number 1

Revision Date 23.02.2022

Trade name: EpoThin 2 Resin
(Contd. of page 2)

In case of contact with skin wash off immediately with soap and water.
Consult a doctor if skin irritation persists.

· **After eye contact:**

Rinse opened eye under running water. If symptoms persist, consult a doctor.
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.

If eye irritation persists: Get medical advice/attention.

· **After swallowing:**

Seek medical advice immediately.
Do not induce vomiting.
Rinse out mouth and give plenty of water to drink.

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

Allergic reactions.
Irritant effects.

· **4.3 Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

Carbon dioxide.
Water spray jet.
Dry powder.
Foam.

· **Suitable extinguishing agents:** Full water jet.

· **5.2 Special hazards arising from the substance or mixture**

Unknown risk of formation of toxic pyrolysis products.
Nitrogen oxides (NO_x).
Carbon monoxide (CO).

· **5.3 Advice for firefighters**

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

· **Protective equipment:** Use self-contained breathing apparatus.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

High risk of slipping due to leakage/spillage of product.
Use personal protective equipment.

· **6.2 Environmental precautions:**

Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not discharge into the drains/surface waters/groundwater.

· **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

Pick up with absorbent material (e.g. sand, sawdust, universal absorbent, diatomaceous earth).

Dispose of absorbed material in accordance within the regulations.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Date Printed 23.02.2022

Version number 1

Revision Date 23.02.2022

Trade name: EpoThin 2 Resin

See Section 13 for disposal information.

(Contd. of page 3)

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
 Ensure good ventilation/exhaustion at the workplace.
 Prevent formation of aerosols.
 The normal safety precautions for handling chemicals must be observed.
 Do not eat, drink, smoke or take drugs at work.
 After worktime and before work breaks the affected skin areas must be thoroughly cleaned.
 Take off contaminated clothing and wash before reuse.
 Use barrier skin cream.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
 Keep container tightly closed.
 Keep in a cool place. Store in a dry place.
 Keep container in a well-ventilated place.
- **Information about storage in one common storage facility:**
 Do not store together with oxidising agents.
 Do not store together with food and animal food/diet.
- **Further information about storage conditions:**
 Keep container tightly sealed.
 Keep only in original container.
 Prevent penetration into the ground.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:**
 Ensure adequate ventilation on workstation.
- **Ingredients with limit values that require monitoring at the workplace:**
 The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 Keep away from foodstuffs, beverages and feed.
 Remove all soiled and contaminated clothing
 Wash hands before breaks and at the end of work.
 Avoid contact with the eyes and skin.
- **Respiratory protection:**
 In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
 Not required under normal conditions.
- **Protection of hands:**



Protective gloves

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Date Printed 23.02.2022

Version number 1

Revision Date 23.02.2022

Trade name: EpoThin 2 Resin
(Contd. of page 4)

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Butyl rubber, >120 min (EN 374).

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

Safety glasses.

· **Body protection:** Light protective clothing of plastic material.

· **Limitation and supervision of exposure into the environment**

Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Liquid

Colour: Clear

· **Odour:** Characteristic

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: Undetermined.

· **Flash point:** 93 °C

· **Flammability (solid, gas):** Not applicable.

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

· **Oxidising properties** no

· **Vapour pressure:** Not determined.

· **Density at 20 °C:** 1.1 g/cm³

· **Relative density** Not determined.

· **Vapour density** Not determined.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Date Printed 23.02.2022

Version number 1

Revision Date 23.02.2022

Trade name: EpoThin 2 Resin

(Contd. of page 5)

· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity: Dynamic: Kinematic:	Not determined. Not determined.
· Solvent content: Organic solvents: VOC (EC)	2.0 % 2.00 %
Solids content:	0.0 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No dangerous reactions known if used as directed.
- **10.2 Chemical stability** Stable under normal ambient conditions (ambient temperature).
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
Reactions with oxidising agents.
Reactions with strong acids and alkalies.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** Oxidising agents.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

25068-38-6 Reaction product: bisphenol-A-(epichlorhydrin) Epoxy resin (number average molecular weight ≤ 700)

Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	20,000 mg/kg (rabbit)

2461-15-6 [[(2-ethylhexyl)oxy]methyl]oxirane

Oral	LD50	7,800 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)

- **Specific symptoms in biological assay:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
- **Other information (about experimental toxicology):**
Toxicological data of complete product are not available.
The product was classified on the basis of the calculation procedure of the preparation directive.
The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Date Printed 23.02.2022

Version number 1

Revision Date 23.02.2022

Trade name: EpoThin 2 Resin

(Contd. of page 6)

- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 Also poisonous for fish and plankton in water bodies.
 Toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects**
 The product contains organically bound halogen in accordance with the formulation. The product was classified on the basis of the calculation procedure of the preparation directive. Ecological data of complete product are not available. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
 Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.
- **Recommendation**
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.
 Disposal in an incineration plant in accordance with the regulations of the local authorities. Coordinate disposal with the authorities if necessary.
- **Waste disposal key:** Waste no. (recommended) 080409*
- **Recommendation:**
 Packaging that cannot be cleaned should be disposed of as for product. Uncontaminated packaging may be taken for recycling.
 Waste no. (recommended) 150110*, 150102, 150104

GB

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Date Printed 23.02.2022


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Revision Date 23.02.2022

 Trade name: **EpoThin 2 Resin**

(Contd. of page 7)

SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	UN3082
· 14.2 UN proper shipping name · ADR · IMDG · IATA	3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
· 14.3 Transport hazard class(es) · ADR, IMDG, IATA <div style="text-align: center;">  </div> · Class · Label	9 Miscellaneous dangerous substances and articles. 9
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards: · Marine pollutant: · Special marking (ADR): · Special marking (IATA):	Yes Symbol (fish and tree) Symbol (fish and tree) Symbol (fish and tree)
· 14.6 Special precautions for user · EMS Number: · Stowage Category	Warning: Miscellaneous dangerous substances and articles. F-A,S-F A
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ) · Transport category · Tunnel restriction code	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml 3 E
· UN "Model Regulation":	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

GB

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Date Printed 23.02.2022

Version number 1

Revision Date 23.02.2022

Trade name: EpoThin 2 Resin

(Contd. of page 8)

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category E2** Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge and should assist the user with the safe handling of this material when properly applied. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 H335 May cause respiratory irritation.
 H411 Toxic to aquatic life with long lasting effects.
- **Department issuing SDS:** Sales department
- **Contact:**
 sales@agarscientific.com
 Tel: +44 (0) 1279 813 519
- **Abbreviations and acronyms:**
 ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 VOC: Volatile Organic Compounds (USA, EU)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 Skin Sens. 1: Skin sensitisation – Category 1
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2