

Laminating Epoxy Resin



Safety Data Sheet

According to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Material Name: Laminating Epoxy Resin
Product code: PEC_R3

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

1.2.1. Relevant identified uses

Use of the substance/mixture: Liquid thermoset resin for composite manufacture

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Professional Epoxy Coatings
Old Cooperage Yard
Gatebeck
KENDAL
LA8 0HW
UNITED KINGDOM

Telephone: +44 (0)1539 267 171
Email: info@pecepoxy.co.uk

1.4. Emergency telephone number

+44 (0)1539 267 171 – English speaking (UK office hours)

2. Hazards identification

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008, 29CFR1910/1200 and GHS Rev. 3 and amendments.

Skin irritation, category 2.
Acute Toxicity (skin), category 4.
Acute Toxicity (inhalation), category 4.
Eye irritation, category 2.
Skin sensitisation, category 1.
Chronic aquatic hazard, category 2.

Hazard-determining components of labelling:

Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)
Oxirane, mono[(C12-14-alkyloxy)methyl] derivs
1,4-bis(2,3 epoxypropoxy)butane
Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate
Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate

2.2. Label elements

Hazard pictograms:



Signal word: Warning

Hazard statements:

H312+H332 Harmful in contact with skin or if inhaled.
 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:

P264 Wash skin thoroughly after handling.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/clothing and eye/face protection.
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

None known

Information concerning particular hazards for humans and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to EC regulation No. 1272/2008, 29CFR1910/1200 and GHS Rev. 3 and amendments, and extended by company and literature data. The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

3. Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Identification	Name	Classification according to Regulation (EC) No. 1278/2008 (CLP)	Weight %
CAS number: 25068-38-6	Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)	Skin Sens. 1; H317 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Aquatic Chronic 2; H411	80-90
CAS number: 68609-97-2	Oxirane, mono[(C12-14-alkyloxy)methyl] derivs	Skin Sens. 1; H317 Skin Irrit. 2; H315	7-10
CAS number: 2425-79-8	1,4-bis(2,3 epoxypropoxy)butane	Skin Sens. 1; H317 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Dermal Acute Tox. 4; H312 Inhal Acute Tox. 4; H332	7-10
CAS number: 41556-26-7	Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	0.5-1

		Skin Sens. 1; H317	
CAS number: 82919-37-7	Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 Skin Sens. 1; H317	0.5-1

Additional information: None

Full Text of H and EUH statements: See section 16

4. First aid measures

4.1. Description of first aid measures

General information: None.

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position.

Maintain an unobstructed airway.

Get medical advice/attention if you feel unwell.

After skin contact:

Wash affected area with soap and water.

Seek medical attention if symptoms develop or persist.

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes.

Remove contact lens(es) if able to do so during rinsing.

Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth and then drink plenty of water.

Do not induce vomiting.

Get medical advice/attention if you feel unwell.

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

None

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

No additional information.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Spray water, Carbon Dioxide (CO₂).

Unsuitable extinguishing media: Not determined or not applicable.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapours.

5.3. Advice for firefighters

Use suitable breathing apparatus.

Move undamaged containers away from immediate hazard area if it can be done safely.

Collect contaminated fire extinguishing water separately – this must not be discharged into drains.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Ensure air handling systems are operational.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.
Wear protective eye wear, gloves and clothing.

6.2. Environmental precautions

Should not be released into the environment.
Prevent from reaching drains, sewer or waterway.

6.3. Methods and material for containment and cleaning up

Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay), acid binders, universal binders).
Dispose of contents / container in accordance with local regulations.

6.4. Reference to other sections

None

7. Handling and storage

7.1. Precautions for safe handling

Do not eat, drink, smoke or use personal products when handling chemical substances.
Avoid breathing mist or vapour.
Use only with adequate ventilation.
Avoid contact with skin and eyes.
Remove contaminated clothing before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, well-ventilated area.
Store away from foodstuffs.

7.3. Specific end use(s)

No additional information.

8. Exposure controls/personal protection



8.1. Control parameters

Occupational Exposure limit values:

Not determined or not applicable.

Biological limit value:

No biological exposure limits noted for the ingredient(s).

Derived No Effect Level (DNEL):

Identification	Exposure Type	Professional Worker	Consumer
CAS: 41556-26-7	Dermal	2.5 mg/kg	1.25 mg/kg
	Inhalation	2.35 mg/m ³	0.58 mg/m ³
CAS: 82919-37-7	Dermal	2.5 mg/kg	1.25 mg/kg
	Inhalation	2.35 mg/m ³	0.58 mg/m ³
	Oral		1.25 mg/kg

Predicted No Effect Concentration (PNEC):

Identification	Target	Value
CAS: 41556-26-7	Fresh water	0.0022 mg/l
	Marine water	0.00022 mg/l
	Fresh water sediments	1.05 mg/kg
	Marine water sediments	0.11 mg/kg
	Plant wastewater treatment	1 mg/l
	Soil (agricultural)	0.21 mg/kg
	Intermittent / Sporadic	0.009 mg/l
CAS: 82919-37-7	Fresh water	0.0022 mg/l
	Marine water	0.00022 mg/l
	Fresh water sediments	1.05 mg/kg
	Marine water sediments	0.11 mg/kg
	Plant wastewater treatment	1 mg/l
	Soil (agricultural)	0.21 mg/kg
	Intermittent / Sporadic	0.009 mg/l

Information on monitoring procedures:

Not determined or not applicable.

8.2. Exposure controls**Appropriate engineering controls:**

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapour and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment**Eye and face protection:**

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.
Select glove material based on rates of diffusion and degradation.

Respiratory protection:

When necessary, use NIOSH-approved breathing equipment.

General hygienic measures:

Wash hands before breaks and at the end of work.
Avoid contact with skin, eyes and clothing.
Perform routine housekeeping.
Wash contaminated clothing before reusing.

Environmental exposure controls:

Select controls based on a risk assessment of local conditions.
See section 6 for information on accidental release measures.

9. Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Appearance (physical state, colour)	Clear/pale violet liquid	Explosion limit lower	No data available
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Odour	Slight
Odour threshold	No data available
pH	No data available
Melting/Freezing point	No data available
Boiling point/range	294°C (561°F)
Flash point (closed cup)	> 60°C (> 140°F)
Evaporation rate	No data available
Flammability (solid, gaseous)	No data available
Density	No data available.

Explosion limit upper	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	1.12
Solubilities	Negligible.
Partition coefficient (n-octanol/water)	No data available
Auto/Self-ignition temperature	260°C (500°F)
Decomposition temperature	No data available
Dynamic viscosity	2-3 Pa·s @ 25°C
Kinematic viscosity	No data available

10. Stability and reactivity

10.1. Reactivity

Does not react under normal conditions of use and storage.

10.2. Chemical stability

Stable under normal conditions of use and storage.

10.3. Possibility of hazardous reactions

None under normal conditions of use and storage.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

None known.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Assessment: Acute Tox. 4, H312; Acute Tox. 4, H332.

Product data:

ATEmix (Dermal)	12222.2 mg/kg
ATEmix (Inhalation)	16.6667 mg/l

Substance data:

Identification	Route	Result
CAS: 68609-97-2	Oral	LD50 – Rat – 17100 mg/kg
CAS: 41556-26-7	Oral	LD50 – Rat – 2615 mg/kg

Skin corrosion/irritation

Assessment: Skin Irrit. 2, H315.

Product data: No data available.

Substance data: No data available.

Serious eye damage/irritation

Assessment: Eye Irrit. 2, H319.
 Product data: No data available.
 Substance data: No data available.

Respiratory or skin sensitisation

Assessment: Skin Sens. 1, H317.
 Product data: No data available.
 Substance data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.
 Product data: No data available.
 Substance data: No data available.

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.
 Product data: No data available.
 Substance data: No data available.

Reproductive Toxicity

Assessment: Based on available data, the classification criteria are not met.
 Product data: No data available.
 Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.
 Product data: No data available.
 Substance data: No data available.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.
 Product data: No data available.
 Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.
 Product data: No data available.
 Substance data: No data available.

12. Ecological information**12.1. Toxicity**

Assessment: Aquatic Chronic 2, H411.
 Product data: No data available.
 Substance data:

Identification	Result
CAS: 41556-26-7	LC50 – Fish – 0.97 mg/l – 96 h
	EC50 – Daphnia – 20 mg/l – 24 h
CAS: 82919-37-7	LC50 – Fish – 0.1-1 mg/l – 96 h
	EC50 – Daphnia – 0.1-1 mg/l
	EC50 – Algae – 0.1-1 mg/l

12.2. Persistence and degradability

Product data: No data available.
 Substance data: No data available.

12.3. Bioaccumulative potential

Product data: No data available.

Substance data: No data available.

12.4. Mobility in soil

Product data: No data available.

Substance data: No data available.

12.5. Results of PBT and vPvB assessment

PBT assessment: This product does not contain any substances that are assessed to be a PBT.

vPvB assessment: This product does not contain any substances that are assessed to be a vPvB.



12.6. Other adverse effects:

No data available.



13. Disposal considerations**13.1. Waste treatment methods****Relevant information:**

It is the responsibility of the waste generator to properly characterise all waste materials according to applicable regulatory entities. (US 40CFR262.11).

14. Transport information**United States Transportation of dangerous goods (49 CFR DOT)**



14.1. UN number	3082
14.2. UN proper shipping name	Environmentally Hazardous Substance, Liquid, (Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin)
14.3. UN transport hazard class(es)	9  
14.4. Packing group	III
14.5. Environmental hazards	Marine Pollutant
14.6. Special precautions for user	The DOT regulations above apply to Non-Bulk shipments only. Product is not regulated for air, rail and motor vehicle packages less than 119 gal (450 L). Product is regulated by vessel. 49 CFR / Highway, Rail & US Air Transport: Not Regulated per 49 CFR Regulation 171.4 Paragraph C and 172.101 Appendix B.

International Carriage of Dangerous Goods by Road/Rail (ADR/RID)



14.1. UN number	3082
14.2. UN proper shipping name	Environmentally Hazardous Substance, Liquid, (Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin)
14.3. UN transport hazard class(es)	9  
14.4. Packing group	III
14.5. Environmental hazards	Marine Pollutant
14.6. Special precautions for user	None
Classification code	90

Transport category	3
Tunnel restriction code	E
Excepted quantities	30mL inner pckg; 1L outer pckg
Limited quantity	5L



International Carriage of Dangerous Goods by Inland Waterways (ADN)

14.1. UN number	3082
14.2. UN proper shipping name	Environmentally Hazardous Substance, Liquid, (Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin)
14.3. UN transport hazard class(es)	9  
14.4. Packing group	III
14.5. Environmental hazards	Marine Pollutant
14.6. Special precautions for user	None
Excepted quantities	30mL inner pckg; 1L outer pckg
Limited quantity	5L

International Maritime Dangerous Goods (IMDG)

14.1. UN number	3082
14.2. UN proper shipping name	Environmentally Hazardous Substance, Liquid, (Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin)
14.3. UN transport hazard class(es)	9  
14.4. Packing group	III
14.5. Environmental hazards	Marine Pollutant
14.6. Special precautions for user	None
EmS number	F-A, S-F
Excepted quantities	30mL inner pckg; 1L outer pckg
Limited quantity	5L

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

14.1. UN number	3082
14.2. UN proper shipping name	Environmentally Hazardous Substance, Liquid, (Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin)
14.3. UN transport hazard class(es)	9  
14.4. Packing group	III
14.5. Environmental hazards	Marine Pollutant
14.6. Special precautions for user	None
Excepted quantities	30mL inner pckg; 1L outer pckg
Limited quantity	30 kg G

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Bulk Name	None
Ship type	None
Pollution category	None

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

Dir. 98/24/EC (Risks related to chemical agents at work)
 Dir. 2000/39/EC (Occupational exposure limit values)
 Regulation (EC) n. 1907/2006 (REACH)
 Regulation (EC) n. 1272/2008 (CLP)
 Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
 Regulation (EU) n. 2015/830
 Regulation (EU) n. 286/2011 (ATP 2 CLP)
 Regulation (EU) n. 618/2012 (ATP 3 CLP)
 Regulation (EU) n. 487/2013 (ATP 4 CLP)
 Regulation (EU) n. 944/2013 (ATP 5 CLP)
 Regulation (EU) n. 605/2014 (ATP 6 CLP)
 Regulation (EU) n. 2015/1221 (ATP 7 CLP)
 Regulation (EU) n. 2016/918 (ATP 8 CLP)
 Regulation (EU) n. 2016/1179 (ATP 9 CLP)
 Regulation (EU) n. 2017/776 (ATP 10 CLP)

Restrictions according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: Restriction 3

Where applicable, refer to the following regulatory provisions:

Directive 2012/18/EU (Seveso III)
 Regulation (EC) nr 648/2004 (detergents).
 Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1
 Product belongs to category: E2

15.2. Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

16. Other information

Indication of changes: Not applicable.

Abbreviations and Acronyms: None

Summary of classification and hazard statements in section 3:

	Classification	Hazard Statement
Dermal Acute Tox. 4; H312	Acute toxicity (dermal), category 4	Harmful in contact with skin
Skin Irrit. 2; H315	Skin irritation, category 2	Causes skin irritation
Skin Sens. 1; H317	Skin sensitisation, category 1	May cause an allergic skin reaction
Eye Irrit. 2; H319	Eye irritation, category 2A	Causes serious eye irritation
Inhal. Acute Tox. 4; H332	Acute toxicity (inhalation), category 4	Harmful if inhaled
Aquatic Acute 1; H400	Acute aquatic hazard, category 1	Very toxic to aquatic life
Aquatic Chronic 1; H410	Chronic aquatic hazard, category 1	Very toxic to aquatic life with long lasting effects
Aquatic Chronic 2; H411	Chronic aquatic hazard, category 2	Toxic to aquatic life with long lasting effects

The information and recommendations contained herein are based upon data believed to be correct. However, as much of the information has been received from sources outside our company, we cannot guarantee its accuracy or completeness. Health and safety precautions contained within this data sheet may not be adequate for all individuals and /or situations. It is the user's obligation to evaluate and use this data in order to comply with all applicable laws and regulations. Additionally, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.