

# Laminating Epoxy Activator



**Professional  
EPOXY COATINGS**

## 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 Activator  
Product code: PEC\_A4

#### 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 curing agent for epoxy resin

##### 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 1865 407 333 – English speaking (24 hours, 7 days)

### 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.

Serious eye damage, category 1.  
Skin corrosion, category 1B.  
Skin sensitisation, category 1.  
Respiratory sensitisation, category 1.  
Acute toxicity (oral), category 4.  
Specific target organ toxicity – repeated exposure, category 1.  
Reproductive toxicity, category 2.

#### 2.2. Label elements

Hazard pictograms:



Signal word: Danger

**Hazard statements:**

H318 Causes serious eye damage.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H302 Harmful if swallowed.

H372 Causes damage to organs through prolonged or repeated exposure.

H361 Suspected of damaging fertility or the unborn child.

**Precautionary statements:**

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

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash skin thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of the workplace.

P285 In case of inadequate ventilation wear respiratory protection.

P270 Do not eat, drink or smoke when using this product.

P201 Obtain special instructions before use.

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

P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician.

P321 Specific treatment (see supplemental first aid instructions on this label).

P363 Wash contaminated clothing before reuse.

P301+P330+P331+P310 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTRE or doctor/physician.

P303+P361+P353+P310 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTRE or doctor/physician.

P304+P340+P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTRE or doctor/physician.

P333+P313 If skin irritation or a rash occurs: Get medical advice/attention.

P273 Avoid release to the environment.

P405 Store locked up.

P501 Dispose of contents and container as instructed in Section 13.

**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	Weight %
CAS number: 100-51-6	Benzyl Alcohol	0.1-8
CAS number: 9046-10-0	Propylene glycol diamine, 2-amino-, diether with Propylene	28-30
CAS number: 140-31-8	Aminoethylpiperazine	<1
CAS number: 27344-41-8	Benzenesulfonic acid, 2,2'-([1,1'-biphenyl]-4,4'-diyldi-2,1-ethenediyl)bis-, sodium salt (1:2)	<0.01
CAS number: 25620-58-0	Trimethylhexamethylenediamine	20-25

CAS number: 2855-13-2	Isophorone diamine	<8
CAS number: 110-85-0	Piperazine	<0.1-2
CAS number: 68609-08-5	Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-, reaction products with bisphenol A diglycidyl ether homopolymer	2-15
CAS number: 111850-23-8	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, reaction products with 2,2,4(or 2,4,4)-trimethyl-1,6-hexanediamine	10-14
CAS number: 103-50-4	Dibenzyl ether	<0.1
CAS number: 1761-71-3	4,4'-Methylenebis(cyclohexylamine)	14-16
CAS number: 17455-13-9	1,4,7,10,13,16-Hexaoxacyclooctadecane	<0.01

Additional information: None

## 4. First aid measures

### 4.1. Description of first aid measures

General information: None.

#### After inhalation:

Move exposed individual to fresh air.  
Loosen clothing as necessary and position individual in a comfortable position.  
Maintain an unobstructed airway.  
Immediately call a POISON CONTROL CENTRE or seek medical attention.

#### After skin contact:

Immediately remove all contaminated clothing.  
Wash affected area with soap and water.  
Immediately call a POISON CONTROL CENTRE or seek medical attention.  
If symptoms develop or persist, seek medical attention.

#### 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.  
Immediately call a POISON CONTROL CENTRE or seek medical attention.

#### After swallowing:

Immediately call a POISON CONTROL CENTRE or seek medical attention.  
Do not induce vomiting.  
Rinse mouth and then drink plenty of water.

### 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: Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.  
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

#### Protective equipment:

Wear protective eye wear, gloves and clothing,  
Refer to Section 8.

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit.

#### Special precautions:

Heating causes a rise in pressure, risk of bursting and combustion.

Shut off sources of ignition.

Carbon monoxide and carbon dioxide may form upon combustion.

## 6. Accidental release measures

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

Ensure adequate ventilation.

Ensure air handling systems are operational.

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.

### 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

100-51-6, Benzyl Alcohol, WEEL TWA 10.0 ppm.

110-85-0, Piperazine, ACGIH 8-hour exposure limit (TLV-TWA) 0.03 ppm.

## 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.

### Respiratory protection:

When necessary, use NIOSH-approved breathing equipment.

### Protection of skin:

Select glove material impermeable and resistant to the substance.

### Eye protection:

Safety goggles or glasses, or appropriate eye protection.

### 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 reuse.

## 9. Physical and chemical properties

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

Appearance (physical state, colour)	Clear to light yellow liquid
Odour	Ammoniacal
Odour threshold	No data available
pH	No data available
Melting/Freezing point	No data available
Boiling point/range	No data available
Flash point (closed cup)	> 100°C
Evaporation rate	No data available
Flammability (solid, gaseous)	No data available
Explosion limit lower	No data available
Explosion limit upper	No data available

Vapour pressure	No data available
Vapour density	No data available
Density (typical at 25°C)	920 - 1000 kg/m <sup>3</sup>
Relative density	1.0
Solubilities	No data available
Partition coefficient (n-octanol/water)	No data available
Auto/Self-ignition temperature	No data available
Decomposition temperature	No data available
Dynamic viscosity (at 25°C)	0.05 - 0.2 Pa.s
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

##### Oral:

Isophorone diamine: LD50: rat male 1,030 mg/kg.  
Benzyl Alcohol: LD50 Rat 1,230 mg/kg.  
1,4,7,10,13,16-Hexaoxacyclooctadecane: LD50 Guinea pig 59 mg/kg.  
Aminoethylpiperazine: LD50 Chicken 1,500 mg/kg.  
4,4'-Methylenebis(cyclohexylamine): LD50 Rat 380 mg/kg.

##### Inhalation:

Benzyl Alcohol: LD50 Rat >4,178 mg/m<sup>3</sup>.

#### Skin corrosion/irritation

Propylene glycol diamine, 2-amino-, diether with Propylene: Corrosive to the skin.  
Isophorone diamine: Corrosive to the skin.  
Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-, reaction products with bisphenol A diglycidyl ether homopolymer: Irritating to the skin.  
Aminoethylpiperazine: Corrosive to the skin.  
Piperazine: Causes skin damage.  
Trimethylhexamethylenediamine: Causes skin burns.  
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, reaction products with 2,2,4(or 2,4,4)-trimethyl-1,6-hexanediamine: Corrosive to the skin.  
4,4'-Methylenebis(cyclohexylamine): Corrosive to the skin.

#### Serious eye damage/irritation

Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-, reaction products with bisphenol A diglycidyl ether homopolymer: Irritating effect on the eyes.  
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, reaction products with 2,2,4(or 2,4,4)-trimethyl-1,6-hexanediamine: Corrosive effect on the eyes.  
4,4'-Methylenebis(cyclohexylamine): Corrosive effect on the eyes.  
Benzenesulfonic acid, 2,2'-([1,1'-biphenyl]-4,4'-diyldi-2,1-ethenediy)bis-, sodium salt (1:2): Irritating effect on the eyes.

#### Respiratory or skin sensitisation

Isophorone diamine: May cause sensitisation by skin contact.  
Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-, reaction products with bisphenol A diglycidyl ether homopolymer: May cause sensitisation by skin contact.  
Aminoethylpiperazine: May cause sensitisation by skin contact.  
Piperazine: Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.  
Trimethylhexamethylenediamine: May cause sensitisation by skin contact.  
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, reaction products with 2,2,4(or 2,4,4)-trimethyl-1,6-hexanediamine: May cause sensitisation by skin contact.  
4,4'-Methylenebis(cyclohexylamine): May cause sensitisation by skin contact.

#### Carcinogenicity

IARC (International Agency for Research on Cancer): None of the ingredients are listed.  
NTP (National Toxicology Program): None of the ingredients are listed.

#### Germ cell mutagenicity

No additional information.

#### Reproductive Toxicity

Piperazine: Suspected of damaging fertility or the unborn child.

#### Specific Target Organ Toxicity (single exposure)

No additional information.

**Specific Target Organ Toxicity (repeated exposure)**

4,4'-Methylenebis(cyclohexylamine): Ingestion – May cause damage to organs through prolonged or repeated exposure. Liver, musculo-skeletal system.

**Aspiration toxicity**

No information available.

**Additional toxicological information**

No additional information.

## 12. Ecological information

**12.1. Toxicity**

Name	Result
Isophorone diamine	LC50 – Daphnia magna (Water flea) – 17.4 mg/L – 48 h.
4,4'-Methylenebis(cyclohexylamine)	EC50 – Daphnia magna (Water flea) – 7.07 mg/L – 48 h.

**12.2. Persistence and degradability**

No additional information.

**12.3. Bioaccumulative potential**

No additional information.

**12.4. Mobility in soil**

No additional information.

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

PBT assessment: No additional information.

vPvB assessment: No additional information.

**12.6. Other adverse effects:**

No additional information.



## 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	2735
14.2. UN proper shipping name	Polyamines, liquid, corrosive, n.o.s. (Isophorone diamine)
14.3. UN transport hazard class(es)	8  
14.4. Packing group	III
14.5. Environmental hazards	Marine Pollutant
14.6. Special precautions for user	None



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

14.1. UN number	2735
14.2. UN proper shipping name	Polyamines, liquid, corrosive, n.o.s. (Isophorone diamine)
14.3. UN transport hazard class(es)	8  
14.4. Packing group	III
14.5. Environmental hazards	Marine Pollutant
14.6. Special precautions for user	None
Classification code	80
Transport category	3
Tunnel restriction code	E
Excepted quantities	30mL inner pckg; 1L outer pckg
Limited quantity	5L

**International Maritime Dangerous Goods (IMDG)**

14.1. UN number	2735
14.2. UN proper shipping name	Polyamines, liquid, corrosive, n.o.s. (Isophorone diamine)
14.3. UN transport hazard class(es)	8  
14.4. Packing group	III
14.5. Environmental hazards	Marine Pollutant
14.6. Special precautions for user	None
EmS number	F-A, S-B
Excepted quantities	30mL inner pckg; 1L outer pckg
Limited quantity	5L

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

14.1. UN number	2735
14.2. UN proper shipping name	Polyamines, liquid, corrosive, n.o.s. (Isophorone diamine)
14.3. UN transport hazard class(es)	8  
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	1L

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

Not applicable



## 15. Regulatory information

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

#### European Union

REACH Article 57 (SVHC): None of the ingredients are listed.

## 16. Other information

Abbreviations and Acronyms: None

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.