

## SAFETY DATA SHEET

### THERMALLY CONDUCTIVE EPOXY HARDENER

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

##### 1.1. Product identifier

**Product name** THERMALLY CONDUCTIVE EPOXY HARDENER  
**Product No.** EER2074B, EER2074BB5K, EER2074K1K, EER2074K5K, EER2074K10K, EER2074K25K, EER2074RP250G, EER2074RP250GE, EER2074RP250GF, EER2074RP1000G, ZE

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

**Identified uses** Resin.  
**Uses advised against** At this moment in time we do not have information on use restrictions. They will be included in this safety data sheet when available

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

**Supplier** ELECTROLUBE. A division of HK WENTWORTH LTD  
 ASHBY PARK, COALFIELD WAY,  
 ASHBY DE LA ZOUCH, LEICESTERSHIRE  
 LE65 1JR  
 UNITED KINGDOM  
 +44 (0)1530 419600  
 +44 (0)1530 416640  
 info@hkw.co.uk

##### 1.4. Emergency telephone number

+44 (0)1530 419600 between 8.30am - 5.00pm GMT Mon – Fri

#### SECTION 2: HAZARDS IDENTIFICATION

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

###### **Classification (EC 1272/2008)**

Physical and Chemical Hazards	Not classified.
Human health	Acute Tox. 4 - H302; Acute Tox. 4 - H312; Skin Corr. 1B - H314; Skin Sens. 1 - H317; Repr. 2 - H361fd
Environment	Aquatic Chronic 2 - H411

**Classification (1999/45/EEC)** Xn; R21/22. Repr. Cat. 3; R62, R63. C; R34. R43. N; R51/53.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

###### **Environment**

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Use appropriate containment to avoid environmental contamination. Avoid release to the environment. Refer to special instructions/safety data sheets. Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point. Dispose of waste and residues in accordance with local authority requirements.

##### 2.2. Label elements

**Contains** ISOPHORONEDIAMINE  
 NONYLPHENOL

**Label In Accordance With (EC) No. 1272/2008**

# THERMALLY CONDUCTIVE EPOXY HARDENER



**Signal Word** Danger

**Hazard Statements**

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.
H361fd	Suspected of damaging fertility or the unborn child.
H411	Toxic to aquatic life with long lasting effects.

**Precautionary Statements**

P273	Avoid release to the environment.
P280	Wear protective gloves, eye and face protection.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+313	IF exposed or concerned: Get medical advice/attention.
P310	Immediately call a POISON CENTER or doctor/physician.

**Supplementary Precautionary Statements**

P261	Avoid breathing vapour/spray.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.

**2.3. Other hazards**

Not Classified as PBT/vPvB by current EU criteria.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**3.2. Mixtures**

<b>ISOPHORONEDIAMINE</b>	<b>80-100%</b>
CAS-No.: 2855-13-2	EC No.: 220-666-8
Classification (EC 1272/2008) Acute Tox. 4 - H302 Acute Tox. 4 - H312 Skin Corr. 1B - H314 Skin Sens. 1 - H317 Aquatic Chronic 3 - H412	Classification (67/548/EEC) C;R34 Xn;R21/22 R43 R52/53
<b>NONYLPHENOL</b>	<b>5-10%</b>
CAS-No.: 25154-52-3	EC No.: 246-672-0
Classification (EC 1272/2008) Acute Tox. 4 - H302 Skin Corr. 1B - H314 Repr. 2 - H361fd Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	Classification (67/548/EEC) Repr. Cat. 3;R62,R63 C;R34 Xn;R22 N;R50/53

# THERMALLY CONDUCTIVE EPOXY HARDENER

<b>Salicylic acid</b>	<b>1-5%</b>
<b>CAS-No.: 69-72-7</b>	<b>EC No.: 200-712-3</b>
Classification (EC 1272/2008) Not classified.	Classification (67/548/EEC) Xn;R22. Xi;R36.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

## Composition Comments

Ingredients not listed are classified as non-hazardous or at a concentration below reportable levels.

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

#### Inhalation

Move the exposed person to fresh air at once. Get medical attention. Provide rest, warmth and fresh air.

#### Ingestion

DO NOT INDUCE VOMITING! Rinse mouth thoroughly. Drink plenty of water. Get medical attention immediately!

#### Skin contact

Wash the skin immediately with soap and water. Get medical attention promptly if symptoms occur after washing.

#### Eye contact

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Get medical attention immediately. Continue to rinse.

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

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

Treat Symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

#### Extinguishing media

Use fire-extinguishing media appropriate for surrounding materials. Fire can be extinguished using: Water spray. Foam. Alcohol resistant foam. Carbon dioxide (CO<sub>2</sub>).

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

#### Hazardous combustion products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

#### Unusual Fire & Explosion Hazards

No unusual fire or explosion hazards noted.

#### Specific hazards

Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Ammonia or amines. Nitrous gases (NO<sub>x</sub>).

### 5.3. Advice for firefighters

#### Special Fire Fighting Procedures

No specific fire fighting procedure given. Avoid breathing fire vapours.

#### Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Wear protective clothing as described in Section 8 of this safety data sheet.

### 6.2. Environmental precautions

Do not discharge into drains, water courses or onto the ground.

# THERMALLY CONDUCTIVE EPOXY HARDENER

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

DO NOT touch spilled material. Absorb in vermiculite, dry sand or earth and place into containers. Flush with plenty of water to clean spillage area. Do not contaminate water sources or sewer. Clean-up personnel should use respiratory and/or liquid contact protection.

## **6.4. Reference to other sections**

Wear protective clothing as described in Section 8 of this safety data sheet. See section 11 for additional information on health hazards. The product contains a substance which is hazardous to aquatic organisms and which may cause long term adverse effects in the aquatic environment. See section 12 as well. For waste disposal, see section 13.

## **SECTION 7: HANDLING AND STORAGE**

### **7.1. Precautions for safe handling**

Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level.

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

Store in tightly closed original container in a dry, cool and well-ventilated place. Keep in original container.

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

The identified uses for this product are detailed in Section 1.2.

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **8.1. Control parameters**

#### **Ingredient Comments**

No exposure limits noted for ingredient(s).

### **8.2. Exposure controls**

#### **Protective equipment**



#### **Process conditions**

Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station.

#### **Engineering measures**

Provide sufficient ventilation during operations which cause vapour formation. Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

#### **Respiratory equipment**

Respiratory protection must be used if air contamination exceeds acceptable level. It is recommended to use respiratory equipment with combination filter, type A2/P2. EN14387 When spraying use suitable air-supplied respirator.

#### **Hand protection**

Use protective gloves made of: Rubber, neoprene or PVC. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Gloves should conform to EN374

#### **Eye protection**

Wear approved chemical safety goggles where eye exposure is reasonably probable. EN166

#### **Other Protection**

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

#### **Hygiene measures**

DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Wash promptly with soap & water if skin becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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

#### **Appearance**

Liquid

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Colour	Colourless.
Solubility	Miscible with water
Initial boiling point and boiling range (°C)	247 (476.6 F)
Melting point (°C)	10 (50 F)
Relative density	0.930 @ 20 °C (68 F)
Viscosity	n/a mPas @ 20 °C (68 F)
Flash point (°C)	112 (233.6 F) CC (Closed cup).
Auto Ignition Temperature (°C)	380 (716 F)
Flammability Limit - Lower(%)	1.2

## 9.2. Other information

### SECTION 10: STABILITY AND REACTIVITY

#### 10.1. Reactivity

There are no known reactivity hazards associated with this product.

#### 10.2. Chemical stability

Stable under normal temperature conditions.

#### 10.3. Possibility of hazardous reactions

Not determined.

#### **Hazardous Polymerisation**

Will not polymerise.

#### 10.4. Conditions to avoid

Avoid heat, flames and other sources of ignition. Avoid contact with acids and oxidising substances.

#### 10.5. Incompatible materials

#### **Materials To Avoid**

Strong oxidising substances. Strong acids. Strong alkalis.

#### 10.6. Hazardous decomposition products

Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Ammonia or amines.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1. Information on toxicological effects

#### **Inhalation**

High concentrations of vapours may irritate respiratory system and lead to headache, fatigue, nausea and vomiting.

#### **Ingestion**

Harmful if swallowed.

#### **Skin contact**

Causes burns. May cause sensitisation by skin contact. Product has a defatting effect on skin. Prolonged contact may cause dryness of the skin. May cause allergic contact eczema.

#### **Eye contact**

Spray and vapour in the eyes may cause irritation and smarting. May cause chemical eye burns.

#### **Health Warnings**

This substance is corrosive. Causes burns.

#### Toxicological information on ingredients.

**THERMALLY CONDUCTIVE EPOXY HARDENER**  
**XYLENE (CAS: 1330-20-7)**

**Acute toxicity:**

**Acute Toxicity (Oral LD50)**

3523 mg/kg Rat

**Acute Toxicity (Dermal LD50)**

12126 mg/kg Rabbit

**Acute Toxicity (Inhalation LC50)**

2700 mg/l (vapours) Rabbit 4 hours

**Aspiration hazard:**

**Inhalation**

Harmful by inhalation. Upper respiratory irritation. Central nervous system depression. Vapours may cause drowsiness and dizziness.

**Ingestion**

Swallowing concentrated chemical may cause severe internal injury. May cause nausea, headache, dizziness and intoxication. Diarrhoea.

**Skin contact**

Harmful in contact with skin. Irritating to skin.

**Eye contact**

May cause severe irritation to eyes.

Central nervous system Liver Kidneys

**SECTION 12: ECOLOGICAL INFORMATION**

**Ecotoxicity**

Dangerous for the environment if discharged into watercourses.

**Ecological information on ingredients.**

**XYLENE (CAS: 1330-20-7)**

**Ecotoxicity**

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**12.1. Toxicity**

**Ecological information on ingredients.**

**XYLENE (CAS: 1330-20-7)**

**Acute Toxicity - Aquatic Invertebrates**

EC50 48 hours 1.0 mg/l Daphnia magna

**Acute Toxicity - Aquatic Plants**

IC50 72 hours 2.2 mg/l

**12.2. Persistence and degradability**

**Degradability**

There are no data on the degradability of this product.

**Ecological information on ingredients.**

**XYLENE (CAS: 1330-20-7)**

**Degradability**

The product is biodegradable.

**12.3. Bioaccumulative potential**

**Bioaccumulative potential**

No data available on bioaccumulation.

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## Ecological information on ingredients.

### XYLENE (CAS: 1330-20-7)

Bioaccumulation factor

BCF 25.9

Partition coefficient

3.2

## 12.4. Mobility in soil

### Ecological information on ingredients.

### XYLENE (CAS: 1330-20-7)

Mobility:

The product is insoluble in water.

## 12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

### Ecological information on ingredients.

### XYLENE (CAS: 1330-20-7)

Not Classified as PBT/vPvB by current EU criteria.

## 12.6. Other adverse effects

### Ecological information on ingredients.

### XYLENE (CAS: 1330-20-7)

Not determined.

## SECTION 13: DISPOSAL CONSIDERATIONS

### General information

Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

### 13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements.

## SECTION 14: TRANSPORT INFORMATION

### 14.1. UN number

UN No. (ADR/RID/ADN)	1760
UN No. (IMDG)	1760
UN No. (ICAO)	1760

### 14.2. UN proper shipping name

Proper Shipping Name CORROSIVE LIQUID, N.O.S. (ISOPHORONEDIAMINE, NONYLPHENOL)

### 14.3. Transport hazard class(es)

ADR/RID/ADN Class	8
ADR/RID/ADN Class	Class 8: Corrosive substances.
ADR Label No.	8
IMDG Class	8
ICAO Class/Division	8
Transport Labels	

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## 14.4. Packing group

ADR/RID/ADN Packing group	III
IMDG Packing group	III
ICAO Packing group	III

## 14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant



## 14.6. Special precautions for user

EMS	F-A, S-B
Emergency Action Code	2X
Hazard No. (ADR)	80
Tunnel Restriction Code	(E)

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

No information required.

## SECTION 15: REGULATORY INFORMATION

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

#### Statutory Instruments

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716). Control of Substances Hazardous to Health.

#### Guidance Notes

Workplace Exposure Limits EH40.

#### EU Legislation

Commission Directive 2000/39/EC of 8 June 2000 establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

#### Authorisations (Title VII Regulation 1907/2006)

No specific authorisations are noted for this product.

#### Restrictions (Title VIII Regulation 1907/2006)

No specific restrictions of use are noted for this product.

### 15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

# THERMALLY CONDUCTIVE EPOXY HARDENER

## SECTION 16: OTHER INFORMATION

<b>Issued By</b>	Helen O'Reilly
<b>Revision Date</b>	APRIL 2013
<b>Revision</b>	5
<b>SDS No.</b>	11483
<b>Risk Phrases In Full</b>	
R34	Causes burns.
R22	Harmful if swallowed.
R21/22	Harmful in contact with skin and if swallowed.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R36	Irritating to eyes.
R43	May cause sensitisation by skin contact.
R63	Possible risk of harm to the unborn child.
R62	Possible risk of impaired fertility.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>Hazard Statements In Full</b>	
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.
H361fd	Suspected of damaging fertility or the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

### Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.