

## SAFETY DATA SHEET THERMAL BONDING SYSTEM

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

#### 1.1. Product identifier

Product name THERMAL BONDING SYSTEM  
Product No. TBS-A, ETBS20S, ETBS01K, ZE

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

Identified uses Adhesive.  
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	Skin Irrit. 2 - H315; Eye Irrit. 2 - H319; Skin Sens. 1 - H317
Environment	Aquatic Acute 1 - H400; Aquatic Chronic 1 - H410

##### Classification (1999/45/EEC)

Xi; R36/38. R43. N; R50/53.

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

##### Environment

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. 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 EPOXY RESIN (Number average MW <= 700 )  
Polypropyleneglycol Diglycidylether

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



Signal Word

Warning

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## Hazard Statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H410	Very toxic to aquatic life with long lasting effects.

## Precautionary Statements

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. Get medical advice/attention.
P313	Get medical advice/attention.

## Supplementary Precautionary Statements

P261	Avoid breathing vapour/spray.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.

## Supplemental label information

EUH205	Contains epoxy constituents. May produce an allergic reaction.
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## 2.3. Other hazards

Not Classified as PBT/vPvB by current EU criteria.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixtures

<b>ZINC OXIDE</b>	<b>30-60%</b>
CAS-No.: 1314-13-2	EC No.: 215-222-5
Classification (EC 1272/2008) Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	Classification (67/548/EEC) N;R50/53
<b>EPOXY RESIN (Number average MW &lt;= 700 )</b>	<b>10-30%</b>
CAS-No.: 25068-38-6	EC No.: 500-033-5
Classification (EC 1272/2008) Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 Aquatic Chronic 2 - H411	Classification (67/548/EEC) R43 Xi;R36/38 N;R51/53
<b>Polypropyleneglycol Diglycidylether</b>	<b>10-30%</b>
CAS-No.: 9072-62-2	EC No.:
Classification (EC 1272/2008) Not classified.	Classification (67/548/EEC) Xi;R36/38. R43.

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.

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## Ingestion

DO NOT INDUCE VOMITING! Get medical attention immediately! Rinse nose, mouth and throat with water.

## Skin contact

Remove affected person from source of contamination. Rinse the skin immediately with lots of 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. Continue to rinse for at least 15 minutes and get medical attention.

### 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

Fire can be extinguished using: Foam. Alcohol resistant foam. Dry chemicals, sand, dolomite etc. DO NOT use water if avoidable.

### 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.

### 5.3. Advice for firefighters

#### 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.

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

Keep combustibles away from spilled material. Stop leak if possible without risk. DO NOT touch spilled material! Wear necessary protective equipment. Absorb in vermiculite, dry sand or earth and place into containers. Wash thoroughly after dealing with a spillage.

### 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. Keep away from heat, sparks and open flame.

### 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

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## 8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
ZINC OXIDE	WEL		5 mg/m3		10 mg/m3	

WEL = Workplace Exposure Limit.

## 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. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes contaminated.

When using do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

Appearance	Viscous Liquid
Colour	Blue.
Solubility	Insoluble in water
Relative density	n/a @ °c
Viscosity	N/A @ °c

### 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 available.

### Hazardous Polymerisation

Will not polymerise.

### 10.4. Conditions to avoid

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Avoid contact with acids and oxidising substances.

## **10.5. Incompatible materials**

### **Materials To Avoid**

Strong oxidising substances.

## **10.6. Hazardous decomposition products**

Fire creates: Vapours/gases/fumes of: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Nitrous gases (NO<sub>x</sub>).

## **SECTION 11: TOXICOLOGICAL INFORMATION**

### **11.1. Information on toxicological effects**

#### **Inhalation**

May cause irritation to the respiratory system.

#### **Ingestion**

May cause discomfort if swallowed. May cause stomach pain or vomiting.

#### **Skin contact**

Irritating to skin. May cause sensitisation by skin contact. May cause allergic contact eczema. Prolonged contact may cause dryness of the skin. Acts as a defatting agent on skin. May cause cracking of skin, and eczema.

#### **Eye contact**

Irritating to eyes. May cause chemical eye burns.

#### **Health Warnings**

Preparation contains an epoxy resin, which may cause sensitisation and development of allergy.

#### **Route of entry**

Inhalation. Ingestion. Skin and/or eye contact.

#### **Toxicological information on ingredients.**

#### **EPOXY RESIN (Number average MW <= 700 ) (CAS: 25068-38-6)**

Toxic Dose 1 - LD 50

>5000 mg/kg (oral rat)

Toxic Dose 2 - LD 50

>20000 mg/kg (oral rat)

## **SECTION 12: ECOLOGICAL INFORMATION**

### **Ecotoxicity**

Dangerous for the environment if discharged into watercourses.

### **12.1. Toxicity**

#### **Ecological information on ingredients.**

#### **EPOXY RESIN (Number average MW <= 700 ) (CAS: 25068-38-6)**

LC 50, 96 Hrs, Fish mg/l

3.1

EC 50, 48 Hrs, Daphnia, mg/l

1.4-1.7

IC 50, 72 Hrs, Algae, mg/l

220

### **12.2. Persistence and degradability**

#### **Degradability**

There are no data on the degradability of this product.

### **12.3. Bioaccumulative potential**

#### **Bioaccumulative potential**

No data available on bioaccumulation.

### **12.4. Mobility in soil**

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## 12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

## 12.6. Other adverse effects

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 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)	3082
UN No. (IMDG)	3082
UN No. (ICAO)	3082

#### 14.2. UN proper shipping name

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ZINC OXIDE, EPOXY RESIN (Number average MW <= 700 ))
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#### 14.3. Transport hazard class(es)

ADR/RID/ADN Class	9
ADR/RID/ADN Class	Class 9: Miscellaneous dangerous substances and articles.
ADR Label No.	9
IMDG Class	9
ICAO Class/Division	9
Transport Labels	



#### 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-F
Emergency Action Code	•3Z
Hazard No. (ADR)	90

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Tunnel Restriction Code (E)

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

No information required.

UDF Phrase 1 Class 9 Environmentally Hazardous substance

### 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.

### SECTION 16: OTHER INFORMATION

**Issued By** Helen O'Reilly

**Revision Date** APRIL 2013

**Revision** 6

**SDS No.** 11154

##### **Risk Phrases In Full**

R36/38 Irritating to eyes and skin.

R43 May cause sensitisation by skin contact.

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.

##### **Hazard Statements In Full**

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

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.

#### 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.