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 Mon – Fri

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (1999/45/EEC) Xi;R36/38. R43. N;R50/53.

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

Labelling

Irritant

Dangerous for the environment

Risk Phrases

R36/38	Irritating to eyes and skin.
R43	May cause sensitisation by skin contact.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases

S24/25	Avoid contact with skin and eyes.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37	Wear suitable gloves.

P5	Contains epoxy constituents. See information supplied by the manufacturer.

2.3. Other hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

ZINC OXIDE **30-60%**

CAS-No.: 1314-13-2 **EC No.: 215-222-5**

Classification (EC 1272/2008)	Classification (67/548/EEC)
Aquatic Acute 1 - H400	N;R50/53
Aquatic Chronic 1 - H410	

EPOXY RESIN (Number average MW <= 700) **10-30%**

CAS-No.: 25068-38-6 **EC No.: 500-033-5**

Classification (EC 1272/2008)	Classification (67/548/EEC)
Skin Irrit. 2 - H315	R43
Eye Irrit. 2 - H319	Xi;R36/38
Skin Sens. 1 - H317	N;R51/53
Aquatic Chronic 2 - H411	

Polypropyleneglycol Diglycidylether **10-30%**

CAS-No.: 9072-62-2 **EC No.:**

Classification (EC 1272/2008)	Classification (67/548/EEC)
Not classified.	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.

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

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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

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

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 (CO2). Nitrous gases (NOx).

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.

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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

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

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

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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))

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
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

Uk Regulatory References

Chemicals (Hazard Information & Packaging) Regulations.
The Control of Substances Hazardous to Health Regulations 2002 (S.I 2002 No. 2677) with amendments.

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Environmental Listing

Control of Pollution Act 1974. Control of Pollution (Special Waste Regulations) Act 1980. Rivers (Prevention of Pollution) Act 1961.

Approved Code Of Practice

Classification and Labelling of Substances and Preparations Dangerous for Supply. Safety Data Sheets for Substances and Preparations.

Guidance Notes

Workplace Exposure Limits EH40.

EU Legislation

Dangerous Substance Directive 67/548/EEC.
Dangerous Preparations Directive 1999/45/EC.
System of specific information relating to Dangerous Preparations. 2001/58/EC.
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.

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

SECTION 16: OTHER INFORMATION

Revision Comments

Revised in accordance with CHIP3 and EU Directives 1999/45/EC and 2001/58/EC

Issued By	Helen O'Reilly
Revision Date	NOVEMBER 2012
Revision	5
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.