ELECTROLUBE
THE SOLUTIONS PEOPLE

SAFETY DATA SHEET
Thermal Bonding System, Part A
According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

1. Identification

Product identifier

Product name Thermal Bonding System, Part A

Product number TBS-A, ETBS20S, ETBS01K, ZE

Recommended use of the chemical and restrictions on use

Application Resin.

Uses advised against No specific uses advised against are identified.

Details of the supplier of the safety data sheet

Supplier

ELECTROLUBE. A division of HK WENTWORTH LTD
HK WENTWORTH-AMERICA
PO Box 126257
Benbrook, Texas 76126
USA
info@hkw.us.com
+1 888-501-9203

Emergency telephone number

Emergency telephone +1 202 464 2554 (USA only)
+44 1235 239670

2. Hazard(s) identification

Classification of the substance or mixture

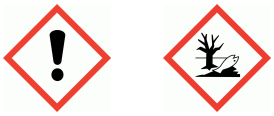
Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 Skin Sens. 1 - H317

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

Label elements

Pictogram



Signal word Warning

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.

Thermal Bonding System, Part A

Precautionary statements

P261 Avoid breathing vapor/ spray.
P264 Wash contaminated skin thoroughly after handling.
P272 Contaminated work clothing must not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302+P352 If on skin: Wash with plenty of water.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337+P313 If eye irritation persists: Get medical advice/ attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.
P501 Dispose of contents/ container in accordance with national regulations.

Contains

Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700) , Oxirane, (chloromethyl)-, polymer with .alpha.-hydro-.omega.-hydroxypoly(oxy(methyl-1,2-ethanediyl))

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/information on ingredients

Mixtures

zinc oxide **30-60%**

CAS number: 1314-13-2

M factor (Acute) = 1 M factor (Chronic) = 1

Classification
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700) **30-60%**

CAS number: 25068-38-6

Classification
Skin Irrit. 2 - H315
Eye Irrit. 2A - H319
Skin Sens. 1 - H317
Aquatic Chronic 2 - H411

Oxirane, (chloromethyl)-, polymer with .alpha.-hydro-.omega.-hydroxypoly(oxy(methyl-1,2-ethanediyl)) **10-30%**

CAS number: 9072-62-2

Classification
Skin Irrit. 2 - H315
Eye Irrit. 2A - H319
Skin Sens. 1 - H317
Aquatic Chronic 3 - H412

Thermal Bonding System, Part A

The full text for all hazard statements is displayed in Section 16.

4. First-aid measures

Description of first aid measures

General information Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.

Inhalation Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.

Ingestion Rinse mouth thoroughly with water. Remove any dentures. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.

Skin Contact It is important to remove the substance from the skin immediately. In the event of any sensitization symptoms developing, ensure further exposure is avoided. Remove contamination with soap and water or recognized skin cleansing agent. Get medical attention if symptoms are severe or persist after washing.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue. If it is suspected that volatile contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

Most important symptoms and effects, both acute and delayed

General information See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation Prolonged inhalation of high concentrations may damage respiratory system.

Ingestion May cause sensitization or allergic reactions in sensitive individuals. May cause irritation.

Skin contact May cause skin sensitization or allergic reactions in sensitive individuals. Redness. Irritating to skin.

Eye contact Irritating to eyes.

Indication of immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically. May cause sensitization or allergic reactions in sensitive individuals.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Thermal Bonding System, Part A

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Specific hazards Containers can burst violently or explode when heated, due to excessive pressure build-up.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapors. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Avoid contact with skin and eyes.

Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Approach the spillage from upwind. Small Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Large Spillages: If leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labeled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. Handling and storage

Thermal Bonding System, Part A

Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimize spills. Keep container tightly sealed when not in use. Avoid the formation of mists. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). Store in accordance with local regulations. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Utilize retaining walls to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.

Storage class Miscellaneous hazardous material storage.

Specific end uses(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

zinc oxide

Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³ fume
Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³ total dust
Long-term exposure limit (8-hour TWA): ACGIH 2 mg/m³ respirable fraction
Short-term exposure limit (15-minute): ACGIH 10 mg/m³ respirable fraction
Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³ respirable fraction

OSHA = Occupational Safety and Health Administration.
ACGIH = American Conference of Governmental Industrial Hygienists.

zinc oxide (CAS: 1314-13-2)

Immediate danger to life and health 500 mg/m³

Amphorous Silica (CAS: 7631-86-9)

Immediate danger to life and health 3000 mg/m³

Exposure controls

Protective equipment

Thermal Bonding System, Part A

Appropriate engineering controls	Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimize worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimize exposure.
Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with OSHA 1910.133. Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.
Other skin and body protection	Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.
Hygiene measures	Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.
Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.
Environmental exposure controls	Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Liquid.
Color	Blue.
Odor	Not known.
Odor threshold	Not available.
pH	Not available.
Melting point	Not available.

Thermal Bonding System, Part A

Initial boiling point and range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Evaporation factor	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Not available.
Other flammability	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Bulk density	Not available.
Solubility(ies)	Not available.
Partition coefficient	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	70-80 Pa s @ 23°C
Explosive properties	Not considered to be explosive.
Oxidizing properties	Does not meet the criteria for classification as oxidizing.

10. Stability and reactivity

Reactivity	See the other subsections of this section for further details.
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
Possibility of hazardous reactions	No potentially hazardous reactions known.
Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.
Materials to avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral

Notes (oral LD_{50}) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD_{50}) Based on available data the classification criteria are not met.

Thermal Bonding System, Part A

Acute toxicity - inhalation

Notes (inhalation LC_{50}) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data Irritating.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitization

Respiratory sensitization Based on available data the classification criteria are not met.

Skin sensitization

Skin sensitization May cause skin sensitization or allergic reactions in sensitive individuals.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

IARC carcinogenicity Contains a substance which may be potentially carcinogenic. IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation Prolonged inhalation of high concentrations may damage respiratory system.

Ingestion May cause sensitization or allergic reactions in sensitive individuals. May cause irritation.

Skin Contact May cause skin sensitization or allergic reactions in sensitive individuals. Redness. Irritating to skin.

Eye contact Irritating to eyes.

Route of entry Ingestion Inhalation Skin and/or eye contact

Target Organs No specific target organs known.

Medical considerations Skin disorders and allergies.

Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Skin corrosion/irritation

Thermal Bonding System, Part A

Skin corrosion/irritation Irritating to skin.

Serious eye damage/irritation

Serious eye damage/irritation Irritation of eyes is assumed.

Carcinogenicity

Carcinogenicity No evidence of carcinogenicity in animal studies.

12. Ecological Information

Toxicity Aquatic Acute 1 - H400 Very toxic to aquatic life. Aquatic Chronic 1 - H410 Very toxic to aquatic life with long lasting effects.

zinc oxide

Acute aquatic toxicity

LE(C)$_{50}$ 0.1 < L(E)C50 ≤ 1

M factor (Acute) 1

Chronic aquatic toxicity

M factor (Chronic) 1

Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Acute toxicity - fish LC_{50}, 96 hours: 1.3 mg/l, Onchorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC_{50}, 48 hours: 2.1 mg/l, Daphnia magna

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 0.3 mg/l, Daphnia magna

Persistence and degradability

Persistence and degradability The degradability of the product is not known.

Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Persistence and degradability Not readily biodegradable.

Bioaccumulative potential

Bio-Accumulative Potential No data available on bioaccumulation.

Partition coefficient Not available.

Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

Bio-Accumulative Potential Bioaccumulation is unlikely.

Partition coefficient log Kow: 2.64-3.78

Mobility in soil

Mobility No data available.

Other adverse effects

Thermal Bonding System, Part A

Other adverse effects None known.

13. Disposal considerations

Waste treatment methods

General information The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

14. Transport information

General For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

UN Number

UN No. (TDG) 3082

UN No. (IMDG) 3082

UN No. (ICAO) 3082

UN No. (DOT) ID8000

UN proper shipping name

Proper shipping name (TDG) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS zinc oxide, Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700))

Proper shipping name (IMDG) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS zinc oxide, Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700))

Proper shipping name (ICAO) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS zinc oxide, Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700))

Proper shipping name (DOT) CONSUMER COMMODITY

Transport hazard class(es)

DOT hazard class 9

DOT hazard label 9

TDG class 9

TDG label(s) 9

IMDG Class 9

ICAO class/division 9

Thermal Bonding System, Part A

Transport labels

DOT transport labels

Packing group

TDG Packing Group	III
IMDG packing group	III
ICAO packing group	III

Environmental hazards

Environmentally Hazardous Substance

Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS	F-A, S-F
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
None of the ingredients are listed or exempt.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
None of the ingredients are listed or exempt.

SARA 313 Emission Reporting
The following ingredients are listed or exempt:

zinc oxide
1.0 %

CAA Accidental Release Prevention
None of the ingredients are listed or exempt.

FDA - Essential Chemical
None of the ingredients are listed or exempt.

Thermal Bonding System, Part A

FDA - Precursor Chemical
None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories
None of the ingredients are listed or exempt.

OSHA Highly Hazardous Chemicals
None of the ingredients are listed or exempt.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins
The following ingredients are listed or exempt:

Amphorous Silica
Known to the State of California to cause cancer.

California Air Toxics "Hot Spots" (A-I)
The following ingredients are listed or exempt:

zinc oxide

Amphorous Silica

California Air Toxics "Hot Spots" (A-II)
None of the ingredients are listed or exempt.

California Directors List of Hazardous Substances
The following ingredients are listed or exempt:

zinc oxide

Amphorous Silica

Massachusetts "Right To Know" List
The following ingredients are listed or exempt:

zinc oxide

Amphorous Silica

Rhode Island "Right To Know" List
The following ingredients are listed or exempt:

zinc oxide

Minnesota "Right To Know" List
The following ingredients are listed or exempt:

zinc oxide

Amphorous Silica

New Jersey "Right To Know" List
The following ingredients are listed or exempt:

zinc oxide

Pennsylvania "Right To Know" List
The following ingredients are listed or exempt:

zinc oxide

Amphorous Silica

Inventories

Thermal Bonding System, Part A

US - TSCA
All the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification
None of the ingredients are listed or exempt.

16. Other information

Classification abbreviations and acronyms	Eye Irrit. = Eye irritation Skin Irrit. = Skin irritation Skin Sens. = Skin sensitisation Aquatic Acute = Hazardous to the aquatic environment (acute) Aquatic Chronic = Hazardous to the aquatic environment (chronic)
Training advice	Read and follow manufacturer's recommendations. Only trained personnel should use this material.
Issued by	Bethan Massey
Revision date	6/23/2017
Revision	0
SDS No.	1694
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. H412 Harmful to aquatic life with long lasting effects.

SAFETY DATA SHEET
Thermal Bonding System, Part B
According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

1. Identification

Product identifier

Product name Thermal Bonding System, Part B

Product number TBS-B, ETBS20S, ETBS01K, ZE

Recommended use of the chemical and restrictions on use

Application Hardener.

Uses advised against No specific uses advised against are identified.

Details of the supplier of the safety data sheet

Supplier

ELECTROLUBE. A division of HK WENTWORTH LTD
HK WENTWORTH-AMERICA
PO Box 126257
Benbrook, Texas 76126
USA
info@hkw.us.com
+1 888-501-9203

Emergency telephone number

Emergency telephone +1 202 464 2554 (USA only)
+44 1235 239670

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards Not Classified

Health hazards Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317 STOT RE 2 - H373

Environmental hazards Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

Label elements

Pictogram

Signal word Danger

Hazard statements H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H373 May cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Thermal Bonding System, Part B

Precautionary statements

P260 Do not breathe vapor/ spray.
P264 Wash contaminated skin thoroughly after handling.
P272 Contaminated work clothing must not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304+P340 If inhaled: Remove person to fresh air and keep 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.
P314 Get medical advice/ attention if you feel unwell.
P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.
P501 Dispose of contents/ container in accordance with national regulations.

Contains

4,4'-methylenebis(cyclohexylamine), Copolymer of benzenamine and formaldehyde, hydrogenated, 3,6-diazaoctanethylenediamin

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/information on ingredients

Mixtures

zinc oxide **30-60%**

CAS number: 1314-13-2

M factor (Acute) = 1 M factor (Chronic) = 1

Classification
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

Triethylenetetramine, propoxylated **10-30%**

CAS number: 26950-63-0

Classification
Eye Irrit. 2A - H319

Copolymer of benzenamine and formaldehyde, hydrogenated **5-10%**

CAS number: 135108-88-2

Classification
Acute Tox. 4 - H302
Skin Corr. 1C - H314
Eye Dam. 1 - H318
Skin Sens. 1 - H317
STOT RE 2 - H373
Aquatic Chronic 3 - H412

Thermal Bonding System, Part B

4,4'-methylenebis(cyclohexylamine)	**5-10%**
CAS number: 1761-71-3	

Classification
Acute Tox. 4 - H302
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Skin Sens. 1B - H317
STOT RE 2 - H373

3,6-diazaoctanethylenediamin	**1-5%**
CAS number: 112-24-3	

Classification
Acute Tox. 4 - H312
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Skin Sens. 1 - H317
Aquatic Chronic 3 - H412

The full text for all hazard statements is displayed in Section 16.

4. First-aid measures

Description of first aid measures

General information Get medical attention immediately. Show this Safety Data Sheet to the medical personnel. Chemical burns must be treated by a physician.

Inhalation Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.

Ingestion Rinse mouth thoroughly with water. Remove any dentures. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.

Skin Contact It is important to remove the substance from the skin immediately. Take off immediately all contaminated clothing. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention. Chemical burns must be treated by a physician.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes.

Thermal Bonding System, Part B

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue. If it is suspected that volatile contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

Most important symptoms and effects, both acute and delayed

General information See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation A single exposure may cause the following adverse effects: Severe irritation of nose and throat. Symptoms following overexposure may include the following: Corrosive to the respiratory tract.

Ingestion May cause sensitization or allergic reactions in sensitive individuals. May cause chemical burns in mouth, esophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.

Skin contact May cause skin sensitization or allergic reactions in sensitive individuals. Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.

Eye contact Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

Indication of immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically. May cause sensitization or allergic reactions in sensitive individuals.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Specific hazards Containers can burst violently or explode when heated, due to excessive pressure build-up. Severe corrosive hazard. Water used for fire extinguishing, which has been in contact with the product, may be corrosive.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Very toxic or corrosive gases or vapors.

Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapors. Evacuate area. Keep upwind to avoid inhalation of gases, vapors, fumes and smoke. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Thermal Bonding System, Part B

Special protective equipment for firefighters Regular protection may not be safe. Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Avoid inhalation of vapors and spray/mists. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes. Avoid contact with contaminated tools and objects.

Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. This product is corrosive. Approach the spillage from upwind. Small Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Large Spillages: If leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labeled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimize spills. Keep container tightly sealed when not in use. Avoid the formation of mists. This product is corrosive. Immediate first aid is imperative. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

Thermal Bonding System, Part B

Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). Store in accordance with local regulations. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Utilize retaining walls to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.

Storage class Corrosive storage.

Specific end uses(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

zinc oxide

Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³ fume
Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³ total dust
Long-term exposure limit (8-hour TWA): ACGIH 2 mg/m³ respirable fraction
Short-term exposure limit (15-minute): ACGIH 10 mg/m³ respirable fraction
Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³ respirable fraction
OSHA = Occupational Safety and Health Administration.
ACGIH = American Conference of Governmental Industrial Hygienists.

zinc oxide (CAS: 1314-13-2)

Immediate danger to life and health 500 mg/m³

Amphorous Silica (CAS: 7631-86-9)

Immediate danger to life and health 3000 mg/m³

Exposure controls

Protective equipment

Appropriate engineering controls Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimize worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimize exposure.

Eye/face protection Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with OSHA 1910.133. Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Thermal Bonding System, Part B

Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.
Other skin and body protection	Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.
Hygiene measures	Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.
Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.
Environmental exposure controls	Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Liquid.
Color	Cream.
Odor	Not known.
Odor threshold	Not available.
pH	Not available.
Melting point	Not available.
Initial boiling point and range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Evaporation factor	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Not available.
Other flammability	Not available.
Vapor pressure	Not available.

Thermal Bonding System, Part B

Vapor density	Not available.
Relative density	Not available.
Bulk density	Not available.
Solubility(ies)	Not available.
Partition coefficient	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	70-80 Pa s @ 23°C
Explosive properties	Not considered to be explosive.
Oxidizing properties	Does not meet the criteria for classification as oxidizing.

10. Stability and reactivity

Reactivity	See the other subsections of this section for further details.
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
Possibility of hazardous reactions	No potentially hazardous reactions known.
Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.
Materials to avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Corrosive gases or vapors.

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral

Notes (oral LD_{50})	Based on available data the classification criteria are not met.
ATE oral (mg/kg)	2,193.86

Acute toxicity - dermal

Notes (dermal LD_{50})	Based on available data the classification criteria are not met.
ATE dermal (mg/kg)	22,833.89

Acute toxicity - inhalation

Notes (inhalation LC_{50})	Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data	Skin Corr. 1B - H314 Causes severe burns.

Serious eye damage/irritation

Serious eye damage/irritation	Eye Dam. 1 - H318 Corrosive to skin. Corrosivity to eyes is assumed.

Respiratory sensitization

Thermal Bonding System, Part B

Respiratory sensitization	Based on available data the classification criteria are not met.

Skin sensitization

Skin sensitization	May cause skin sensitization or allergic reactions in sensitive individuals.

Germ cell mutagenicity

Genotoxicity - in vitro	Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	Contains a substance which may be potentially carcinogenic. IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Reproductive toxicity

Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard	Based on available data the classification criteria are not met.

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Corrosive to the respiratory tract. Symptoms following overexposure may include the following: Severe irritation of nose and throat.
Ingestion	May cause sensitization or allergic reactions in sensitive individuals. May cause chemical burns in mouth, esophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.
Skin Contact	May cause skin sensitization or allergic reactions in sensitive individuals. Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.
Route of entry	Ingestion Inhalation Skin and/or eye contact
Target Organs	No specific target organs known.
Medical considerations	Skin disorders and allergies.

Triethylenetetramine, propoxylated

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	4,500.0
Species	Rat

Thermal Bonding System, Part B

ATE oral (mg/kg)	4,500.0

Copolymer of benzenamine and formaldehyde, hydrogenated

Acute toxicity - oral

ATE oral (mg/kg)	500.0

4,4'-methylenebis(cyclohexylamine)

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	380.0
Species	Rat
ATE oral (mg/kg)	380.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,110.0
Species	Rat
ATE dermal (mg/kg)	2,110.0

3,6-diazaoctanethylenediamin

Acute toxicity - dermal

ATE dermal (mg/kg)	1,100.0

12. Ecological Information

Toxicity Aquatic Acute 1 - H400 Very toxic to aquatic life. Aquatic Chronic 1 - H410 Very toxic to aquatic life with long lasting effects.

zinc oxide

Acute aquatic toxicity

$LE(C)_{50}$	0.1 < L(E)C50 ≤ 1
M factor (Acute)	1

Chronic aquatic toxicity

M factor (Chronic)	1

Persistence and degradability

Persistence and degradability The degradability of the product is not known.

Bioaccumulative potential

Bio-Accumulative Potential No data available on bioaccumulation.

Partition coefficient Not available.

Mobility in soil

Mobility No data available.

Other adverse effects

Thermal Bonding System, Part B

Other adverse effects None known.

13. Disposal considerations

Waste treatment methods

General information The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

14. Transport information

General For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

UN Number

UN No. (TDG) 1760

UN No. (IMDG) 1760

UN No. (ICAO) 1760

UN No. (DOT) ID8000

UN proper shipping name

Proper shipping name (TDG) CORROSIVE LIQUID, N.O.S. (CONTAINS 4,4'-methylenebis(cyclohexylamine), zinc oxide)

Proper shipping name (IMDG) CORROSIVE LIQUID, N.O.S. (CONTAINS 4,4'-methylenebis(cyclohexylamine), zinc oxide)

Proper shipping name (ICAO) CORROSIVE LIQUID, N.O.S. (CONTAINS 4,4'-methylenebis(cyclohexylamine), zinc oxide)

Proper shipping name (DOT) CONSUMER COMMODITY

Transport hazard class(es)

DOT hazard class 9

DOT hazard label 9

TDG class 8

TDG label(s) 8

IMDG Class 8

ICAO class/division 8

Transport labels

Thermal Bonding System, Part B

DOT transport labels

Packing group

TDG Packing Group	II
IMDG packing group	II
ICAO packing group	II

Environmental hazards

Environmentally Hazardous Substance

Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS	F-A, S-B
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
None of the ingredients are listed or exempt.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities
None of the ingredients are listed or exempt.

SARA 313 Emission Reporting
The following ingredients are listed or exempt:

zinc oxide
1.0 %

CAA Accidental Release Prevention
None of the ingredients are listed or exempt.

FDA - Essential Chemical
None of the ingredients are listed or exempt.

FDA - Precursor Chemical
None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories
None of the ingredients are listed or exempt.

Thermal Bonding System, Part B

OSHA Highly Hazardous Chemicals
None of the ingredients are listed or exempt.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins
The following ingredients are listed or exempt:

Amphorous Silica
Known to the State of California to cause cancer.

California Air Toxics "Hot Spots" (A-I)
The following ingredients are listed or exempt:

zinc oxide

Amphorous Silica

California Air Toxics "Hot Spots" (A-II)
None of the ingredients are listed or exempt.

California Directors List of Hazardous Substances
The following ingredients are listed or exempt:

zinc oxide

Amphorous Silica

Massachusetts "Right To Know" List
The following ingredients are listed or exempt:

zinc oxide

3,6-diazaoctanethylenediamin

Amphorous Silica

Rhode Island "Right To Know" List
The following ingredients are listed or exempt:

zinc oxide

Minnesota "Right To Know" List
The following ingredients are listed or exempt:

zinc oxide

Amphorous Silica

New Jersey "Right To Know" List
The following ingredients are listed or exempt:

zinc oxide

3,6-diazaoctanethylenediamin

Pennsylvania "Right To Know" List
The following ingredients are listed or exempt:

zinc oxide

3,6-diazaoctanethylenediamin

Amphorous Silica

Inventories

Thermal Bonding System, Part B

US - TSCA
All the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification
None of the ingredients are listed or exempt.

16. Other information

Classification abbreviations and acronyms	Eye Dam. = Serious eye damage Skin Corr. = Skin corrosion Skin Sens. = Skin sensitisation Aquatic Acute = Hazardous to the aquatic environment (acute) Aquatic Chronic = Hazardous to the aquatic environment (chronic)
Training advice	Read and follow manufacturer's recommendations. Only trained personnel should use this material.
Issued by	Bethan Massey
Revision date	6/23/2017
Revision	0
SDS No.	1695
Hazard statements in full	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. H318 Causes serious eye damage. H319 Causes serious eye irritation. H373 May cause damage to organs through prolonged or repeated exposure. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.