

Section 1: Identification

Product Name NiBond
Product Code 4AD011 – PART A
Product Type / Use Electrically Conductive Epoxy Adhesive
Restrictions of Use None known
Manufacturer Conductive Composites
 830 E. South Flat Rd
 Cleveland, UT 84518
<https://www.conductive.com>
Telephone (General) (435) 654-3683
MEDICAL EMERGENCY Poison Control Center – 1-877-671-2608

Section 2: Hazards Identification

Classification of the Substance or Mixture:
 Skin Irritation – Category 2
 Eye Irritation – Category 2A
 Skins Sensitization - Category 1

GHS Label Elements:

Hazard Pictogram:



Signal Word: Danger
Hazard Statement: Causes skin and eye irritation

Precautionary statements:

General: Read label before use. Keep out of reach of children. If medical advice is needed have the product container or label close at hand for reference.
Prevention: Use proper “personal protective equipment” (PPE): disposable rubber gloves, eye, and face protection. Use of a barrier cream on exposed skin may provide additional protection. Wash hands thoroughly after handling. Avoid breathing vapors or particulates.
Response: If exposed on skin: wash thoroughly with water. If exposed on eyes: rinse gently but thoroughly with water. Remove contact lenses if possible. For any other exposure conditions seek competent medical attention.
Storage: Store in dry location at temperatures between 50 °F – 90 °F (10 °C – 33 °C).
Disposal: Dispose of contents and container in accordance with all local, regional, national, and international regulations.
Hazards not otherwise classified: None known.

Section 3: Composition/Information on Ingredients

Substance / mixture: Mixture.

Ingredient Name	Composition	CAS Number
Nickel (Ni)	< 5 %	7440-02-0
Tetraglycidyl diaminodiphenylmethane	40 – 60 %	28768-32-3
Epichlorohydrin-4,4'-isopropylidene diphenol resin	20 - 40 %	9003-55-8
Modified epoxy resin	7 – 20 %	Unknown

* exact percentages may vary and are trade secret. Composition ranges listed above may provide assistance in selecting proper personal protections.

Section 4: First-Aid Measures

EYE CONTACT: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. Seek competent medical attention.

INHALATION: If mist or vapors from this product have been inhaled, remove the person to fresh air immediately and keep at rest in a position comfortable for breathing. Seek competent medical attention if symptoms develop or persist.

INGESTION: Rinse mouth with water. **Do not induce vomiting.** Seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person. Seek competent medical attention.

SKIN: Remove contaminated clothing, wash affected area with soap and large amounts of warm water. Seek competent medical attention if symptoms develop or persist.

Section 5: Fire-Fighting Measures

FLAMMABILITY OF THE PRODUCT: No specific fire or explosion hazard.

EXTINGUISHING MEDIA: Use extinguishing agent suitable for surrounding material and type of fire.

HAZARDOUS THERMAL DECOMPOSITION PRODUCTS: May generate large amounts of dense smoke containing unidentified toxic gases. Upon decomposition this product will emit carbon monoxide, carbon dioxide and various low molecular weight hydrocarbons, and oxides of nitrogen.

SPECIAL PROTECTIVE ACTIONS FOR FIRE FIGHTERS: Promptly isolate the scene and remove all persons in the vicinity of the accident if there is a fire.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS: Use full face, self-contained breathing apparatus, and full protective clothing when necessary.

Section 6: Accidental Release Measures

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES:

FOR NON EMERGENCY PERSONNEL: No action shall be taken involving any personal risk or without proper training. Keep unnecessary and unprotected personnel from entering the area of an accidental release. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Use appropriate personal protective equipment.

FOR EMERGENCY RESPONDERS: If specialized clothing is required to deal with the spillage, refer to any relevant information in Section 8 on suitable and unsuitable materials.

ENVIRONMENTAL PRECAUTIONS: Avoid spreading of spilled material into soil, waterways, drains, or sewers. Inform proper authorities if the product has caused any environmental release or exposure to the above areas. Water polluting material. May be harmful to the environment if released in large quantities.



METHODS AND MATERIALS FOR CONTAINMENT AND CLEANUP:

SMALL SPILL: Stop leak if without risk. Remove containers from spill area. Absorb with an inert dry material and place in an appropriate waste disposal container. Dispose via a licensed waste disposal contractor.

LARGE SPILL: Stop leak if without risk. Remove containers from spill area. Approach release from upwind. Prevent entry into sewers, waterways, basements, or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, absorbent clay, vermiculite, or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7: Handling and Storage

PRECAUTIONS FOR SAFE HANDLING:

PROTECTIVE MEASURES: Wear appropriate personal protective equipment (PPE) (see Section 8). Do not allow contact with eyes or mucous membranes. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse containers for any other purpose. This material contains conductive components.

Store in in the original supplied container, with the lid firmly closed, when not in use. Do not store near acids. Store at temperatures between 50 °F – 90 °F (10 °C – 33 °C).

If ventilation alone cannot control exposure to vapor and dust, use respirators approved for the purpose.

Avoid skin contact. Wear suitable disposable gloves. Wash skin thoroughly before and after handling. A barrier cream or lotion may provide additional protection to accidental exposure.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored, applied, or processed. After exposure to the material, workers should wash hands and face before eating, drinking, or smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on other hygiene measures.

Section 8: Exposure Controls/Personal Protection

CONTROL PARAMETERS – OCCUPATIONAL EXPOSURE LIMITS:

Hazardous Component	ACGIH TLV	OSHA PEL	AIHA WEEL
Tetraglycidyl diaminodiphenylmethane	None	None	None
Epichlorohydrin-04,4'-isopropylidene	None	None	None
Modified epoxy resin	None	None	None

APPROPRIATE ENGINEERING CONTROLS: If user operations generate dust, fumes, gas, vapor, or mist, use process enclosures and / or additional ventilation or engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

ENVIRONMENTAL EXPOSURE CONTROLS: Emissions from ventilation or work processing 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.

INDIVIDUAL PROTECTION MEASURES:

EYE/FACE PROTECTION: Safety eye-wear complying with approved OSHA standards should be used.

SKIN PROTECTION: Wear chemical resistant, impervious, disposable gloves to protect hands. Wear protective clothing such as a loose-fitting long-sleeved shirt that covers the arms and neck, long pants, and footwear that covers the entire foot.

RESPIRATORY PROTECTION: Not ordinarily required. If sufficient vapor, fumes, or mist are generated during application, use a NIOSH approved organic vapor respirator.

GENERAL HYGIENE RECOMMENDATIONS: Before eating, drinking, smoking, or using toilet facilities, wash face and hands thoroughly with soap and water.

Section 9: Physical and Chemical Properties

Physical state:	paste
Color:	blue gray
Odor:	mild
pH:	neutral
Viscosity:	N/A
Melting point of resin:	Not determined
Boiling point of resin	Not determined
Flash Point	> 93 C
Evaporation Rate:	Not determined
Flammability:	Not applicable
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Solubility	Not miscible, insoluble in water
Partition coefficient:	Not determined
Viscosity:	not determined
VOC (wt%)	< 10 g/l estimated

Section 10: Stability and Reactivity

Reactivity: This product is stable or normal conditions of storage and use.

Chemical Stability: This product is stable, however, the nickel present in the formula may react vigorously with acids to liberate hydrogen which can form explosive mixtures with air.

Possibility of Hazardous Reactions: May occur. Under normal conditions of storage and use, no hazardous reactions are anticipated.

Conditions to Avoid: Keep away from heat, ignition sources and incompatible materials. Avoid mixing this component, part A, with component B until ready to use. Avoid exposure to peroxides, acids, and oxidizing agents as uncontrolled reactions may occur resulting in excessive heat and an exothermic reaction.

Hazardous Decomposition: The products of combustion and decomposition depend on other materials present in the fire and the actual conditions of the fire. Burning will produce carbon monoxide, carbon dioxide, oxides of nitrogen, and other unidentified gases and vapors that may be toxic. Avoid inhalation of decomposition products.

Section 11: Toxicological Information

Relevant Routes of Exposure: Skin, Eyes, Inhalation

Potential Health Effects:

Inhalation: May cause respiratory irritation
Skin Contact: This product may cause skin irritation and sensitization from contact
Eye Contact: This product may cause eye irritation
Ingestion: This product may cause nausea, vomiting, diarrhea, and cramping

Hazardous Components	LD50s and LC50s	Immediate and Delayed Health Effects
Tetraglycidyl diaminodiphenylmethane	None	Allergen, Blood, Central Nervous System, Gastrointestinal, Irritant, Kidney, Liver, Mutagen, Nervous System
Epichlorodrin-4,4'-isopropylidene diphenol resin	None	Allergen, Irritant
Modified epoxy resin	None	No Data

Hazardous Component	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Tetraglycidyl diaminodiphenylmethane	No	No	No
Epichlorodrin-4,4'-isopropylidene diphenol resin	No	No	No
Modified epoxy resin	No	No	No

Evidence for the association of nickel compound exposures and cancer risk comes mainly from workers in now obsolete nickel refining operations where very high concentrations of airborne nickel, mostly present as oxidic or sub-sulphidic species at up to 100 mg/m³ or more, were associated with excess nasal and lung cancers. The inhalation of nickel powder has not resulted in an increased incidence of malignant lung tumors in rodents. Repeated intratracheal instillation of nickel powder produced an increased incidence of malignant lung tumors in rats. Repeated intratracheal instillation of nickel powder did not produce an increased incidence of malignant lung tumors in hamsters when administered at the maximum tolerated dose. Single intratracheal instillations of nickel powder in hamsters at doses near the LD50 produced an increased incidence of fibrosarcomas, mesotheliomas and rhabdomyosarcomas. Inhalation of nickel powder at concentrations 15 times the TLV irritated the respiratory tract in rodents.

Animal experiments indicate that soluble nickel ingestion causes adverse effects on fetal development at a threshold oral exposure of 2.2 mg/ Ni/kg/day by pregnant rats. Data are insufficient to determine if this effect occurs in humans and no regulatory agency has classified soluble forms of nickel as reproductive risks for humans. No soluble nickel is found in this product as formulated.

Section 12: Ecological Information

Persistence and Degradability: Not available.
Ecological Information: Do not dispose of into drain systems, surface water, or ground water.

Section 13: Disposal Considerations

Disposal Methods: The generation of waste should be avoided. Material for disposal should be placed in appropriate sealed containers to avoid potential human and environmental exposure. It is the responsibility of the generator to comply with all federal, state, and local laws and regulations. We recommend contacting an appropriate waste disposal contractor and environmental agency for relevant laws and regulations in your region. Under the U.S., Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets relevant waste classification and to assure proper disposal.

Hazardous Waste Number: Material, if discarded, is not expected to be a characteristic hazardous waste under RCRA. Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

Section 14: Transport Information

The transportation information below applies to the material itself and not to any specific packaging configuration

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Tetraglycidyl diaminodiphenylmethane, Bisphenol-A Epichlorhydrin resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tetraglycidyl diaminodiphenylmethane, Bisphenol-A Epichlorhydrin resin)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: Tetraglycidyl diaminodiphenylmethane, Bis-A Epichlorhydrin resin



SPECIAL PRECAUTIONS FOR USER: Transport within user's premises: 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.

Section 15: Regulatory Information

United States Regulatory Information

TSCA 8 (b) Inventory Status:	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory
TSCA 12 (b) Export Notification:	None above reporting de minimis
CERCLA/SARA Section 302 EHS:	Epichlorohydrin (CAS# 106-89-8).
CERCLA/SARA Section 311/312:	Immediate Health, Delayed Health
CERCLA/SARA Section 313:	None above reporting de minimis.
California Proposition 65:	This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status:	One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.
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Hazardous Materials Information Review Act: 10742

Section 16: Other Information

Explanation and Disclaimer: Wherever such words or phrases as "hazardous," "toxic," "carcinogen," etc. appear herein, they are used as defined or described under state employee right-to-know laws, Federal OSHA laws or the direct sources for these laws such as the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), etc. The use of such words or phrases should not be taken to mean that we deem or imply any substance or exposure to be toxic, hazardous or otherwise harmful. Any exposure can only be understood within the entire context of its occurrence, which includes such factors as the substance's characteristics as defined in the SDS, amount and duration of exposures, other chemicals present and preexisting individual differences in response to the exposure.

The data provided in this SDS is based on the information received from our raw material suppliers and other sources believed to be reliable. We are supplying you this data solely in compliance with the Federal OSHA Hazard Communication Standard, 29 CFR 1910.1200 and other Federal and state laws as described in Section 15: Regulatory Information. This SDS and the information in it are not to be used for purposes other than compliance with the Federal OSHA Hazard Communication Standard.

CONDUCTIVE COMPOSITES COMPANY BELIEVES THAT THE INFORMATION IN THIS SAFETY DATA SHEET IS ACCURATE. HOWEVER, CONDUCTIVE COMPOSITES COMPANY DOES NOT IN ANY WAY WARRANT (EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY FOR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) THE DATA CONTAINED OR THE PRODUCT DESCRIBED IN THIS SDS. LIABILITY, IF ANY, FOR USE OF THIS PRODUCT IS LIMITED TO THE TERMS CONTAINED IN OUR SALE TERMS AND CONDITIONS. ADDITIONALLY, WE DO NOT WARRANT THAT THE PRODUCT WILL NOT INFRINGE ANY PATENT OR OTHER PROPRIETARY OR PROPERTY RIGHTS OF OTHERS.



SDS-007 NiBond 4AD011 – Part A
SAFETY DATA SHEET

Revision History – SDS-4AD011 part A – Electrically Conductive Epoxy Adhesive – part A		
Revision	Effective Date	Summary of Changes
0	2/19/2021	Initial version
1.0	2/19/2022	Updated formatting
1.1	2/20/2023	Updated address
1.2	8/17/2023	Updated nomenclature

Section 1: Identification

Product Name

Product Code NiBond 4AD011 – PART B
Product Type / Use Electrically Conductive Epoxy Adhesive
Restrictions of Use None known
Manufacturer Conductive Composites
 830 E. South Flat Rd
 Cleveland, UT 84518
<https://www.conductive.com>
Telephone (General) (435) 654-3683
MEDICAL EMERGENCY Poison Control Center – 1-877-671-2608

Section 2: Hazards Identification

Classification of the Substance or Mixture:

Skin Irritation – Category 4
 Skin Corrosion – Category 1B
 Serious Eye Damage – Category 1
 Skins Sensitization - Category 1

GHS Label Elements:

Hazard Pictogram:



Signal Word: Danger
Hazard Statement: Causes skin and eye irritation

Precautionary statements:

General: Read label before use. Keep out of reach of children. If medical advice is needed have the product container or label close at hand for reference.

Prevention: Avoid breathing vapors, mist, or spray. Wash affected area thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, clothing, eye and face protection

Response: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical attention. Wash contaminated clothing before reuse.

Storage: Store in dry location at temperatures between 50 °F – 90 °F (10 °C – 33 °C).

Disposal: Dispose of contents and container in accordance with all local, regional, national, and international regulations.

Hazards not otherwise classified: None known.

Section 3: Composition/Information on Ingredients

Substance / mixture: Mixture.

Ingredient Name	Composition	CAS Number
Tetraethylene pentamine	40-50%	112-57-2

N, N'-Bis (3-aminopropyl) piperazine	30-40%	7209-38-3
3,6,9,12-tetraazatetradecamethylenediamine	40 – 60 %	4067-16-7

* exact percentages may vary and are trade secret. Composition ranges listed above may provide assistance in selecting proper personal protections.

Section 4: First-Aid Measures

EYE CONTACT: In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

INHALATION: If inhaled, immediately remove the affected person to fresh air. If symptoms develop and persist, get medical attention. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.

INGESTION: Get immediate medical attention. Do not induce vomiting

SKIN: Remove contaminated clothing and footwear. Immediately wash skin thoroughly with soap and water. If symptoms develop and persist, get medical attention.

Section 5: Fire-Fighting Measures

EXTINGUISHING MEDIA: Water spray (fog), foam, dry chemical or carbon dioxide.

SPECIAL FIREFIGHTING PROCEDURES: Wear full protective clothing. Wear self-contained breathing apparatus.

UNUSUAL FIRE OR EXPLOSION HAZARDS: Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

HAZARDOUS COMBUSTION PRODUCTS: Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Oxides of nitrogen.

Section 6: Accidental Release Measures

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES:

ENVIRONMENTAL PRECAUTIONS: Prevent further leakage or spillage if safe to do so. Wear appropriate protective equipment and clothing during clean-up. Do not allow product to enter sewer or waterways.

CLEAN-UP METHODS: Absorb spill with inert material. Shovel material into appropriate container for disposal. Dispose of according to Federal, State, and local governmental regulations.

Section 7: Handling and Storage

PRECAUTIONS FOR SAFE HANDLING:

HANDLING: Prevent contact with eyes, skin, and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. For Part A plus Part B adhesive mixture, follow curing schedule as recommended in product literature. Do not heat Part B at temperatures greater than 100°C (212°F). This material may self-react at higher temperatures and cause an exotherm. The exotherm has the potential for release of excessive energy and toxic gasses. Empty containers retain product residue, so obey hazard warnings and handle empty containers as if they were full. Do not cut, grind, weld, or drill on or near this container.

STORAGE: Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials.

Section 8: Exposure Controls/Personal Protection

CONTROL PARAMETERS – OCCUPATIONAL EXPOSURE LIMITS:

Hazardous Component	ACGIH TLV	OSHA PEL	AIHA WEEL
Tetraethylene petamine	None	None	(SKIN) Aerolol. 1ppm (5mg/m3) TWA Aerosol. (Skin sensitizer)
N,N'-Bis(3-aminopropyl)piperazine	None	None	None
3,6,9,12-tetraazatetradecamethylenediamine	None	None	None

APPROPRIATE ENGINEERING CONTROLS: Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.

INDIVIDUAL PROTECTION MEASURES:

EYE/FACE PROTECTION: Safety goggles or safety glasses with side shields.

SKIN PROTECTION: Wear impervious gloves for prolonged contact. Use of impervious apron and boots are recommended

RESPIRATORY PROTECTION: If ventilation is not sufficient to effectively prevent buildup of aerosols, mists or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.

Section 9: Physical and Chemical Properties

Physical state:	liquid
Color:	orange-red
Odor:	ammoniacal
pH:	Not applicable
Viscosity:	Not available
Melting point/range:	Not determined
Boiling poin/range:	340°C (644°F)
Flash Point	> 93° C (>199.4°F); Estimated
Evaporation Rate:	Not determined
Flammability:	Not applicable
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Solubility	Fully soluble
Partition coefficient:	Not determined
Viscosity:	Not available
VOC (wt%)	< 10 g/l estimated

Section 10: Stability and Reactivity

Stability: Stable at normal conditions.

Possibility of Hazardous Reactions: Not available

Hazardous decomposition products: Upon decomposition, this product emits carbon monoxide, carbon dioxide, and/or low molecular weight hydrocarbons. Oxides in nitrogen

Reactivity: Not available

Conditions to Avoid: Avoid mixing resin (Part A) and curing agent (Part B) unless you plan to use immediately. Do not heat mixed adhesive unless curing surfaces to be bonded. Failure to observe these precautions may result in excessive heat build-up causing and exotherm.

Section 11: Toxicological Information

Product toxicity data: Not aware of any toxicity data on the specific mixture of chemical components contained in this product.

Relevant routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects:

Inhalation: Mists, vapors, or liquid may cause severe irritation or burns.
Skin Contact: This product is severely irritating to the skin and may cause burns. May cause allergic skin reaction. May be harmful if absorbed through skin.
Eye Contact: This product is severely irritating to the eyes and may cause irreversible damage including burns and blindness. May cause corneal injury.
Ingestion: May cause burns of mouth and throat if swallowed.

Hazardous Components	LD50s and LC50s	Immediate and Delayed Health Effects
Tetraethylene pentamine	Oral LD50 (Rat)=3.99 g/kg Oral LD50 (Rat)=2.1 g/kg Dermal LD50 (Rabbit)=0.66g/kg	Irritant, Mutagen, Allergen
N,N'-Bis(3-aminopropyl)piperazine	None	No Data
3,6,9,12-tetraazatetradecamethylenediamine	None	Irritant, Allergen

Hazardous Component	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Tetraethylene pentamine	No	No	No
N,N'-Bis(3-aminopropyl)piperazine	No	No	No
3,6,9,12-tetraazatetradecamethylenediamine	No	No	No

Section 12: Ecological Information

Ecological Information: Not available.

Section 13: Disposal Considerations

Information provided is for unused product only

Disposal Methods: Dispose of according to Federal, State, and local government regulations.

Hazardous Waste Number: Material, if discarded, is not expected to be a characteristic hazardous waste under RCRA.

Section 14: Transport Information

The transportation information below applies to the material/formulation itself and not to any specific packaging configuration

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Amines, liquid, corrosive, n.o.s (Tetraethylene pentaamine, Substituted piperazine)

Hazard class or division: 8

Identification number: UN2735

Packing group: III

International Air Transportation (ICAO/IATA)

Proper shipping name: Amines, liquid, corrosive, n.o.s (Tetraethylene pentaamine, Substituted piperazine)

Hazard class or division: 8

Identification number: UN2735

Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: Amines, liquid, corrosive, n.o.s (Tetraethylene pentaamine, Substituted piperazine)

Hazard class or division: 8

Identification number: UN2735

Packing group: III

Marine pollutant: Tetraethylene pentamine

Section 15: Regulatory Information

United States Regulatory Information

TSCA 8 (b) Inventory Status:

All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory

TSCA 12 (b) Export Notification:

None above reporting de minimis



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SAFETY DATA SHEET

CERCLA/SARA Section 302 EHS:
 CERCLA/SARA Section 311/312:
 CERCLA/SARA Section 313:

None above reporting de minimis
 Immediate Health, Delayed Health
 None above reporting de minimis.

California Proposition 65:

No California Proposition 65 listed chemicals are known to be present

Canada Regulatory Information
 CEPA DSL/NDSL Status:

All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

Section 16: Other Information

Explanation and Disclaimer: Wherever such words or phrases as "hazardous," "toxic," "carcinogen," etc. appear herein, they are used as defined or described under state employee right-to-know laws, Federal OSHA laws or the direct sources for these laws such as the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), etc. The use of such words or phrases should not be taken to mean that we deem or imply any substance or exposure to be toxic, hazardous or otherwise harmful. Any exposure can only be understood within the entire context of its occurrence, which includes such factors as the substance's characteristics as defined in the SDS, amount and duration of exposures, other chemicals present and preexisting individual differences in response to the exposure.

The data provided in this SDS is based on the information received from our raw material suppliers and other sources believed to be reliable. We are supplying you this data solely in compliance with the Federal OSHA Hazard Communication Standard, 29 CFR 1910.1200 and other Federal and state laws as described in Section 15: Regulatory Information. This SDS and the information in it are not to be used for purposes other than compliance with the Federal OSHA Hazard Communication Standard.

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Revision History – SDS-4AD011 part B – Electrically Conductive Epoxy Adhesive – Part B		
Revision	Effective Date	Summary of Changes
0	2/19/2021	Initial version
1.0	2/23/2021	Updated formatting
1.1	2/20/2023	Updated address
1.2	8/17/2023	Updated nomenclature