

SAFETY DATA SHEET

Issue date: 10/02/16

Revision Number: 002

Bondline 2948

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Bondline 2948 (<20 Grams)
Product Type: Epoxy Adhesive
Company Address:
Bondline Electronic Adhesives, Inc.
777 N Pastoria Avenue
Sunnyvale, CA 94085

Contact Information:
Telephone: 1-408-830-9200
EMERGENCY TELEPHONE: 1-408-830-9200

2. HAZARDS IDENTIFICATION



Hazard pictogram(s):

Signal Word: **Warning**

| Hazard Statements: | | Hazard Category |
|--------------------|-------------------------------------|-----------------|
| H 316 | Causes mild skin irritation | 2 |
| H 317 | May Cause an allergic skin reaction | 2 |
| H 320 | Causes eye irritation | 2A |

Precautionary Statements

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|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Prevention: | Avoid breathing vapors Wash thoroughly after handling. Use in a well-ventilated area. Wear eye protection. Wear protective gloves. |
| Response: | IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. |
| Storage: | Store in freezer at minus 40°C (minus 40°F) or colder until used. |

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Hazardous Component(s) | CAS Number | Percentage* |
|-----------------------------------|------------|-------------|
| Silver | 7440-22-4 | >60 |
| Bisphenol A/Epichlorohydrin Epoxy | 25068-38-6 | <50 |
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4. FIRST AID MEASURES

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| Inhalation: | Move to fresh air. If breathing is difficult, give oxygen. Get medical attention. |
| Skin contact: | Immediately flush skin with plenty of water (using soap, if available). If symptoms develop and persist, get medical attention. |
| Eye contact: | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention. |
| Ingestion: | DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention. |
| Symptoms: | See Section 11. |

5. FIRE FIGHTING MEASURES

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|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Extinguishing media: | Water spray (fog), foam, dry chemical or carbon dioxide. |
| Special firefighting procedures: | Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. In case of fire, keep containers cool with water spray. |
| Unusual fire or explosion hazards: | Closed containers may rupture (due to build up of pressure) when exposed to extreme heat. |
| Hazardous combustion products: | Oxides of carbon, oxides of nitrogen, irritating organic vapors. Toxic and irritating vapors. |

6. ACCIDENTAL RELEASE MEASURES

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| Environmental precautions: | Do not allow product to enter sewer or waterways. |
| Clean-up methods: | Use paper towels to wipe up epoxy. Epoxy will harden at ambient temperature. |

7. HANDLING AND STORAGE

Handling: Use only with adequate ventilation. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Refer to Section 8.

Storage: Store at minus 40°C (minus 40°F) or colder.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

| Hazardous Component(s) | ACGIH TLV | OSHA PEL | AIHA WEEL | OTHER |
|------------------------|------------------------------------------|------------------------------------|-----------|-------|
| Silver | 0.1 mg/m ³ TWA Dust and fume. | 0.01 mg/m ³ PEL (as Ag) | None | None |
| Epoxy resin | None | None | None | None |
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Engineering controls: Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

Respiratory protection: Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.

Eye/face protection: Safety goggles or safety glasses with side shields Eye wash stations should be available.

Skin protection: Use gloves

9. PHYSICAL AND CHEMICAL PROPERTIES

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|-------------------------------------------------|----------------------|
| Physical state: | Paste |
| Color: | Silver |
| Odor: | Slight |
| Odor threshold: | Not available. |
| pH: | Not available. |
| Vapor pressure: | Not applicable |
| Boiling point/range: | Not available. |
| Melting point/ range: | Not applicable |
| Specific gravity: | 4.0 |
| Vapor density: | Not applicable |
| Flash point: | > 93 °C (> 199.4 °F) |
| Flammable/Explosive limits - lower: | Not available. |
| Flammable/Explosive limits - upper: | Not available. |
| Autoignition temperature: | Not available. |
| Evaporation rate: | Not available. |
| Solubility in water: | Insoluble |
| Partition coefficient (n-octanol/water): | Not applicable |
| VOC content: | < 1 % |
| Viscosity: | Paste |
| Decomposition temperature: | Not available. |

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: None under normal processing. Polymerization may occur at elevated temperature.

Hazardous decomposition products: Oxides of carbon. Irritating organic vapors. Oxides of nitrogen. Hydrocarbons.

Incompatible materials: Amines.

Reactivity: Will harden at ambient temperature

Conditions to avoid: Elevated temperatures.

11. TOXICOLOGICAL INFORMATION

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

Potential Health Effects/Symptoms

Inhalation: May cause respiratory tract irritation.
Skin contact: Causes skin irritation. May cause allergic skin reaction.
Eye contact: Causes serious eye irritation.
Ingestion: May cause gastrointestinal tract irritation if swallowed.

| Hazardous Component(s) | LD50s and LC50s | Immediate and Delayed Health Effects |
|------------------------|----------------------------------------------------------------------|---------------------------------------------|
| Silver | Oral LD50 (RAT) = > 5,000 mg/kg Dermal LD50 (RAT) = > 2,000 mg/kg | Allergen, Eyes, Irritant, Respiratory, Skin |
| Epoxy resin | None | Allergen, Eyes, Irritant, Respiratory, Skin |
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| Hazardous Component(s) | NTP Carcinogen | IARC Carcinogen | OSHA Carcinogen (Specifically Regulated) |
|------------------------|----------------|-----------------|------------------------------------------|
| Silver | No | No | No |
| Epoxy resin | No | No | No |
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12. ECOLOGICAL INFORMATION

Ecological information: Do not empty into drains, surface water or ground water.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

- Recommended method of disposal:** Follow all local, state, federal and provincial regulations for disposal.
- Waste treatment methods:** Follow all local, state, federal and provincial regulations for disposal. Used Syringe containers with waste epoxy should be cured (see data sheet for Cure temperature) and disposed into an authorized landfill.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

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

- Proper shipping name:** RQ, Environmentally hazardous substances, liquid, n.o.s.
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
DOT Hazardous Substance(s): Silver

International Air Transportation (ICAO/IATA)

- Proper shipping name:** Environmentally hazardous substance, liquid, n.o.s.
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.
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

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:** None above reporting de minimis
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
CERCLA/SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Silver (CAS# 7440-22-4).
- CERCLA Reportable quantity:** Silver (CAS# 7440-22-4) 1,000 lbs. (454 kg)
- 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:** Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

Prepared by: Bondline Electronic Adhesives, Inc.

Disclaimer: All statements, technical information and recommendations contained herein are based on tests we believe to be accurate, but the accuracy or completeness thereof is not guaranteed, and the following is made in lieu of warranty express or implied. Seller and manufacturer's only obligation shall be to replace such quantity of the product proved to be defective. Neither seller nor manufacturer shall be liable for any injury, loss or damage, direct or consequential, arising from use or inability to use the project. Before using, user shall determine the suitability of the product for his/her intended use, and user assumes all risk and liability whatsoever in connection therewith. No statement or recommendation not contained herein shall have any force or effect unless in an agreement signed by officers of seller and manufacturer.