

## Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

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Issue date 08/01/2018

Reviewed on 08/01/2018

**1 Identification**

- **Product identifier**
- **Trade name:** Arctic Silver Thermal Adhesive
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Product description** Permanent Thermal Adhesive
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Arctic Silver Incorporated  
9826 West Legacy Ave.  
Visalia, CA 93291 USA  
Voice: 559.740.0912  
Fax: 559.740.0913  
infoas@arcticsilver.com  
www.arcticsilver.com
- **Emergency telephone number:**  
Rocky Mountain Poison Control  
Toll Free: 877-740-5015  
Alternate: 303-739-1110

**2 Hazard(s) identification**

- **Classification of the substance or mixture**



GHS07

Acute Tox. 4 H302	Harmful if swallowed.
Skin Irrit. 2 H315	Causes skin irritation.
Eye Irrit. 2A H319	Causes serious eye irritation.
Skin Sens. 1 H317	May cause an allergic skin reaction.
STOT SE 3 H335-H336	May cause respiratory irritation. May cause drowsiness or dizziness.

- **Label elements**
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labeling:**  
Epoxy resin  
Boron Nitride
- **Hazard statements**  
Harmful if swallowed.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause an allergic skin reaction.  
May cause respiratory irritation. May cause drowsiness or dizziness.
- **Precautionary statements**  
Avoid breathing vapors.  
Use only outdoors or in a well-ventilated area.

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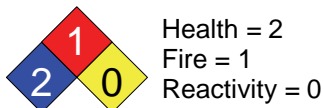
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**Trade name: Arctic Silver Thermal Adhesive**

- Wear protective gloves.
- Wear eye protection / face protection.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Contaminated work clothing must not be allowed out of the workplace.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If swallowed: Call a poison center/doctor if you feel unwell.
- Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Wash contaminated clothing before reuse.
- If skin irritation occurs: Get medical advice/attention.
- If skin irritation or rash occurs: Get medical advice/attention.
- If eye irritation persists: Get medical advice/attention.
- Rinse mouth.
- If on skin: Wash with plenty of water.
- Take off contaminated clothing and wash it before reuse.
- Store locked up.
- Store in a well-ventilated place. Keep container tightly closed.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Unknown acute toxicity:**  
45 percent of the mixture consists of ingredient(s) of unknown toxicity.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMS-ratings (scale 0 - 4)**



- **Hazard(s) not otherwise classified (HNOC):** None known

**3 Composition/information on ingredients**

- **Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.
- **Dangerous Components:**

Epoxy resin	⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Irrit. 2B, H320	35-45%
10043-11-5 Boron Nitride	⚠ Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320	2-10%

**4 First-aid measures**

- **Description of first aid measures**
- **General information:**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**  
Supply fresh air; consult doctor in case of complaints.  
In case of unconsciousness, place patient securely on side position for transportation.

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- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly.  
If skin irritation occurs, consult a doctor.
- **After eye contact:**  
Rinse opened eye for at least 15 minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed:** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**5 Fire-fighting measures**

- **Extinguishing media**
- **Suitable extinguishing agents:** Use firefighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:**  
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to section 13.  
Ensure adequate ventilation.  
Dispose of the collected material according to regulations.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**7 Handling and storage**

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

- **Additional information about design of technical systems:** No further data; see section 7.

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- **Control parameters**
- **Components with occupational exposure limits:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation of this SDS were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing and wash before reuse.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

- **Eye protection:**



Tightly sealed goggles

**9 Physical and chemical properties**

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
  - Form:** Viscous
  - Color:** Silver
- **Odor:**
  - A: Slight epoxy odor
  - B: Mercaptan sulfur odor
- **Odor threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**
  - Melting point/Melting range:** Not determined.
  - Boiling point/Boiling range:** > 999 °C (> 1830 °F)
- **Flash point:** > 204 °C (> 399 °F)
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:**
  - Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - Lower:** Not determined.

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<b>Upper:</b>	Not determined.
· <b>Vapor pressure:</b>	<0.15 mmHg
· <b>Density @ 20 °C (68 °F):</b>	2.28 g/cm <sup>3</sup> (19.027 lbs/gal)
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
· <b>Other information</b>	No further relevant information available.

**10 Stability and reactivity**

- **Reactivity** No further relevant information available.
- **Chemical stability** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** Heat, flame and ignition sources.
- **Incompatible materials:** Strong oxidizing agents, strong reducing agents
- **Hazardous decomposition products:**  
Fumes produced when heated to decomposition may contain carbon monoxide, carbon dioxide, ammonia, and aldehydes.

**11 Toxicological information**

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:**  
Irritant to skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful  
Irritant
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**  
None of the ingredients are listed.
- **NTP (National Toxicology Program)**  
None of the ingredients are listed.

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**OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

**12 Ecological information**

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Not known to be hazardous to water.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

**13 Disposal considerations**

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Observe all federal, state and local environmental regulations when disposing of this material.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

**14 Transport information**

- **UN-Number**
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **UN proper shipping name**
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **Transport hazard class(es)**
- **DOT, ADR, ADN, IMDG, IATA**
- **Class** Non-Regulated Material
- **Packing group**
- **DOT, ADR, IMDG, IATA** Non-Regulated Material
- **Environmental hazards:** Not applicable.
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

**15 Regulatory information**

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
- **Section 355 (extremely hazardous substances):**  
None of the ingredients are listed.

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• **Section 313 (Specific toxic chemical listings):**

7440-22-4 Silver

• **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

• **California Proposition 65**

• **Chemicals known to cause cancer:**

None of the ingredients are listed.

• **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

• **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

• **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

• **Carcinogenic categories**

• **EPA (Environmental Protection Agency)**

7440-22-4 Silver

10043-11-5 Boron Nitride

D

I (oral)

• **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients are listed.

• **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

• **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

• **Hazard pictograms**



GHS07

• **Signal word** Warning

• **Hazard-determining components of labeling:**

Epoxy resin

Boron Nitride

• **Hazard statements**

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

May cause respiratory irritation. May cause drowsiness or dizziness.

• **Precautionary statements**

Avoid breathing vapors.

Use only outdoors or in a well-ventilated area.

Wear protective gloves.

Wear eye protection / face protection.

Wash thoroughly after handling.



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Continue rinsing.  
If swallowed: Call a poison center/doctor if you feel unwell.  
Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
Wash contaminated clothing before reuse.  
If skin irritation occurs: Get medical advice/attention.  
If skin irritation or rash occurs: Get medical advice/attention.  
If eye irritation persists: Get medical advice/attention.  
Rinse mouth.  
If on skin: Wash with plenty of water.  
Take off contaminated clothing and wash it before reuse.  
Store locked up.  
Store in a well-ventilated place. Keep container tightly closed.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

**• National regulations:**

The product is subject to be classified according with the latest version of the regulations on hazardous substances.

**• State Right to Know**

All ingredients are listed.

**• Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16 Other information**

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

**• Date of preparation / last revision** 06/04/2015 / -**• Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
ACGIH: American Conference of Governmental Industrial Hygienists  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
Acute Tox. 4: Acute toxicity, Hazard Category 4  
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A  
Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B  
Skin Sens. 1: Sensitization - Skin, Hazard Category 1  
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

**• \* Data compared to the previous version altered.**