1 Identification

- **Product name:** Conductive Mounting Powder, Copper-based
- **Part number:** 150-10010, -10005
- **Application of the substance / the mixture** Thermoset molding
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** Allied High Tech Products Inc.
    2376 East Pacifica Place
    USA-RANCHO DOMINGUEZ, CA 90220
    USA
    info@alliedhightech.com
- **Information department:** Product safety department
- **Emergency telephone number:**
  During normal opening times: +1 (310) 635-2466
  Chemtrec: +1 (202) 483-7616

2 Hazard(s) identification

- **Classification of the substance or mixture**
  The product is not classified, according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**
  Health = 0
  Fire = 0
  Reactivity = 0
- **HMIS-ratings (scale 0 - 4)**
  HEALTH Health = 0
  FIRE Fire = 0
  REACTIVITY Reactivity = 0
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
Product name: Conductive Mounting Powder, Copper-based

vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Hazardous Components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-50-8 copper</td>
<td>25-50%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-hazardous Components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulates, NOC</td>
<td>50-100%</td>
</tr>
</tbody>
</table>

Additional information: The specific chemical identity and/or exact percentage of the composition is estimated.

4 First-aid measures

- Description of first aid measures
- General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult 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 fire fighting measures that suit the environment.
- Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

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: Pick up mechanically.
- 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.
- Protective Action Criteria for Chemicals

<table>
<thead>
<tr>
<th>PAC-1:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-50-8 copper</td>
<td>3 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-2:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7440-50-8 copper</td>
<td>33 mg/m³</td>
</tr>
</tbody>
</table>
7 Handling and storage

· Handling:
· Precautions for safe handling No special measures required.
· 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: Store in a cool location.
· Information about storage in one common storage facility: Not required.
· Further information about storage conditions: None.
· 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 item 7.

· Control parameters

<table>
<thead>
<tr>
<th>Component</th>
<th>Limit Value</th>
<th>as Cu</th>
<th>Long-term value:</th>
<th>as Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAC-3:</td>
<td>7440-50-8 copper</td>
<td>200 mg/m³</td>
<td>1* 0.1** mg/m³</td>
<td>0.1** mg/m³</td>
</tr>
<tr>
<td>REL</td>
<td>1* 0.1** mg/m³</td>
<td>*dusts and mists</td>
<td>*fume</td>
<td></td>
</tr>
<tr>
<td>TLV</td>
<td>1* 0.2** mg/m³</td>
<td>*dusts and mists</td>
<td>*fume; as Cu</td>
<td></td>
</tr>
</tbody>
</table>

· Additional information: The lists that were valid during the creation were used as basis.

· Exposure controls
· Personal protective equipment:
· General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.
· Breathing equipment:
In case of dust formation, use respiratory equipment with filter type:
Filter P1
· Protection of hands: Not required.
· Material of gloves Nitrile rubber, NBR
· Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· Eye protection: Safety glasses
9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
  - **Appearance:**
    - **Form:** Powder
    - **Color:** Dark orange color
  - **Odor:** Odorless
  - **Odor threshold:** Not determined.
  - **pH-value:** Not applicable.

- **Change in condition**
  - **Melting point/Melting range:** 90-130 °C (194-266 °F)
  - **Boiling point/Boiling range:** Undetermined.

- **Flash point:** >250 °C (>482 °F)

- **Flammability (solid, gaseous):** Not determined.

- **Ignition temperature:** >400 °C (>752 °F)

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.

- **Vapor pressure:** Not applicable.

- **Density:** Not determined.
  - **Relative density**
  - **Vapor density** Not applicable.
  - **Evaporation rate** Not applicable.

- **Solubility in / Miscibility with Water:** Insoluble.

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**
  - **Dynamic:** Not applicable.
  - **Kinematic:** Not applicable.

- **Solvent content:**
  - **VOC content:** 0.00 %
    - 0.0 g/l / 0.00 lb/gl

- **Solids content:** 100.0 %

- **Other information**
  - No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.

- **Chemical stability**

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

(Contd. on page 5)
**Product name: Conductive Mounting Powder, Copper-based**

- **Possibility of hazardous reactions**
  As the product is supplied it is not capable of dust explosion; however enrichment with fine dust causes risk of dust explosion.

- **Conditions to avoid**
  Avoid creating dust as it may form an explosive mixture in the air.
  Keep away from oxidising agents and acidic substances.

- **Incompatible materials:** No further relevant information available.

- **Hazardous decomposition products:**
  - Hydrogen cyanide (prussic acid)
  - Styrene
  - Hydrocarbons
  - Aldehyde
  - Acids
  - Phenolic compounds
  - Carbon monoxide and carbon dioxide
  At temperatures above 250°C, depolymerization and the release of starting monomers can arise.

### 11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity:**
  - **Primary chemical irritant effect:**
    - **on the skin:** No irritant effect.
    - **on the eye:** No irritating effect.
  - **Sensitization:** No sensitizing effects known.
  - **Additional toxicological information:**
    Abrasive eye irritant
    When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories**
  - **IARC (International Agency for Research on Cancer)**
    None of the ingredients is listed.
  - **NTP (National Toxicology Program)**
    None of the ingredients is listed.
  - **OSHA-Ca (Occupational Safety & Health Administration)**
    None of the ingredients is 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:**
    Water hazard class 1 (Self-assessment): slightly hazardous for water
    Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
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**: Contact waste processors for recycling information.

- **Uncleaned packagings**
  - **Recommendation**: Disposal must be made according to official regulations.

### 14 Transport information

- **UN-Number**
  - **DOT**: NA3077
  - **ADN, IMDG, IATA**: not regulated

- **UN proper shipping name**
  - **DOT**: Environmentally hazardous substances, solid, n.o.s. (copper)
  - **ADN, IMDG, IATA**: not regulated

- **Transport hazard class(es)**
  - **DOT**: 9 Miscellaneous dangerous substances and articles
  - **Label**: 9
  - **ADN/R Class**: not regulated

- **Packing group**
  - **DOT**: III
  - **IMDG, IATA**: not regulated

- **Environmental hazards**
  - **Marine pollutant**: No
  - **Yes (DOT)**

- **Special precautions for user**: Not applicable.

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**: Not applicable.

- **Transport/Additional information**
  - **DOT**
  - **Quantity limitations**: On passenger aircraft/rail: No limit
  - On cargo aircraft only: No limit
  - **Remarks**: Special marking with the symbol (fish and tree).
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 is listed.

  - Section 313 (Specific toxic chemical listings):
    7440-50-8 copper

  - TSCA (Toxic Substances Control Act):
    7440-50-8 copper

  - TSCA new (21st Century Act) (Substances not listed)
    Particulates, NOC

  - Proposition 65

    - Chemicals known to cause cancer:
      None of the ingredients is listed.

    - Chemicals known to cause reproductive toxicity for females:
      None of the ingredients is listed.

    - Chemicals known to cause reproductive toxicity for males:
      None of the ingredients is listed.

    - Chemicals known to cause developmental toxicity:
      None of the ingredients is listed.

  - Carcinogenic categories

    - EPA (Environmental Protection Agency)
      7440-50-8 copper D

    - TLV (Threshold Limit Value established by ACGIH)
      None of the ingredients is listed.

    - NIOSH-Ca (National Institute for Occupational Safety and Health)
      None of the ingredients is listed.

    - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing SDS: Environment protection department.
- Contact: Kim Dermit
- Date of preparation / last revision 06/12/2018 / -
- Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
### Product name: Conductive Mounting Powder, Copper-based

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Governmental Industrial Hygienists</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (division of the American Chemical Society)</td>
</tr>
<tr>
<td>NFPA</td>
<td>National Fire Protection Association (USA)</td>
</tr>
<tr>
<td>HMIS</td>
<td>Hazardous Materials Identification System (USA)</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compounds (USA, EU)</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>vPvB</td>
<td>very Persistent and very Bioaccumulative</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>REL</td>
<td>Recommended Exposure Limit</td>
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</tbody>
</table>

(Contd. of page 7)