1 Identification

- Product name: Conductive Mounting Powder, Copper-based
- Part number: 155-10010
- 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 = 1
    - Reactivity = 0

  - HMIS-ratings (scale 0 - 4)
    - HEALTH 0
    - FIRE 1
    - REACTIVITY 0

- Other hazards
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

3 Composition/information on ingredients

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

(Contd. on page 2)
Product name: Conductive Mounting Powder, Copper-based

(Contd. of page 1)

- **Hazardous Components:**
  - 7440-50-8 copper 25-50%

- **Non-hazardous Components:**
  - Particulates, NOC 50-100%

**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**
  - At temperatures above 250°C, the following can be emitted:
    - Carbon monoxide (CO)
    - Hydrogen cyanide (HCN)
- **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>
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<tbody>
<tr>
<td>7440-50-8 copper</td>
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<td>3 mg/m³</td>
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<td>7440-50-8 copper</td>
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<td>33 mg/m³</td>
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<tbody>
<tr>
<td>7440-50-8 copper</td>
<td></td>
<td>200 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:**
    - Dust generated from the substrate during use of this product may be explosive if in sufficient concentration with an ignition source.
    - Protect against electrostatic charges.
    - Keep ignition sources away - Do not smoke.
Product name: Conductive Mounting Powder, Copper-based

- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles:
    Store in a cool location.
    No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Store receptacle in a well ventilated area.
- 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
  - Components with limit values that require monitoring at the workplace:
    | PEL | Long-term value: 1* 0.1** mg/m³ as Cu *dusts and mists **fume |
    | REL | Long-term value: 1* 0.1** mg/m³ as Cu *dusts and mists **fume |
    | TLV | Long-term value: 1* 0.2** mg/m³ *dusts and mists; **fume; as Cu |

- 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 (194-202 °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.
Product name: Conductive Mounting Powder, Copper-based

(Contd. of page 3)

| · Auto igniting: | Product is not selfigniting. |
| · Danger of explosion: | Product does not present an explosion hazard. |
| · Explosion limits: | Not determined. |
| · Lower: | Not determined. |
| · Upper: | Not determined. |
| · Vapor pressure: | Not applicable. |
| · Density: | Not determined. |
| · Relative density | Not determined. |
| · Vapor density | Not applicable. |
| · Evaporation rate | Not applicable. |
| · Solubility in / Miscibility with Water: | Insoluble. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity: | Not applicable. |
| · Dynamic: | Not applicable. |
| · Kinematic: | Not applicable. |
| · Solvent content: | 0.00 % |
| · VOC content: | 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.
· 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.
Product name: Conductive Mounting Powder, Copper-based

- 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, 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, ADN, IMDG, IATA: Not regulated

- **Packing group**
  - DOT, IMDG, IATA: Not regulated

- Environmental hazards:
  - Marine pollutant: No

- Special precautions for user
  - Not applicable.
Product name: Conductive Mounting Powder, Copper-based

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):
      All other ingredients are exempt from listing.

· Hazardous Air Pollutants
  None of the ingredients is listed.

· 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
  · 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
· Last revision: 04/30/2020 / 2.0
· Abbreviations and acronyms:
  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)
Product name: Conductive Mounting Powder, Copper-based

VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit