1 Identification

- Product name: Alumina Powder 0.05, 0.3, 1.0 micron / Aluminum Oxide Abrasive Powder 3, 5, 9, 15, 30 micron
- Part number:
  - 90-187015 - 90-187195
  - 90-130005 - 90-130050
- CAS Number:
  - 1344-28-1
- EC number:
  - 215-691-6

- Application of the substance / the mixture: Abrasive
- 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 substance is not classified, according to the Globally Harmonized System (GHS).

3 Composition/information on ingredients

- Chemical characterization: Substances
- CAS No. Description
  - 1344-28-1 aluminium oxide
- Identification number(s)
- EC number: 215-691-6

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.

(Contd. on page 2)
Product name: Alumina Powder 0.05, 0.3, 1.0 micron / Aluminum Oxide Abrasive Powder 3, 5, 9, 15, 30 micron

· After swallowing: If symptoms persist consult doctor.
· Information for doctor:
  Eye irritation
  Dermatitis
· 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: No special measures required.
· 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.

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.
  No special requirements.
· 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

| PEL | Long-term value: 15*; 5** mg/m³
| REL | Long-term value: 10* 5** mg/m³
| TLV | Long-term value: 1* mg/m³

· Exposure controls
· Personal protective equipment:
· General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed.
· Breathing equipment:
  Not required.
  Use suitable respiratory protective device in case of insufficient ventilation.
Product name: Alumina Powder 0.05, 0.3, 1.0 micron / Aluminum Oxide Abrasive Powder 3, 5, 9, 15, 30 micron

(Contd. of page 2)

**9 Physical and chemical properties**

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Information</td>
</tr>
<tr>
<td>Appearance:</td>
</tr>
<tr>
<td>Form: Powder</td>
</tr>
<tr>
<td>Color: White</td>
</tr>
<tr>
<td>Odor: Odorless</td>
</tr>
<tr>
<td>Odor threshold: Not determined.</td>
</tr>
<tr>
<td>pH-value: Not applicable.</td>
</tr>
<tr>
<td>Change in condition</td>
</tr>
<tr>
<td>Melting point/Melting range: 2,050 °C (35.750 °F)</td>
</tr>
<tr>
<td>Boiling point/Boiling range: 2977 °C (5,390.6 °F)</td>
</tr>
<tr>
<td>Flash point: Not applicable.</td>
</tr>
<tr>
<td>Flammability (solid, gaseous): Product is not flammable.</td>
</tr>
<tr>
<td>Decomposition temperature: Not determined.</td>
</tr>
<tr>
<td>Auto igniting: Not determined.</td>
</tr>
<tr>
<td>Danger of explosion: Product does not present an explosion hazard.</td>
</tr>
<tr>
<td>Explosion limits:</td>
</tr>
<tr>
<td>Lower: Not determined.</td>
</tr>
<tr>
<td>Upper: Not determined.</td>
</tr>
<tr>
<td>Vapor pressure: Not applicable.</td>
</tr>
<tr>
<td>Density at 20 °C (68 °F): 3.97 g/cm³ (33.13 lbs/gal)</td>
</tr>
<tr>
<td>Relative density Not determined.</td>
</tr>
<tr>
<td>Vapor density Not applicable.</td>
</tr>
<tr>
<td>Specific gravity: 3.98 (Water = 1)</td>
</tr>
<tr>
<td>Evaporation rate Not applicable.</td>
</tr>
<tr>
<td>Solubility in / Miscibility with Water: Insoluble.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water): Not determined.</td>
</tr>
<tr>
<td>Viscosity:</td>
</tr>
<tr>
<td>Dynamic: Not applicable.</td>
</tr>
<tr>
<td>Kinematic: Not applicable.</td>
</tr>
<tr>
<td>VOC content: 0.00 %</td>
</tr>
<tr>
<td>Solids content: 100.0 %</td>
</tr>
<tr>
<td>Other information No further relevant information available.</td>
</tr>
</tbody>
</table>

**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: No dangerous reactions known. |
| Conditions to avoid: No further relevant information available. |
| Incompatible materials: No further relevant information available. |
| Hazardous decomposition products: No dangerous decomposition products known. |

(Contd. on page 4)
11 Toxicological information

· Information on toxicological effects
  · Acute toxicity:
    · LD/LC50 values that are relevant for classification:
      ATE (Acute Toxicity Estimate)
      Inhalative LC50/4 h >6 mg/l (rat)

1344-28-1 aluminium oxide

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50</th>
<th>LC50/4 h</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>&gt;5,000 mg/kg (rat)</td>
<td>&gt;6 mg/l (rat)</td>
<td></td>
</tr>
<tr>
<td>Inhalative</td>
<td>LC50/4 h</td>
<td>&gt;6 mg/l (rat)</td>
<td></td>
</tr>
</tbody>
</table>

· 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
  · Abrasive skin 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.
  The substance is not subject to classification.

· Carcinogenic categories

  · IARC (International Agency for Research on Cancer)
    Substance is not listed.

  · NTP (National Toxicology Program)
    Substance is not listed.

  · OSHA-Ca (Occupational Safety & Health Administration)
    Substance is not 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 hazardous for 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: 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, ADN, IMDG, IATA
  - not regulated
- Transport hazard class(es):
  - DOT, ADN, IMDG, IATA
  - Class
  - not regulated
- Packing group: DOT, IMDG, IATA
  - not regulated
- Environmental hazards:
  - Marine pollutant: No
- 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": not regulated

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Sara
    - Section 355 (extremely hazardous substances):
      - Substance is not listed.
    - Section 313 (Specific toxic chemical listings):
      - Substance is listed.
    - TSCA (Toxic Substances Control Act):
      - ACTIVE
- Hazardous Air Pollutants
  - Substance is not listed.
- Proposition 65
  - Chemicals known to cause cancer:
    - Substance is not listed.
  - Chemicals known to cause reproductive toxicity for females:
    - Substance is not listed.
  - Chemicals known to cause reproductive toxicity for males:
    - Substance is not listed.
  - Chemicals known to cause developmental toxicity:
    - Substance is not 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 Derrit
- Last revision / supersedes version: 06/11/2020 / 2.0
- Supersedes date: 04/30/2020

(Contd. on page 6)
Product name: Alumina Powder 0.05, 0.3, 1.0 micron / Aluminum Oxide Abrasive Powder 3, 5, 9, 15, 30 micron

· **Abbreviations and acronyms:**
  - IMDG: International Maritime Code for Dangerous Goods
  - DOT: US Department of Transportation
  - IATA: International Air Transport Association
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - OSHA: Occupational Safety & Health
  - TLV: Threshold Limit Value
  - PEL: Permissible Exposure Limit
  - REL: Recommended Exposure Limit

· **Data compared to the previous version altered.**