1 Identification

· Product name: Alumina Polishing Suspension, De-agglomerated, 0.3 & 1.0 micron
· Part number: 90-187510, 90-187545, 90-187580, 90-187515, 90-187550, 90-187585
· Application of the substance / the mixture Polishing solution
· 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)

  ![NFPA Rating](image)
  Health = 0
  Fire = 0
  Reactivity = 0

· HMIS-ratings (scale 0 - 4)

  ![HMIS Rating](image)
  Health = 0
  Fire = 0
  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: Alumina Polishing Suspension, De-agglomerated, 0.3 & 1.0 micron

(Contd. page 1)

- **Hazardous Components:**
  - 1344-28-1 aluminium oxide 10-25%

- **Non-hazardous Components:**
  - 7732-18-5 water, distilled, conductivity or of similar purity 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
    - Headache
    - Coughing
    - Nausea

- **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:**
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

- **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>1344-28-1 aluminium oxide</th>
<th>15 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAC-2:</td>
<td>1344-28-1 aluminium oxide</td>
<td>170 mg/m³</td>
</tr>
<tr>
<td>PAC-3:</td>
<td>1344-28-1 aluminium oxide</td>
<td>990 mg/m³</td>
</tr>
</tbody>
</table>

7 Handling and storage

- **Handling:**
  - No special measures required.

- **Precautions for safe handling:**
  - No special measures required.

- **Conditions for protection against explosions and fires:**
  - No special measures required.

<table>
<thead>
<tr>
<th>Requirements to be met by storerooms and receptacles:</th>
</tr>
</thead>
</table>

- **Storage:**
  - Store in a cool location.
  - No special requirements.
Product name: Alumina Polishing Suspension, De-agglomerated, 0.3 & 1.0 micron

- 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 with limit values that require monitoring at the workplace</th>
</tr>
</thead>
<tbody>
<tr>
<td>1344-28-1 aluminium oxide</td>
</tr>
<tr>
<td>PEL</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>REL</td>
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<tr>
<td></td>
</tr>
<tr>
<td>TLV</td>
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<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:
  Not required.
  Use suitable respiratory protective device in case of insufficient ventilation.

- Protection of hands:
  Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

- Material of gloves
  The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- 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: Goggles recommended during refilling.

9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
  - Appearance:
    Form: Suspension
    Color: Whitish
  - Odor:
    Odorless
  - Odor threshold:
    Not determined.

- pH-value at 20 °C (68 °F):
  9

- Change in condition
  Melting point/Melting range: 0 °C (32 °F)
  Boiling point/Boiling range: 100 °C (212 °F)

- Flash point:
  Not applicable.

- Flammability (solid, gaseous):
  Not applicable.

- Decomposition temperature:
  Not determined.

- Auto igniting:
  Product is not selfigniting.

- Danger of explosion:
  Product does not present an explosion hazard.
Safety Data Sheet
acc. to OSHA HCS

Printing date 04/30/2020
Version 2.0
Last revision 04/30/2020

Product name: Alumina Polishing Suspension, De-agglomerated, 0.3 & 1.0 micron

· Explosion limits:
  Lower: Not determined.
  Upper: Not determined.

· Vapor pressure at 20 °C (68 °F): 23 hPa (17.3 mm Hg)

· Density: Not determined.
· Relative density: Not determined.
· Vapor density: Not determined.
· Specific gravity: 1.1-1.2 (Air = 1)
· Evaporation rate: Not determined.

· Solubility in / Miscibility with
  Water: Fully miscible.

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

· Viscosity:
  Dynamic: Not determined.
  Kinematic: Not determined.

· Solvent content:
  Water: 81.8 %
  VOC content: 0.00 %
  0.0 g/l / 0.00 lb/gal

· Solids content: 18.2 %
· 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: No dangerous reactions known.
· Conditions to avoid: Keep away from oxidising agents and acidic substances.
· Incompatible materials: No further relevant information available.
· Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects
· Acute toxicity:
  · LD/LC50 values that are relevant for classification:
    1344-28-1 aluminium oxide
    Oral LD50 5,010 mg/kg (rat)

· 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 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.

· Carcinogenic categories
· IARC (International Agency for Research on Cancer)

  None of the ingredients is listed.
Product name: Alumina Polishing Suspension, De-agglomerated, 0.3 & 1.0 micron

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.
  - Recommended cleansing agent: Water, if necessary with cleansing agents.

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: not regulated
- 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):
    None of the ingredients is listed.
Product name: Alumina Polishing Suspension, De-agglomerated, 0.3 & 1.0 micron

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:** 04/30/2020 / 1.9

**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)
- 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
- NIOSH: National Institute for Occupational Safety
- OSHA: Occupational Safety & Health
- TLV: Threshold Limit Value
- PEL: Permissible Exposure Limit
- REL: Recommended Exposure Limit