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).
- 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

(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

- HMIS-ratings (scale 0 - 4)
  - HEALTH: Health = 0
  - FIRE: Fire = 1
  - REACTIVITY: Reactivity = 0

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

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.
  - After swallowing: If symptoms persist consult doctor.
  - Information for doctor:
    - Most important symptoms and effects, both acute and delayed
      - Headache
      - Coughing
  - 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.
47. Protective Action Criteria for Chemicals

- PAC-1: 15 mg/m³
- PAC-2: 170 mg/m³
- PAC-3: 990 mg/m³

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:
- Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>1344-28-1 aluminium oxide</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL Long-term value: 15*; 5** mg/m³</td>
</tr>
<tr>
<td>*Total dust; ** Respirable fraction</td>
</tr>
<tr>
<td>REL Long-term value: 10* 5** mg/m³</td>
</tr>
<tr>
<td>as Al*Total dust **Respirable/pyro powd./welding f.</td>
</tr>
<tr>
<td>TLV Long-term value: 1* mg/m³</td>
</tr>
<tr>
<td>as Al; *as respirable fraction</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: Wash hands before breaks and at the end of work.
  - Breathing equipment: Use suitable respiratory protective device when high concentrations are present.
  - 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.
  - 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.
## 9 Physical and chemical properties

### Information on basic physical and chemical properties

#### General Information

- **Appearance:** Powder
- **Color:** White
- **Odor:** Odorless
- **Odor threshold:** Not determined.
- **pH-value:** Not applicable.

#### Change in condition

- **Melting point/Melting range:** 2,050 °C (3,722 °F)
- **Boiling point/Boiling range:** 60 °C (140 °F)

#### Flash point:

- Not applicable.

#### Flammability (solid, gaseous):

- Product is not flammable.

#### Decomposition temperature:

- Not determined.

#### Auto igniting:

- Not determined.

#### Danger of explosion:

- Product does not present an explosion hazard.

#### Explosion limits:

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

#### Vapor pressure:

- Not applicable.

#### Density at 20 °C (68 °F):

- 3.97 g/cm³ (33.12965 lbs/gal)

#### Bulk density:

- 920 kg/m³

#### Relative density:

- Not determined.

#### Vapor density:

- Not applicable.

#### Specific gravity:

- 3.98 (Water = 1)

#### Evaporation rate:

- Not applicable.

#### Solubility in / Miscibility with

- **Water:** Insoluble.

#### Partition coefficient (n-octanol/water):

- Not determined.

#### Viscosity:

- **Dynamic:** Not applicable.
- **Kinematic:** Not applicable.
- **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.
Product name: Alumina Powder 0.05, 0.3, 1.0 micron / Aluminum Oxide Abrasive Powder 3, 5, 9, 15, 30 micron

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
  \begin{itemize}
  \item LD/LC50 values that are relevant for classification:
  \begin{itemize}
  \item ATE (Acute Toxicity Estimate)
    \begin{itemize}
    \item Inhalative LC50/4 h >6 mg/l (rat)
    \end{itemize}
  \end{itemize}
  \end{itemize}

  \begin{itemize}
  \item 1344-28-1 aluminium oxide
    \begin{itemize}
    \item Oral LD50 5,010 mg/kg (rat)
    \item Inhalative LC50/4 h >6 mg/l (rat)
    \end{itemize}
  \end{itemize}

- Primary chemical irritant effect:
  \begin{itemize}
  \item on the skin: No irritant effect.
  \item on the eye: No irritating effect.
  \item Sensitization: No sensitizing effects known.
  \end{itemize}

- 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
  \begin{itemize}
  \item IARC (International Agency for Research on Cancer)
    Substance is not listed.
  \item NTP (National Toxicology Program)
    Substance is not listed.
  \item OSHA-Ca (Occupational Safety & Health Administration)
    Substance is not listed.
  \end{itemize}

12 Ecological information

- Toxicity
  \begin{itemize}
  \item Aquatic toxicity: No further relevant information available.
  \item Persistence and degradability: No further relevant information available.
  \item Behavior in environmental systems:
  \begin{itemize}
  \item Bioaccumulative potential: No further relevant information available.
  \item Mobility in soil: No further relevant information available.
  \end{itemize}
  \end{itemize}

- Additional ecological information:
  \begin{itemize}
  \item General notes: Generally not hazardous for water
  \item Results of PBT and vPvB assessment
    \begin{itemize}
    \item PBT: Not applicable.
    \item vPvB: Not applicable.
    \end{itemize}
  \end{itemize}
Product name: Alumina Powder 0.05, 0.3, 1.0 micron / Aluminum Oxide Abrasive Powder 3, 5, 9, 15, 30 micron

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 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):**
    - Substance is listed.

  - **Proposition 65**

  - **Chemicals known to cause cancer:**
    - Substance is not listed.

  - **Chemicals known to cause reproductive toxicity for females:**
    - Substance is not listed.
Product name: Alumina Powder 0.05, 0.3, 1.0 micron / Aluminum Oxide Abrasive Powder 3, 5, 9, 15, 30 micron

- Chemicals known to cause reproductive toxicity for males:
  Substance is not listed.

- Chemicals known to cause developmental toxicity:
  Substance is not listed.

- Carcinogenic categories
  - EPA (Environmental Protection Agency)
    Substance is not listed.
  - TLV (Threshold Limit Value established by ACGIH)
    Substance is not listed.
  - NIOSH-Ca (National Institute for Occupational Safety and Health)
    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 Dermit
- Date of preparation / last revision 06/04/2018 / -
- 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
  ACGIH: American Conference of Governmental Industrial Hygienists
  EINECS: European Inventory of Existing Commercial 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