1 Identification

- **Product name**: Colloidal Silica/Alumina Polishing Solution, 0.05 micron
- **Part number**: 180-70000, 180-70010, 180-70015
- **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@alliedhiightech.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 ratings](image)

  - Health = 0
  - Fire = 0
  - Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**

  ![HMIS-ratings](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.
Product name: Colloidal Silica/Alumina Polishing Solution, 0.05 micron

(Contd. of page 1)

- **Hazardous Components:**
  - 7631-86-9 silicon dioxide, chemically prepared 10-25%
  - 57-55-6 propylene glycol ❌ Acute Tox. 4, H302 10-25%
  - 1344-28-1 aluminium oxide 10-25%

- **Non-hazardous Components:**
  - Proprietary Ingredient 50-100%
  - Dye ≤1%

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**
    Coughing
    Breathing difficulty

- **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:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.

- **Environmental precautions:** Dilute with plenty of water.

- **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**

  - **PAC-1:**
    - 7631-86-9 silicon dioxide, chemically prepared 18 mg/m³
    - 57-55-6 propylene glycol 30 mg/m³
    - 1344-28-1 aluminium oxide 15 mg/m³

  - **PAC-2:**
    - 7631-86-9 silicon dioxide, chemically prepared 740 mg/m³
    - 57-55-6 propylene glycol 1,300 mg/m³
    - 1344-28-1 aluminium oxide 170 mg/m³

  - **PAC-3:**
    - 7631-86-9 silicon dioxide, chemically prepared 4,500 mg/m³
    - 57-55-6 propylene glycol 7,900 mg/m³
    - 1344-28-1 aluminium oxide 990 mg/m³

(Contd. on page 3)
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:
    Store away from oxidizing agents.
    Store away from foodstuffs.
- 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>Components with limit values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td>7631-86-9 silicon dioxide, chemically prepared</td>
</tr>
<tr>
<td>PEL</td>
</tr>
<tr>
<td>TLV</td>
</tr>
</tbody>
</table>

| 57-55-6 propylene glycol                                 |
| WEEL | Long-term value: 10 mg/m³                              |

| 1344-28-1 aluminium oxide                               |
| PEL | Long-term value: 15*; 5** mg/m³                         |
| REL | Long-term value: 10* 5** mg/m³                         |
|     | as Al*Total dust**Respirable/pyro powd./welding f.    |
| TLV | Long-term value: 1* mg/m³                              |
|     | as Al; *as respirable fraction                        |

- 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: 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: Goggles recommended during refilling.

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information
- Appearance:
  - Form: Solution
  - Color: Light blue

(Contd. on page 4)
### 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**
  - Excessive heat
  - Keep away from oxidising agents and acidic substances.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**
  - Nitrogen oxides
  - Carbon monoxide and carbon dioxide
- **Additional information:** Hazardous decomposition products may form during combustion.
11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:

<table>
<thead>
<tr>
<th>LD/LC50 values that are relevant for classification:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE (Acute Toxicity Estimate)</td>
</tr>
<tr>
<td>Oral</td>
</tr>
<tr>
<td>Dermal</td>
</tr>
</tbody>
</table>

7631-86-9 silicon dioxide, chemically prepared

| Oral | LD50 7,000 mg/kg (mouse)                     |
| Dermal | LD50 2,010 mg/kg (rabbit)                    |

57-55-6 propylene glycol

| Oral | LD50 2,000 mg/kg (rat)                        |
| Dermal | LD50 20,800 mg/kg (rabbit)                    |

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 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.

- Carcinogenic categories

  - IARC (International Agency for Research on Cancer)
    7631-86-9 silicon dioxide, chemically prepared 3

  - 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 Not easily biodegradable

- 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.

(Contd. on page 6)
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, IMDG, IATA: not regulated

- UN proper shipping name
  DOT, 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):
  None of the ingredients is listed.

- Section 313 (Specific toxic chemical listings):
  1344-28-1 aluminium oxide

- TSCA (Toxic Substances Control Act):
  All components have the value ACTIVE.

- 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.
Safety Data Sheet
acc. to OSHA HCS

Printing date 04/30/2020
Last revision 04/28/2020

Version 3.0

Product name: Colloidal Silica/Alumina Polishing Solution, 0.05 micron

(Ctd. of page 6)

· Carcinogenic categories

<table>
<thead>
<tr>
<th>EPA (Environmental Protection Agency)</th>
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<table>
<thead>
<tr>
<th>TLV (Threshold Limit Value established by ACGIH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1344-28-1 aluminium oxide</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NIOSH-Ca (National Institute for Occupational Safety and Health)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
</tbody>
</table>

· 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: 04/28/2020 / 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)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
tPvB: 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
Acute Tox. 4: Acute toxicity – Category 4