1 Identification

· Product name: Colloidal Silica Suspension, Non-Crystallizing, 0.02 micron
· Part number: 180-40000, 180-40010, 180-40015
· 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)

Health = 0
Fire = 0
Reactivity = 0

· HMIS-ratings (scale 0 - 4)

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 Suspension, Non-Crystallizing, 0.02 micron

(Contd. of page 1)

<table>
<thead>
<tr>
<th>Hazardous Components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7631-86-9 silicon dioxide, chemically prepared</td>
<td>25-50%</td>
</tr>
<tr>
<td>57-55-6 propylene glycol</td>
<td>10-25%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-hazardous Components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7732-18-5 water, distilled, conductivity or of similar purity</td>
<td>50-100%</td>
</tr>
</tbody>
</table>

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 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: 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

<table>
<thead>
<tr>
<th>PAC-1:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7631-86-9 silicon dioxide, chemically prepared</td>
<td>18 mg/m³</td>
</tr>
<tr>
<td>57-55-6 propylene glycol</td>
<td>30 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-2:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7631-86-9 silicon dioxide, chemically prepared</td>
<td>740 mg/m³</td>
</tr>
<tr>
<td>57-55-6 propylene glycol</td>
<td>1,300 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-3:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7631-86-9 silicon dioxide, chemically prepared</td>
<td>4,500 mg/m³</td>
</tr>
<tr>
<td>57-55-6 propylene glycol</td>
<td>7,900 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: No special measures required.

(Contd. on page 3)
Safety Data Sheet  
acc. to OSHA HCS

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

Product name: Colloidal Silica Suspension, Non-Crystallizing, 0.02 micron

- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles:
    Use polyolefine receptacles.
    Unsuitable material for receptacle: steel.
- Information about storage in one common storage facility: Store away from foodstuffs.
- Further information about storage conditions: Protect from frost.
- 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>
<tr>
<td>WEEL</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: Not required.
- Material of gloves
  Nitrile rubber, NBR
  Recommended thickness of the material: ≥ 0.4 mm
- Penetration time of glove material
  Break through time: >10 min.
  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: Light blue
  - Odor: Odorless
  - Odor threshold: Not determined.
- pH-value at 20 °C (68 °F): 10.5
- Change in condition
  - Melting point/Melting range: Undetermined.
  - Boiling point/Boiling range: 100 °C (212 °F)
- Flash point: Not applicable.
- Flammability (solid, gaseous): Not applicable.
- Decomposition temperature: Not determined.
Product name: Colloidal Silica Suspension, Non-Crystallizing, 0.02 micron

(Contd. of page 3)

- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - Lower: Not determined.
  - Upper: Not determined.
- **Vapor pressure at 20 °C (68 °F):** 23 hPa (17.3 mm Hg)
- **Density at 20 °C (68 °F):** 1.2 g/cm³ (10.014 lbs/gal)
- **Relative density** Not determined.
- **Vapor density** Not determined.
- **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:**
  - Organic solvents: 16.7 %
  - Water: 54.2 %
  - VOC content: 16.67 %
    - 200.0 g/l / 1.67 lb/gal
- **Solids content:** 29.2 %
- **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** Freezing conditions
- **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:**
    - **ATE (Acute Toxicity Estimate)**
      - Oral LD50: 12,000 mg/kg (rat)
      - Dermal LD50: 6,891 mg/kg (rabbit)
    - **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)

(Contd. on page 5)
Product name: Colloidal Silica Suspension, Non-Crystallizing, 0.02 micron

· 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

<table>
<thead>
<tr>
<th>IARC (International Agency for Research on Cancer)</th>
<th>7631-86-9 silicon dioxide, chemically prepared</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTP (National Toxicology Program)</td>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td>OSHA-Ca (Occupational Safety &amp; Health Administration)</td>
<td>None of the ingredients is listed.</td>
</tr>
</tbody>
</table>

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

14 Transport information

<table>
<thead>
<tr>
<th>UN-Number DOT, IMDG, IATA</th>
<th>not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name DOT, IMDG, IATA</td>
<td>not regulated</td>
</tr>
<tr>
<td>Transport hazard class(es) DOT, ADN, IMDG, IATA</td>
<td>not regulated</td>
</tr>
<tr>
<td>Class</td>
<td>not regulated</td>
</tr>
<tr>
<td>Packing group DOT, IMDG, IATA</td>
<td>not regulated</td>
</tr>
</tbody>
</table>
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):**
      - None of the ingredients is listed.
    - **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.
  - **Carcinogenic categories**
    - **EPA (Environmental Protection Agency)**
      - None of the ingredients is listed.
    - **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 / 1.0
- **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
Product name: Colloidal Silica Suspension, Non-Crystallizing, 0.02 micron

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
Acute Tox. 4: Acute toxicity – Category 4