1 Identification

· **Product name:** Cerium Oxide Suspension, 0.5 micron
· **Part number:** 90-187915
· **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**

  ![GHS08 Health hazard]

  STOT SE 2  H371  May cause damage to the digestive system.
  STOT RE 2  H373  May cause damage to the respiratory system through prolonged or repeated exposure.

  ![GHS07]

  Skin Irrit. 2  H315  Causes skin irritation.

  Eye Irrit. 2B  H320  Causes eye irritation.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

  ![GHS07]
  ![GHS08]
Product name: Cerium Oxide Suspension, 0.5 micron

- **Signal word** Warning
- **Hazard statements**
  - Causes skin and eye irritation.
  - May cause damage to the digestive system.
  - May cause damage to the respiratory system through prolonged or repeated exposure.
- **Precautionary statements**
  - Do not breathe dust/fume/gas/mist/vapors/spray.
  - Wear protective gloves.
  - Wash thoroughly after handling.
  - Do not eat, drink or smoke when using this product.
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - Specific treatment (see on this label).
  - If skin irritation occurs: Get medical advice/attention.
  - If eye irritation persists: Get medical advice/attention.
  - Get medical advice/attention if you feel unwell.
  - If on skin: Wash with plenty of water.
  - IF exposed or concerned: Call a poison center/doctor.
  - Take off contaminated clothing and wash it before reuse.
  - Store locked up.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**
  - **NFPA ratings (scale 0 - 4)**
    - Health = 1
    - Fire = 0
    - Reactivity = 0
  - **HMIS-ratings (scale 0 - 4)**
    - Health = 1
    - Fire = 0
    - Reactivity = 0
  - **Other hazards**
    - **Results of PBT and vPvB assessment**
      - PBT: Not applicable.
      - vPvB: Not applicable.

### 3 Composition/information on ingredients

- **Description:** Mixture of the substances listed below with nonhazardous additions.

#### Hazardous Components:

- 1306-38-3 cerium dioxide 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**
  - **After inhalation:** Supply fresh air; consult doctor in case of complaints.
  - **After skin contact:** Generally the product does not irritate the skin.
5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents:
  CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- 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: Do not allow to enter sewers/surface or ground 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.

7 Handling and storage

- Handling:
  Precautions for safe handling: No special precautions are necessary if used correctly.
  Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities
- Storage:
  Requirements to be met by storerrooms and receptacles: 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
- Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Substance</th>
<th>PEL</th>
<th>Long-term value: 10 mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>1306-38-3 cerium dioxide</td>
<td>TLV</td>
<td>Long-term value: 10 mg/m³</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: Not required.
- Protection of hands:
  The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
  Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- 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
  - Form: Fluid
  - Color: Yellow-brown
  - Odor: Odorless
  - Odour 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.

  - Ignition temperature:
    Decomposition temperature: Not determined.

  - 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:
    Not determined.

  - Density at 20 °C (68 °F):
    1.9198 g/cm³ (16.021 lbs/gal)

  - Relative density:
    Not determined.

  - Vapour density:
    Not determined.

  - Evaporation rate:
    Not determined.
Product name: Cerium Oxide Suspension, 0.5 micron

| · Solubility in / Miscibility with Water: | Not miscible or difficult to mix. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity: | 
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Solvent content: | 
| Organic solvents: | 0.0 % |
| Water: | 85.0 % |
| · Solids content: | 15.0 % |
| · Other information | No further relevant information available. |

10 Stability and reactivity

· Reactivity
· 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: Carbon monoxide and carbon dioxide
· Additional information: Hazardous decomposition products occur during combustion.

11 Ecological information

· Toxicity
· Aquatic toxicity: No further relevant information available.
· Persistence and degradability: No further relevant information available.
13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **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 MARPOL 73/78 and the IBC Code**
  - Not applicable.

- **UN "Model Regulation"**
  - -

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: Cerium Oxide Suspension, 0.5 micron**

### 313 (Specific toxic chemical listings):
- None of the ingredients is listed.

### TSCA (Toxic Substances Control Act):
- All ingredients are 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)**
  - 1306-38-3 cerium dioxide II
- **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
- **Date of preparation / last revision** 06/24/2015 / -
- **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
  - 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)
  - Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
  - Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B
  - STOT SE 2: Specific target organ toxicity - Single exposure, Hazard Category 2
  - STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2