1 Identification

· Product name: Silicon Carbide Grinding Stone
· Part number: 81-10905, 81-10910
· 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@alliedhihtech.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
  Carc. 1A H350 May cause cancer.
· Additional information:
  Classification may change depending on the exact product composition.
  All components listed for this product are bound within the product. When handled as intended and under normal conditions of use, there is no evidence that any of the ingredients are released in amounts that pose a significant health risk.
· Label elements
  · GHS label elements
    The product is classified and labeled according to the Globally Harmonized System (GHS).
  · Hazard pictograms
    GHS08
· Signal word: Danger
· Hazard-determining components of labeling:
  Quartz (SiO2)
· Hazard statements
  May cause cancer.
· Precautionary statements
  Obtain special instructions before use.

(Contd. on page 2)
Product name: Silicon Carbide Grinding Stone

Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
IF exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:
  · NFPA ratings (scale 0 - 4)
    - Health = 0
    - 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

· Chemical characterization: Mixtures
· Description: Mixture of the substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Hazardous Components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>409-21-2 silicon carbide</td>
<td>50-100%</td>
</tr>
<tr>
<td>13463-67-7 titanium dioxide</td>
<td>Care. 2, H351 ≥0.1-≤1%</td>
</tr>
<tr>
<td>14808-60-7 Quartz (SiO2)</td>
<td>Care. 1A, H350 ≥0.1-≤1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-hazardous Components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass or glass porcelain</td>
<td>25-50%</td>
</tr>
<tr>
<td>Unknown</td>
<td>10-25%</td>
</tr>
</tbody>
</table>

· Additional information: Unknown ingredient may contain concentrations of one of the following treatments: sulfur, paraffin or resin.

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.
  · 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: No special measures required.
Safety Data Sheet
acc. to OSHA HCS

Printing date 05/01/2020
Version 2.0
Last revision 05/01/2020

Product name: Silicon Carbide Grinding Stone

(Contd. of page 2)

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.
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- 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>409-21-2 silicon carbide</td>
<td>45 mg/m³</td>
</tr>
<tr>
<td>13463-67-7 titanium dioxide</td>
<td>30 mg/m³</td>
</tr>
<tr>
<td>14808-60-7 Quartz (SiO2)</td>
<td>0.075 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-2:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>409-21-2 silicon carbide</td>
<td>500 mg/m³</td>
</tr>
<tr>
<td>13463-67-7 titanium dioxide</td>
<td>330 mg/m³</td>
</tr>
<tr>
<td>14808-60-7 Quartz (SiO2)</td>
<td>33 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAC-3:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>409-21-2 silicon carbide</td>
<td>3,000 mg/m³</td>
</tr>
<tr>
<td>13463-67-7 titanium dioxide</td>
<td>2,000 mg/m³</td>
</tr>
<tr>
<td>14808-60-7 Quartz (SiO2)</td>
<td>200 mg/m³</td>
</tr>
</tbody>
</table>

7 Handling and storage

- Handling:
  - Precautions for safe handling Open and handle receptacle with care.
  - Information about protection against explosions and fires: Keep respiratory protective device available.
- 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: Not required.
  - Further information about storage conditions:
    Keep receptacle tightly sealed.
    Store receptacle in a well ventilated area.
  - 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:
    | 409-21-2 silicon carbide |
    |--------------------------|
    | PEL                      |
    | Long-term value: 15* 5** mg/m³ |
    | fibrous dust: *total dust **respirable fraction |
Product name: Silicon Carbide Grinding Stone

(REL) Long-term value: 10* 5** mg/m³
*total dust **respirable fraction
TLV Long-term value: 10* 3** mg/m³
fibrous dust: 0.1 f/cc; nonfibrous: *inh., **resp.

13463-67-7 titanium dioxide

PEL Long-term value: 15* mg/m³
*total dust
TLV Long-term value: 10 mg/m³

14808-60-7 Quartz (SiO2)

PEL Long-term value: 0.05* mg/m³
*resp. dust; 30mg/m³/%SiO2+2
REL Long-term value: 0.05* mg/m³
*respirable dust
TLV Long-term value: 0.025* mg/m³
*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:
    Keep away from foodstuffs, beverages and feed.
    Wash hands before breaks and at the end of work.
    Store protective clothing separately.
  - Breathing equipment: Use suitable respiratory protective device when high concentrations are present.
  - Protection of hands:

    Protective gloves

    The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
    Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

  - Material of gloves Leather gloves
  - 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:

    Tightly sealed goggles

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information
- Appearance:
  - Form: Solid
  - Color: Various colors
  - Odor: Light
  - Odor threshold: Not determined.
- pH-value: Not applicable.
- Change in condition
  - Melting point/Melting range: Undetermined.
Product name: Silicon Carbide Grinding Stone

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling point/Boiling range</td>
<td>Undetermined.</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Flammability (solid, gaseous)</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Auto igniting</td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td>Danger of explosion</td>
<td>Product does not present an explosion hazard.</td>
</tr>
<tr>
<td>Explosion limits</td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Upper</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.5-3.1</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Solubility in / Miscibility with Water</td>
<td>Slightly soluble.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Dynamic</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Kinematic</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Solvent content</td>
<td></td>
</tr>
<tr>
<td>VOC content</td>
<td>0.00 %</td>
</tr>
<tr>
<td>Solids content</td>
<td>100.0 %</td>
</tr>
<tr>
<td>Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

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.
  - Keep away from alkaline solutions.
- 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:

<table>
<thead>
<tr>
<th></th>
<th>ATE (Acute Toxicity Estimate)</th>
<th>409-21-2 silicon carbide</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Oral</td>
<td>LD50</td>
</tr>
<tr>
<td></td>
<td>Dermal</td>
<td>LD50</td>
</tr>
</tbody>
</table>
Product name: Silicon Carbide Grinding Stone

13463-67-7 titanium dioxide

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50</th>
<th>LC50/4 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>&gt;20,000 mg/kg (rat)</td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>&gt;10,000 mg/kg (rabbit)</td>
<td></td>
</tr>
<tr>
<td>Inhalative</td>
<td>&gt;6.82 mg/l (rat)</td>
<td></td>
</tr>
</tbody>
</table>

- 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
- Carcinogenic categories

<table>
<thead>
<tr>
<th>IARC (International Agency for Research on Cancer)</th>
<th>NTP (National Toxicology Program)</th>
<th>OSHA-Ca (Occupational Safety &amp; Health Administration)</th>
</tr>
</thead>
<tbody>
<tr>
<td>409-21-2 silicon carbide 2A</td>
<td>14808-60-7 Quartz (SiO2) K</td>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td>13463-67-7 titanium dioxide 2B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14808-60-7 Quartz (SiO2) 1</td>
<td></td>
<td></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: 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.

14 Transport information

- UN-Number
  - DOT, ADN, IMDG, IATA: not regulated
- UN proper shipping name
  - DOT, ADN, IMDG, IATA: not regulated
Product name: Silicon Carbide Grinding Stone

(Contd. of page 6)

- 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):
    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:
    13463-67-7 titanium dioxide
    14808-60-7 Quartz (SiO2)

  - 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)
    - 409-21-2 silicon carbide A2
    - 13463-67-7 titanium dioxide A4
    - 14808-60-7 Quartz (SiO2) A2

  - NIOSH-Ca (National Institute for Occupational Safety and Health)
    - 13463-67-7 titanium dioxide
    - 14808-60-7 Quartz (SiO2)

(Contd. on page 8)
Product name: Silicon Carbide Grinding Stone

· National regulations:
· Information about limitation of use:
  Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.
· 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: 05/01/2020 / 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
  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
  Care: 1A: Carcinogenicity – Category 1A
  Care: 2: Carcinogenicity – Category 2