1 Identification

- **Product name:** Silicon Carbide Powder
- **Part number:** 90-130130 - 90-130180
- **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**

  ![GHS08 Health hazard](image)
  Carc. 1A  H350  May cause cancer.

  ![GHS07](image)
  STOT SE 3  H335  May cause respiratory irritation.

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

  ![GHS07](image)  ![GHS08](image)

- **Signal word** Danger
- **Hazard-determining components of labeling:**
  Quartz (SiO2)
Safety Data Sheet
acc. to OSHA HCS

Product name: Silicon Carbide Powder

- Hazard statements
  May cause cancer.
  May cause respiratory irritation.
- Precautionary statements
  Obtain special instructions before use.
  Do not handle until all safety precautions have been read and understood.
  Avoid breathing dust/fume/gas/mist/vapors/spray
  Use only outdoors or in a well-ventilated area.
  Wear protective gloves/protective clothing/eye protection/face protection.
  IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  IF exposed or concerned: Get medical advice/attention.
  Call a poison center/doctor if you feel unwell.
  Store in a well-ventilated place. Keep container tightly closed.
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.
- Classification system:
  - NFPA ratings (scale 0 - 4)
    Health = 2
    Fire = 0
    Reactivity = 0
  - HMIS-ratings (scale 0 - 4)
    HEALTH 2
    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.

- Hazardous Components:
  | 409-21-2 | silicon carbide | 50-100% |
  | 7440-21-3 | silicon | Flam. Sol. 2, H228 | ≤2.5% |
  | 7429-90-5 | aluminium powder (stabilised) | Flam. Sol. 1, H228; Water-react. 2, H261 | ≤2.5% |
  | 14808-60-7 | quartz (SiO2) | Cac. 1A, H350 | ≤2.5% |
- Non-hazardous Components:
  | 7439-89-6 | iron | ≤2.5% |

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.
Product name: Silicon Carbide Powder

- **After swallowing**: If symptoms persist consult doctor.
- **Information for doctor:**
  - **Most important symptoms and effects, both acute and delayed**
    - Coughing
    - Breathing difficulty
    - Gastric or intestinal disorders
  - **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**: Do not allow to enter sewers/surface or ground water.
- **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**

  - **PAC-1**:
    - 409-21-2 silicon carbide: 45 mg/m³
    - 7440-21-3 silicon: 45 mg/m³
    - 7439-89-6 iron: 3.2 mg/m³
    - 14808-60-7 Quartz (SiO2): 0.075 mg/m³

  - **PAC-2**:
    - 409-21-2 silicon carbide: 500 mg/m³
    - 7440-21-3 silicon: 100 mg/m³
    - 7439-89-6 iron: 35 mg/m³
    - 14808-60-7 Quartz (SiO2): 33 mg/m³

  - **PAC-3**:
    - 409-21-2 silicon carbide: 3,000 mg/m³
    - 7440-21-3 silicon: 630 mg/m³
    - 7439-89-6 iron: 150 mg/m³
    - 14808-60-7 Quartz (SiO2): 200 mg/m³

(Contd. on page 4)
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.
· 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:

<table>
<thead>
<tr>
<th>Component</th>
<th>PEL Long-term value: 15* 5** mg/m³</th>
<th>REL Long-term value: 10* 5** mg/m³</th>
<th>TLV Long-term value: 10* 3** mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>409-21-2 silicon carbide</td>
<td>fibrous dust: *total dust **respirable fraction</td>
<td>*total dust **respirable fraction</td>
<td>fibrous dust:0.1 f/cc; nonfibrous:*inh.,**resp.</td>
</tr>
<tr>
<td>7440-21-3 silicon</td>
<td>PEL Long-term value: 15* 5** mg/m³</td>
<td>REL Long-term value: 10* 5** mg/m³</td>
<td>TLV Long-term value: 10* 5** mg/m³</td>
</tr>
<tr>
<td>7429-90-5 aluminium powder (stabilised)</td>
<td>PEL Long-term value: 15*, 5** mg/m³</td>
<td>REL Long-term value: 10* 5** mg/m³</td>
<td>TLV Long-term value: 1* mg/m³</td>
</tr>
<tr>
<td>14808-60-7 Quartz (SiO2)</td>
<td>PEL Long-term value: 0.05* mg/m³</td>
<td>REL Long-term value: 0.05* mg/m³</td>
<td>TLV Long-term value: 0.025* mg/m³</td>
</tr>
</tbody>
</table>

· Additional information: The lists that were valid during the creation were used as basis.
Product name: Silicon Carbide Powder

- 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:
    Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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
  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:

Tightly sealed goggles

9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance:
      Form: Powder
      Color: Dark grey
      Odor: Odorless
      Odor threshold: Not determined.
    - pH-value: Not applicable.

- Change in condition
  Melting point/Melting range: ~2,700 °C (~4,892 °F)
  Boiling point/Boiling range: Undetermined.

- Flash point: Not applicable.

- Flammability (solid, gaseous): Not determined.

- Decomposition temperature: Not determined.

- Auto igniting: Product is not selfigniting.

- Danger of explosion: Product does not present an explosion hazard.
Product name: Silicon Carbide Powder

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

- **Vapor pressure:** Not applicable.

- **Density at 20 °C (68 °F):** 3.2 g/cm³ (26.704 lbs/gal)
- **Relative density** Not determined.
- **Vapor density** Not applicable.
- **Evaporation rate** Not applicable.

- **Solubility in / Miscibility with Water:** Insoluble.

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**
  - Dynamic: Not applicable.
  - Kinematic: Not applicable.

- **Solvent content:**
  - 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.
- **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**
  - Water
    - Keep away from oxidising agents and acidic substances.
    - Do not mix with alkalis.
- **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 2,090 mg/kg (rat)
      - Dermal LD₅₀ 2,090 mg/kg (rat)
    - 409-21-2 silicon carbide
      - Oral LD₅₀ 2,010 mg/kg (rat)
      - Dermal LD₅₀ 2,010 mg/kg (rat)
Product name: Silicon Carbide Powder

<table>
<thead>
<tr>
<th>7440-21-3 silicon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</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**
  - IARC (International Agency for Research on Cancer)
    - 14808-60-7 Quartz (SiO2) I
  - NTP (National Toxicology Program)
    - 14808-60-7 Quartz (SiO2) K
  - 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: 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: Generally 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 Powder

- Transport hazard class(es)
  - DOT, ADN, IMDG, IATA
    - Class: not regulated

- Packing group
  - DOT, IMDG, IATA
    - Class: 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": 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):
  - 409-21-2 silicon carbide
  - 7440-21-3 silicon
  - 7439-89-6 iron
  - 14808-60-7 Quartz (SiO2)

- TSCA new (21st Century Act) (Substances not listed)
  - 7429-90-5 aluminium powder (stabilised)

- Proposition 65

  - Chemicals known to cause cancer:
    - 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

(Contd. on page 9)
Product name: Silicon Carbide Powder

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

National regulations:
- Additional classification according to Decree on Hazardous Materials:
  Carcinogenic hazardous material group III (dangerous).
- 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
- Date of preparation / last revision 06/14/2018 / -
- 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
  ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  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
  Flam. Sol. 1: Flammable solids – Category 1
  Flam. Sol. 2: Flammable solids – Category 2
  Water-react. 2: Substances and mixtures which in contact with water emit flammable gases – Category 2
  Carc. 1A: Carcinogenicity – Category 1A
  STOT SE 3: Specific target organ toxicity (single exposure) – Category 3