Material Safety Data Sheet: Orange Silica Gel

1. Identification of the substance/preparation and the company
   Substance: Orange Silica Gel
   Application: Drying Agent
   Company: IMPAK Corporation
   13700 South Broadway
   Los Angeles, CA 90061

2. Composition/Information of ingredients
   Chemical Description: Orange to green indicating silica gel
   Formula: SiO₂
   CAS (R Phrase Classification): 112926-00-8 amorphous silica 98.2%, Activated coloring agent 0.2% max

3. Hazards Identification
   Do not breathe dust or exceed the exposure limits.

4. First-aid measures
   Inhalation: Remove from source of exposure.
   Skin Contact: Wash spillage from skin with soap and water.
   Eyes Contact: Wash immediately with copious amounts of water and obtain medical attention.
   Ingestion: Wash out mouth with water. If large amount swallowed or symptoms develop, consult a doctor.

5. Fire-fighting measures

6. Accidental release measures
   Personnel Precautions: Do not inhale. Wear appropriate protective clothing. Dust mask essential if conditions are dusty. See section 8 for exposure limits.
   Spillages: Contain spillage. Collect in suitable containers for recovery or disposal. During collection avoid creating dust.

7. Handling and Storage
   Handling: Avoid creating any dust. Do not smoke. During handling electrostatic charges can accumulate.
   Storage: All containers must be closed air tight and kept in a dry place.
8. **Exposure controls/personal protection**

**Occupational Exposure Standards:**

- **Synthetic amorphous silica:**
  - Silica amorphous: total inhalable dust: UK EH40; OES 6mg/m³ 8h TWA
  - Silica amorphous: respirable dust: UK EH40; OES 2.4 mg/m³ 8h TWA
  - Silica gel: ACGIH: TLV 10mg/m³ 8h TWA
  - Activation agent: ACGIH: 0.5mg/m³ 8h TWA

**Engineering Control Measures:** Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.

**Respiratory Protection:** Avoid inhalation of dust. Wear suitable respiratory protective equipment if working in confined spaces with inadequate ventilation or whenever there is any risk of the exposure limits being exceeded.

**Hand Protection:** Wear protective gloves.

**Eyes Protection:** Wear suitable eye protection

**Protection during application:** Handle in well ventilated conditions in accordance with good industrial hygiene and safety practices

9. **Physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>beads</td>
</tr>
<tr>
<td>Color</td>
<td>Dry: yellow/orange</td>
</tr>
<tr>
<td></td>
<td>Saturated: Green</td>
</tr>
<tr>
<td>Odor</td>
<td>odorless</td>
</tr>
<tr>
<td>PH Value</td>
<td>2-10 at 5% w/w in water</td>
</tr>
<tr>
<td>Melting point</td>
<td>&gt;1000 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>not determined</td>
</tr>
<tr>
<td>Inflammability</td>
<td>no</td>
</tr>
<tr>
<td>Ignition temperature</td>
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</tr>
<tr>
<td>Spontaneous flammability</td>
<td>not determined</td>
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<tr>
<td>Fire-promoting</td>
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<tr>
<td>Properties</td>
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<tr>
<td>Explosive limits</td>
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</tr>
<tr>
<td>Vapor pressure</td>
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</tr>
<tr>
<td>Bulk density</td>
<td>720 kg/m³ (typical)</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>less 1.0% in weight</td>
</tr>
<tr>
<td>Fat Solubility</td>
<td>not determined</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>n-octanol/water</td>
</tr>
<tr>
<td></td>
<td>not determined</td>
</tr>
</tbody>
</table>

10. **Stability and reactivity**

- **Stability:** Hygroscopic
- **Conditions to Avoid:** High temperatures in excess of 155 °C
- **Materials to Avoid:** none known
- **Hazardous Decomposition:** Hygroscopic material

11. **Toxicological Information**

- **Toxicity:** The lethal dose for humans for synthetic amorphous silica is estimated at over 15,000 mg/kg.
- **Health Effects Inhalation:** Synthetic amorphous silica gel has little adverse effect on lungs and does not produce sighting disease or toxic effect when exposure is kept below the permitted limits. However, existing medical conditions (eg. asthma, bronchitis) aggravated by exposure to dust. Effects of them may be greater, and occur at lower levels exposure in smokers compared to non-smoker
- **Eye Contact:** Dust may cause discomfort and mild irritation.
- **Skin Contact:** Dust may have a drying effect on the skin
- **Carcinogenicity:** Amorphous silica is not classifiable as to it carcinogenicity to humans (Group 3)
12. Ecological information

Ecotoxicity: Synthetic amorphous silica is virtually inert. Has no known adverse effect on the environment.

13. Disposal Considerations

Product Disposal: Product can be reactivated in an oven for re-use. This material is not classified as hazardous waste under EEC Directive 91/689/EEC. Dispose of in accordance with all applicable local and national regulations. This material is not classified as special waste under UK Special Waste Regulations 1996 and can be disposed of by landfill at an approved site.

14. Transport information

UN Class: Not classified as dangerous goods under the United Nations Transport Recommendations.

15. Regulatory information

EC Classification: This product is not classified as dangerous
S phrases: Handle in accordance with good industrial hygiene and safety practices. Avoid inhalation of dust.
EINECS Listing: Preparation - all components listed
TSCA Listing: Mixture - all components listed
AICS Listing: Mixture - all components listed
DSL/NDSL (Canadian) Listing: Mixture - all components listed

16. Other Information

None

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The above details do not imply any guarantee concerning composition, properties, or performance.