**Section 1. Identification**

<table>
<thead>
<tr>
<th>1.1 Product identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product name</strong></td>
</tr>
<tr>
<td><strong>Part No.</strong></td>
</tr>
<tr>
<td><strong>Validation date</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.2 Relevant identified uses of the substance or mixture and uses advised against</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Material uses</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.3 Details of the supplier of the safety data sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Supplier/Manufacturer</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.4 Emergency telephone number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In case of emergency</strong></td>
</tr>
</tbody>
</table>

**Section 2. Hazards identification**

<table>
<thead>
<tr>
<th>2.1 Classification of the substance or mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OSHA/HCS status</strong></td>
</tr>
<tr>
<td><strong>Classification of the substance or mixture</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.2 GHS label elements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Signal word</strong></td>
</tr>
<tr>
<td><strong>Hazard statements</strong></td>
</tr>
<tr>
<td><strong>Precautionary statements</strong></td>
</tr>
<tr>
<td><strong>Prevention</strong></td>
</tr>
<tr>
<td><strong>Response</strong></td>
</tr>
<tr>
<td><strong>Storage</strong></td>
</tr>
<tr>
<td><strong>Disposal</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.3 Other hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hazards not otherwise classified</strong></td>
</tr>
</tbody>
</table>

**Date of issue**: 11/15/2017
Section 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica, amorphous, precipitated and gel</td>
<td>100</td>
<td>112926-00-8</td>
</tr>
</tbody>
</table>

Note: The hazard information listed is based on unbonded silica gel CAS Number 112926-00-8. To the best of our knowledge, the acute and chronic toxicological properties of bonded silica gels have not been investigated. This product contains synthetic amorphous silica, and should not be confused with crystalline silica such as quartz, cristobalite, or tridymite, or with diatomaceous earth or other naturally occurring forms of amorphous silica that frequently contain crystalline forms of silica.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion: Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Inhalation: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact: No known significant effects or critical hazards.

Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following: irritation redness

Inhalation: Adverse symptoms may include the following: respiratory tract irritation coughing

Skin contact: No specific data.

Ingestion: No specific data.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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Section 4. First aid measures

Specific treatments : No specific treatment.
Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media
Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture
Specific hazards arising from the chemical : No specific fire or explosion hazard.
Hazardous thermal decomposition products : Decomposition products may include the following materials: metal oxide/oxides

5.3 Advice for firefighters
Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing dust. Put on appropriate personal protective equipment.
For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up
Methods for cleaning up : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
Section 7. Handling and storage

7.1 Precautions for safe handling

**Protective measures**: Put on appropriate personal protective equipment (see Section 8). Avoid breathing dust.

**Advice on general occupational hygiene**: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

**Recommendations**: Industrial applications, Professional applications.

**Industrial sector specific solutions**: Not applicable.

Section 8. Exposure controls/personal protection

8.1 Control parameters

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica, amorphous, precipitated and gel</td>
<td>OSHA PEL 1989 (United States, 3/1989). TWA: 6 mg/m³ 8 hours. NIOSH REL (United States, 10/2016). TWA: 6 mg/m³ 10 hours.</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

**Appropriate engineering controls**: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Environmental exposure controls**: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**

**Hygiene measures**: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. If operating conditions cause high dust concentrations to be produced, use dust goggles.

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Section 8. Exposure controls/personal protection

**Skin protection**

**Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Body protection**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection**

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

**Appearance**

**Physical state**

Solid. [Powder. (5.0 μm)]

**Color**

White.

**Odor**

Odorless.

**Odor threshold**

Not available.

**pH**

Not available.

**Melting point**

Not available.

**Boiling point**

Not available.

**Flash point**

Not available.

**Evaporation rate**

Not available.

**Flammability (solid, gas)**

Not available.

**Lower and upper explosive (flammable) limits**

Not available.

**Vapor pressure**

Not available.

**Vapor density**

Not available.

**Relative density**

Not available.

**Solubility**

Insoluble in the following materials: cold water and hot water.

**Partition coefficient: n-octanol/water**

Not available.

**Auto-ignition temperature**

Not available.

**Decomposition temperature**

Not available.

**Viscosity**

Not available.

Section 10. Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

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Section 10. Stability and reactivity

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : May react or be incompatible with oxidizing materials.
Incompatible with hydrogen fluoride.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica, amorphous, precipitated and gel</td>
<td>LC50 Inhalation Dusts and mists</td>
<td>Rat</td>
<td>&gt;58.8 mg/l</td>
<td>4 hours</td>
</tr>
</tbody>
</table>

Irritation/Corrosion
Not available.

Sensitization
Not available.

Mutagenicity
Not available.

Carcinogenicity
Not available.

Classification

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica, amorphous, precipitated and gel</td>
<td>-</td>
<td>3</td>
<td>-</td>
</tr>
</tbody>
</table>

Reproductive toxicity
Not available.

Teratogenicity
Not available.

Specific target organ toxicity (single exposure)
Not available.

Specific target organ toxicity (repeated exposure)
Not available.

Aspiration hazard
Not available.

Information on the likely routes of exposure

| Potential acute health effects | Routes of entry anticipated: Oral, Dermal, Inhalation. |

Eye contact : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

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Section 11. Toxicological information

**Skin contact** : No known significant effects or critical hazards.
**Ingestion** : No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact** : Adverse symptoms may include the following:
- irritation
- redness

**Inhalation** : Adverse symptoms may include the following:
- respiratory tract irritation
- coughing

**Skin contact** : No specific data.
**Ingestion** : No specific data.

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

**Potential immediate effects** : Not available.
**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.
**Potential delayed effects** : Not available.

**Potential chronic health effects**

- **General** : Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
- **Carcinogenicity** : No known significant effects or critical hazards.
- **Mutagenicity** : No known significant effects or critical hazards.
- **Teratogenicity** : No known significant effects or critical hazards.
- **Developmental effects** : No known significant effects or critical hazards.
- **Fertility effects** : No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates**
Not available.

Section 12. Ecological information

**12.1 Toxicity**
Not available.

**12.2 Persistence and degradability**

**Conclusion/Summary** : Based on chemical experience, will degrade over very long period of time.

**12.3 Bioaccumulative potential**
Not available.
Section 12. Ecological information

12.4 Mobility in soil

Soil/water partition coefficient ($K_{OC}$) : Not available.

12.5 Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

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Section 15. Regulatory information

| Clean Air Act Section 602 Class II Substances | Not listed |
| DEA List I Chemicals (Precursor Chemicals) | Not listed |
| DEA List II Chemicals (Essential Chemicals) | Not listed |
| **SARA 302/304** |  |
| **Composition/information on ingredients** |  |
| No products were found. |  |
| **SARA 304 RQ** | Not applicable. |
| **SARA 311/312** |  |
| **Classification** | Not applicable. |
| **Composition/information on ingredients** |  |
| No products were found. |  |

**State regulations**

| Massachusetts | This material is listed. |
| New York | This material is not listed. |
| New Jersey | This material is listed. |
| Pennsylvania | This material is listed. |

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**
Not listed.

**Montreal Protocol (Annexes A, B, C, E)**
Not listed.

**Stockholm Convention on Persistent Organic Pollutants**
Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**
Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**
Not listed.

**Inventory list**

| Australia | This material is listed or exempted. |
| Canada | This material is listed or exempted. |
| China | This material is listed or exempted. |
| Europe | This material is listed or exempted. |
| Japan | **Japan inventory (ENCS)**: This material is listed or exempted. **Japan inventory (ISHL)**: This material is listed or exempted. |
| Malaysia | This material is listed or exempted. |
| New Zealand | This material is listed or exempted. |
| Philippines | This material is listed or exempted. |
| Republic of Korea | This material is listed or exempted. |
| Taiwan | This material is listed or exempted. |
| Thailand | Not determined. |

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Section 15. Regulatory information

Turkey : This material is listed or exempted.
United States : Not determined.
Viet Nam : Not determined.

Section 16. Other information

History
Date of issue : 11/15/2017
Date of previous issue : 02/29/2016.
Version : 5

Indicates information that has changed from previously issued version.

Notice to reader

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