SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier
Product Name: Gasil HP290
Synthetic amorphous silica

CAS No.: 112926-00-8 *
EINECS No.: 231-545-4

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified use(s): Additive for use in a wide range of applications including paper, paints and coatings. ; Ink adsorption ; Matting agent ; Process regulator or aid ;

Uses advised against: None known.

1.3 Details of the supplier of the safety data sheet
Company Identification: PQ Corporation
P.O. Box 840
Valley Forge
PA 19482
USA

Telephone: +1 610-651-4200
E-Mail (competent person): sds.uk@pqcorp.com

1.4 Emergency telephone number
Emergency Phone No.: +1 800-424-9300

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
GHS Classification: Not classified as dangerous for supply/use.

EC Classification: Not classified as dangerous for supply/use.

Hazard summary: Exposure to any kind of dust is potentially harmful.

2.2 Label elements
Signal word(s): None.

Hazard statement(s): None.

Precautionary statement(s): None.

2.3 Other hazards
Not applicable.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>%W/W</th>
<th>CAS No.</th>
<th>EINECS No. / REACH Registration</th>
<th>Hazard symbol(s) and hazard statement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synthetic amorphous silica</td>
<td>&gt; 95 %</td>
<td>112926-00-8 *</td>
<td>231-545-4 01-2119379499-16</td>
<td>Not classified</td>
</tr>
<tr>
<td>Water</td>
<td>&lt; 5 %</td>
<td>7732-18-5</td>
<td>231-791-2</td>
<td></td>
</tr>
</tbody>
</table>

Revision: EU/GHS v1
Date of Issue: 09/2013
Date Previous Issue: 07/2008
SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures
Eye Contact
If substance has got into the eyes, immediately wash out with plenty of water. Obtain immediate medical attention.

Skin Contact
Wash affected skin with plenty of water. If symptoms develop, obtain medical attention.

Inhalation
Remove patient from exposure, keep warm and at rest. If symptoms develop, obtain medical attention.

Ingestion
Do not induce vomiting. Wash out mouth with water. If large amount swallowed or symptoms develop obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed
Exposure to any kind of dust is potentially harmful.

4.3 Indication of any immediate medical attention and special treatment needed
See Section: 4.1

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media
Suitable Extinguishing Media
Compatible with all standard fire fighting techniques.

Unsuitable extinguishing Media
None known.

5.2 Special hazards arising from the substance or mixture
Not applicable. Inorganic powder or granules. Non-combustible.

5.3 Advice for fire-fighters
None.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Wear suitable protective clothing. Wear eye/face protection. An approved dust mask should be worn if dust is generated during handling.

6.2 Environmental precautions
Synthetic amorphous silica is virtually inert and has no known adverse effect on the environment.

6.3 Methods and materials for containment and cleaning up
Contain spillages. Dampening with water can reduce dust. Sweep or preferably vacuum up and collect in suitable containers for recovery or disposal.

6.4 Reference to other sections
See Also Section 8.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid generation of dust. A considerable static electrical charge can be built up during mechanical handling which may become a hazard in atmospheres containing flammable vapours. Advice on the control of static is given in British Standard BS 5958. Advice on the control of static is given in British Standard BS 5958. See Also Section 8.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed and dry.

7.3 Specific end use(s)
No data.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
**SUBSTANCE:** Synthetic amorphous silica

<table>
<thead>
<tr>
<th>Occupational Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK EH40: Silica amorphous Total inhalable dust: WEL 6 mg/m³ 8h TWA. Respirable dust: WEL 2.4 mg/m³ 8h TWA.</td>
</tr>
<tr>
<td>US ACGIH: Silica, Amorphous - Precipitated silica and silica gel: TLV withdrawn 2006</td>
</tr>
<tr>
<td>US OSHA: Silica amorphous - Precipitated silica: PEL 6mg/m³ 8h TWA</td>
</tr>
</tbody>
</table>

**8.2 Exposure controls**

Wear protective equipment to comply with good occupational hygiene practice. Do not eat, drink or smoke at the workplace.

**8.2.1 Appropriate engineering controls**

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.

**8.2.2 Personal Protection**

**Respiratory protection**

Avoid inhalation of dusts. Wear suitable respiratory protective equipment if working in confined spaces with inadequate ventilation or where there is any risk of the exposure limits being exceeded. Advice on respiratory protective equipment is given in the HSE (Health and Safety Executive) publication HS(G)53.

**Eye/face protection**

Safety spectacles. Eye protection with side protection (EN 166).

**Skin protection**

Wear suitable protective clothing and gloves. Plastic or rubber gloves. For example EN374-3. Wear suitable overalls.

**8.2.3 Environmental Exposure Controls**

Avoid generation of dust.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

- **Appearance**: Powder. White.
- **Odour**: Odourless.
- **Odour Threshold (ppm)**: Not applicable.
- **pH (Value)**: 3 - 10 at 5% w/w in water.
- **Freezing Point (°C)**: Not applicable.
- **Melting Point (°C)**: > 1000
- **Boiling Point (°C)**: Not applicable.
- **Flash Point (°C) [Closed cup]**: Not applicable.
- **Evaporation rate**: Not applicable.
- **Flammability (solid, gas)**: Not applicable.
- **Explosive Limit Ranges**: Not applicable.
- **Vapour Pressure (mm Hg)**: Not applicable.
- **Vapour Density (Air=1)**: Not applicable.
- **Density (g/ml)**: No data.
- **Solubility (Water)**: Insoluble.
- **Solubility (Other)**: No data.
- **Partition Coefficient**: No data.
- **Auto Ignition Point (°C)**: Not applicable.
- **Decomposition Temperature (°C)**: Not applicable.
- **Viscosity (mPa·s)**: Not applicable.
- **Explosive properties**: Not applicable.
- **Oxidising Properties**: Not applicable.

**9.2 Other information**

No data.

**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity**

See Section: 10.3

**10.2 Chemical stability**

This product is hygroscopic.
10.3 Possibility of hazardous reactions
None known.

10.4 Conditions to avoid
See Section: 10.3

10.5 Incompatible materials
See Section: 10.3

10.6 Hazardous decomposition product(s)
None known.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Ingestion
The lethal dose for humans for synthetic amorphous silica is estimated at over 15000 mg/kg bw. Synthetic amorphous silica is a permitted food additive in the UK, US and many other countries. Oral LD50 (rat) >3100 mg/kg bw

Inhalation
Synthetic amorphous silica has little adverse effect on lungs and does not produce significant disease or toxic effect when exposure is kept below the permitted limits. However, existing medical conditions (eg. asthma, bronchitis) may be aggravated by exposure to dust. Effects of dust may be greater, and occur at lower levels of exposure in smokers compared to non-smokers.

Skin Contact
Dust may have a drying effect on the skin. Dermal LD50 (rabbit) >5000 mg/kg bw

Eye Contact
Dust may cause discomfort and mild irritation.

Skin corrosion/irritation
Non-irritant. Dust may have a drying effect on the skin.

Serious eye damage/irritation
Non-irritant.

Sensitisation
Not sensitising.

Mutagenicity
No evidence of genotoxicity. In vitro/in vivo negative.

Carcinogenicity
IARC assessment: Amorphous silica is not classifiable as to its carcinogenicity to humans (Group 3).

Reproductive toxicity
No evidence of reproductive toxicity or developmental toxicity.

STOT - single exposure
Not classified

STOT - repeated exposure
Not classified. NOAEL oral (rat) >4000 mg/kg bw/d

Aspiration hazard
Not classified

Other information
Not applicable

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity
Synthetic amorphous silica is virtually inert and has no known adverse effect on the environment.
Fish (Brachydanio rerio) LL50 (96 hour) >10000 mg/l
Aquatic invertebrates: (Daphnia magna) EL50 (24 hour) >10000 mg/l

12.2 Persistence and degradability
Inorganic.

12.3 Bioaccumulative potential
Inorganic. The substance has no potential for bioaccumulation.

12.4 Mobility in soil
Not applicable.

12.5 Results of PBT and vPvB assessment
Not classified as PBT or vPvB.

12.6 Other adverse effects
None.

SECTION 13: DISPOSAL CONSIDERATIONS
13.1 Waste treatment methods
Disposal should be in accordance with local, state or national legislation.
This product normally causes no problems in sewage treatment works, where it settles with the sewage sludge.
This material is not classified as hazardous waste under EC Directive 2008/98/EC (and amendments). This material is not classified as hazardous waste under the Hazardous Waste (England and Wales) Regulations SI 2005 No. 894. This material is not classified as hazardous waste under the Hazardous Waste (England and Wales) Regulations SI 2005 No. 894.
May be disposed of by landfill in accordance with local regulations.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number
Not classified as dangerous for transport. Not classified as hazardous under DOT or US Transport Recommendations.

14.2 Proper Shipping Name
Not applicable.

14.3 Transport hazard class(es)
Not applicable.

14.4 Packing group
Not applicable.

14.5 Environmental hazards
Not applicable.

14.6 Special precautions for user
None. No special packaging requirements.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
TSCA Inventory Status: Reported/Included. CAS No. 7631-86-9
AICS Inventory Status: Reported/Included.
DSL/NDSL Inventory Status: Reported/Included.
German Water Hazard Classification VwVwS: Product ID number 849, not hazardous to water - nwg.

HMIS (Hazardous Material Information System):
Health Hazard: 1
Fire Hazard: 0
Reactivity: 0

SARA/Title III Hazard Categories:
Immediate (acute) Health: No
Reactive Hazard: No
Delayed (chronic) Health: No
Sudden Release of Pressure: No
Fire Hazard: No

15.2 Chemical Safety Assessment
Information available on request.

SECTION 16: OTHER INFORMATION

Data referenced in this eSDS is from company-owned information, from data legitimately accessed by PQ Corporation through membership of Industry Consortia or other agreements, or from data provided by raw material suppliers.

This SDS was last reviewed: 09/2013
The following sections contain revisions or new statements: All sections.
* NOTE: 1990 CAS (Chemical Abstract Service) added additional CAS Numbers to differentiate the many amorphous silicas covered by CAS 7631-86-9. CAS 112926-00-8 identifies amorphous silica gel or precipitate containing 0% crystalline silica.

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