

Safety Data Sheet

Quechen Silicon Chemical Co., Ltd

Newsil Granule Series (all grades)
(Synthetic Precipitated Silica)

Revision 4.0



Revision date: March 14, 2015

Read the entire SDS for a complete hazard assessment.

White Carbon (Synthetic Precipitated Silica)

Section 1. Product and Company Identification

1.1 Product Identifiers:

Product Name: Newsil Granule (all grades)
(Synthetic Precipitate Silica)
Synonyms: Silica gel; Silica amorphous, hydrated
Molecular Weight: Not available
Chemical Formula: $\text{SiO}_2 \cdot n\text{H}_2\text{O}$

DISTRIBUTED BY
R.E. CARROLL INC.
1570 NORTH OLDEN AVENUE
TRENTON, NJ 08638-3204
609-695-6211 / 800-257-9365

1.2 Recommended use: Base material for the production of various commercial and consumer products.
Restrictions on use: Commercial formulation use only.

1.3 Manufacturer and Supplier:

Manufacturer
Quechen Silicon Chemical Co., Ltd
Donggang Town, Xishan, Wuxi, 214196
Jiangsu, China
Phone: Non-emergency 0086-510-88793288)

Distributor
R.E. Carroll, Inc.
1570 North Olden Avenue
Trenton, NJ 08638 USA
Phone: 609-695-6211
Fax: 609-695-0102
Email: johnb@recarroll.com

1.4 Emergency telephone number:

In the US: For a transport accident or leak, fire or major spill, call CHEMTREC, (800) 424-9300.
For International CHEMTREC assistance, call 1-703-527-3887 (collect calls accepted).

Section 2. Hazards Identification

2.1 Globally Harmonized System (GHS) Hazard Classification:

Not classified as hazardous

This SDS meets the requirements of GHS Revision 3, HCS 2012 (29 CFR 1910.1200)

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2.2 GHS Label elements including precautionary statements:

GHS Symbol: None needed

GHS Signal word: None needed

Hazard Statement: None needed

Precautionary Statements: None needed

2.3 Other hazards which are not included in the classification criteria:

Slipping Hazard

May cause mild irritation to respiratory tract and mechanical irritation to eyes and skin.

May cause dryness and irritation to mucous membranes, nose, and throat. Symptoms may include coughing, sore throat and wheezing. Synthetic amorphous silica does not produce silicosis.

Section 3. Composition/Information on Ingredients

Chemical Name	CAS No.	Content (%)
Precipitated Amorphous Silica	112926-00-8 (alternate 7631-86-9 TSCA)	> / = 98.0
Sulfuric acid sodium salt	7757-82-6	< / = 2.0

Section 4. First-Aid Measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

4.1 Inhalation:

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and continue to monitor. Seek immediate medical attention.

4.2 Skin contact:

Wash skin with plenty of soap and water. Gently wipe or rinse the inside of the mouth with water. Sips of water can be given. If symptoms persist, seek medical attention. Wash contaminated clothing before use.

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4.3 Eye contact:

Immediately flush eyes thoroughly with water for several minutes. Remove contact lenses after one to two minutes and continue flushing for several more minutes. If redness, itching or burning sensation develops, seek medical attention.

4.4 Ingestion:

DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious person. Gently wipe or rinse the inside of the mouth with water. Sips of water can be given. If symptoms persist, contact a poison control center, emergency room, or physician for treatment information.

4.5 Acute and delayed symptoms/effects:

Eye Contact: Excessive exposure may cause mechanical irritation to eyes.

Skin Contact: Practically non-toxic to skin. Prolonged or repeated contact may dry skin and cause mild irritation.

Ingestion: Harmful effects not anticipated from swallowing small amounts. May be harmful in large amounts.

Inhalation: Excessive exposure may cause irritation to eyes, nose, throat, lungs, and respiratory tract.

Chronic health effects: Chronic exposure may cause drying and cracking of skin and respiratory irritation.

Relevant routes of exposure: Eye, skin, inhalation.

4.6 Indication of immediate medical attention and notes for physicians:

Persons with pre-existing skin, eye, or respiratory conditions may be at an increased risk from the irritant properties of this material. Attending physician should treat exposed patients symptomatically.

Section 5. Fire-Fighting Measures

5.1 Extinguishing media:

Suitable extinguishing media:

Non-combustible material. Use extinguishing media appropriate to surrounding fire and to protect personnel. Hand held dry chemical or carbon dioxide extinguishers may be used for small fires.

Unsuitable extinguishing media:

For this product, no limitations of extinguishing agents are given. Forceful application of fire extinguishing agents or water spray may spread burning material.

5.2 Special hazards arising from the chemical:

Unusual fire and explosion hazards: None known.

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Hazardous Combustion Products:

During a fire, smoke may contain the original material in addition to combustion products of varying composition, which may be toxic and/or irritating.

5.3 Special protective equipment and precautions for firefighters:

Fire Fighting Procedures:

Keep personnel away. Isolate fire and deny unnecessary entry. Do not apply direct water stream. Use fine water spray or foam. Cool surroundings with water to localize fire zone. Hand held dry chemical or carbon dioxide extinguishers may be used for small fires.

Special Protective Equipment for Firefighters:

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Avoid breathing vapors, mist, or gas. Avoid skin and eye contact. Evacuate personnel to safe areas. Spilled material may cause a slipping hazard. Use appropriate safety equipment. See Section 8 for information on personal protection equipment.

6.2 Environmental precautions and protective procedures:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains, sewers, waterways, and/or groundwater.

6.3 Methods and material for containment and cleaning up:

Contain spilled material if possible. Sweep up using non-sparking tools. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

Section 7. Handling and Storage

7.1 Precautions for safe handling:

No smoking, open flames or sources of ignition in handling and storage area. Good housekeeping and controlling of dusts are necessary for safe handling of product. When transferring material into flammable solvents, use proper grounding to avoid electrical sparks. Product surface alterations caused by calcining or mixing with additives may alter toxicological properties.

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Avoid breathing process fumes. Use with adequate ventilation. Do not eat, drink and/or smoke in work areas.
Wash hands after use.
Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage (including any incompatibilities): Store in cool place. Avoid heat and ignition sources. Keep container tightly closed in a dry and well-ventilated place. Store in accordance with good manufacturing practices.

Section 8. Exposure Controls and Personal Protection

Consult with a Health and Safety Professional for specific selections.

8.1 Control parameter:

Occupational exposure limits

8-hour Time Weighted Average (TWA); 15-minute Short-Term Exposure Limit (STEL)

OSHA: 6mg/m³ (total dust)

ACGIH: 10mg/m³ (inhalation fraction) TWA, 3mg/m³ (respirable nuisance particulate) TWA

8.2 Appropriate engineering controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

8.3 Personal protective equipment:

Eye protection:

Use safety glasses. If there is a potential for exposure to mists which could cause eye discomfort, wear chemical goggles, or use a full-face respirator.

Body protection: Wear clean body-covering clothing to prevent skin exposure.

Hand protection:

Contact should be minimized. Protective gloves are recommended when prolonged skin contact cannot be avoided. The glove(s) listed may provide protection against permeation (gloves of other chemically resistant materials may not provide adequate protection): Polyethylene, Polyvinyl chloride (PVC), Neoprene, Nitrile, Polyvinyl alcohol, Viton. Selection of gloves will depend on the task.

Respiratory protection:

Concentration in air determines the level of respiratory protection needed. Use only NIOSH certified respiratory equipment. Respiratory protection is not usually needed unless product is heated or misted. Half-mask air purifying respirator with dust mist filters or HEPA filter cartridges is acceptable for exposures to ten (10) times

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the exposure limit. Full-face air purifying respirator with dust mist filters or HEPA filter cartridges is acceptable for exposures to fifty (50) times the exposure limit. Protection by air purifying respirators is limited. Use a positive pressure-demand full-face supplied air respirator or SCBA for exposures greater than fifty (50) times the exposure limit. If exposure is above the IDLH (Immediately Dangerous to Life and Health), or there is the possibility of an uncontrolled release, or exposure levels are unknown, then use a positive pressure-demand full-face supplied air respirator with escape bottle or SCBA. Wear a NIOSH-approved (or equivalent) full-face piece airline respirator in the positive pressure mode with emergency escape provisions.

Other:

Remove contaminated clothing and wash before reuse. For non-fire emergencies, respiratory protection may be necessary and wear appropriate protective clothing to avoid contact with material. Have eyewash station in work area. Do not consume or store food in the work area. Wash hands before smoking or eating.

Section 9. Physical and Chemical Properties

Appearance: White Granule

Odor: Odorless

Color: White

Solubility: Negligible (< 0.1%)

Specific Gravity: 2.1

pH: 6.0-7.5 (in 10% slurry)

% Volatiles by volume @ 21°C (70°F): 0

Boiling Point: 2230°C (4046°F)

Melting Point: 1610°C (2930°F)

Vapor Density (Air=1): No information found

Vapor Pressure (mm Hg): No information found

Evaporation Rate (BuAc=1): No information found

Section 10. Stability and Reactivity

10.1 Chemical stability: Stable under normal temperature conditions and recommended use.

10.2 Possibility of hazardous reactions:

No hazardous reactions if stored and handled as prescribed/indicated.

10.3 Conditions to avoid: Strong heating, sparks, open flames, moisture.

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10.4 Incompatible materials:

Strong oxidizing agents, strong acids. Strong bases, oxidizers, hydrogen fluoride, fluorine, xenon hexafluoride, oxygen difluoride, and chlorine trifluoride. Substance can explode when wet and heated with magnesium.

10.5 Hazardous decomposition products:

Decomposition products depend upon temperature, air supply and the presence of other materials. Processing may release fumes and other decomposition products. Fumes can be irritating.

10.6 Hazardous Polymerization: Will not polymerize.

Section 11. Toxicological Information

11.1 Information on the likely routes of exposure: Inhalation, ingestion, skin and eye contact.

11.2 Information on toxicological effects:

Acute toxicity:

Oral	LD50: > 5,000 mg/kg - Rat Similar material
Inhalation	No data available
Dermal	LD50: > 5,000 mg/kg - Rabbit Similar material

Skin corrosion/irritation: Non-irritating, prolonged skin contact may lead to drying or cracking of the skin due to water absorption properties.

Serious eye damage/irritation: None irritating. Eye contact can result in mild irritation.

Inhalation: This material can cause nasal and respiratory tract irritation and nosebleed.

Respiratory or skin sensitization: Not known to be a sensitizer.

Germ Cell Mutagenicity: No known significant effects or critical hazards.

Reproductive Toxicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Specific target organ toxicity (STOT):

STOT-single exposure	The substance or mixture is not classified as specific target organ toxicant, single exposure.
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STOT-repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

11.3 Carcinogenicity:

This product does not contain any material at > 0.1% that is listed by IARC, NTP, EPA, ACGIH or OSHA.

Chronic: An epidemiological study was conducted which included 165 precipitated silica workers who had been exposed an average time span of 8.6 years. Of these 165 workers, 44 had been exposed for an average of 18 years. No adverse effects were noted in complete medical examinations (including chest roentgenograms) of these workers. Pulmonary function decrements were corrected only with smoking and age but not with the degree or duration of dust exposure.

Laboratory studies have also been conducted in small animals via inhalation of levels of precipitated silica dust of up to 126 mg/m³ per periods from six months to two years. Although precipitated silica was temporarily deposited in the animals' lungs, most of the deposited material was cleared soon after the dust exposure ended.

The result of all studies performed by, or known to Quechen indicated a very low order of pulmonary activity for synthetic precipitated silica.

Quechen recommends that persons with breathing problems or lung disease should not work in dusty areas unless a physician approves and certifies their fitness to wear respiratory protection.

IARC reviewed the data on amorphous silica in 1996 and concluded there was inadequate evidence from both epidemiology and experimental studies that amorphous silica is a carcinogenic risk factor. The organization concluded that amorphous silica is in Group 3.

Amorphous silica is not listed by IARC, NTP, or OSHA as a carcinogen.

Section 12. Ecological Information

12.1 Mobility: No information available.

12.2 Aquatic and terrestrial ecotoxicity:

Silica, amorphous,

NOEC > 1000 ppm

Daphnia - Daphnia Magna

Acute NOEC > 10000 ppm

Fresh water fish

Acute NOEC > 10000 ppm

Fish - Brachydanio Rerio

This material is not expected to be toxic to aquatic life.

12.3 Persistence and degradability: Insignificant Degradability

12.4 Bioaccumulative potential: Low bioaccumulation expected

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12.5 Other adverse effects: No other relevant information available

Section 13. Disposal Considerations

13.1 Disposal methods:

Uncontaminated discarded product is not a hazardous waste under RCRA. Do not dump into any sewers, on the ground or into any body of water. All disposal practices must comply with all federal, state, and local laws and regulations. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this

13.2 Container disposal:

Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue. Puncture or otherwise destroy empty container and dispose of in a facility permitted for nonhazardous waste.

Section 14. Transport Information

14.1 UN number: Not regulated.

14.2 UN proper shipping name: Not regulated

14.3 Transport hazard class: Not regulated.

14.4 Packing group (if applicable): Not regulated.

14.5 Marine Pollutant (Yes/No): No

14.6 Special precaution: No information available.

Section 15. Regulatory Information

U.S. Regulations

USA TSCA: Synthetic amorphous silica is listed on the TSCA Inventory as its general CAS# 7631-86-9.

15.1 SARA Section 311/312 Hazard Categories

Acute Hazard: No

Chronic Hazard: No

Fire Hazard: No

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Reactive Hazard: No
Sudden Pressure Release: No

15.2 CERCLA Hazardous Substance SARA Section 304 Release Reporting:

<u>Component(s)</u>	<u>Reportable Quantity</u>
None	

15.3 SARA Section 302 Extremely Hazardous Substances:

<u>Component(s)/</u> <u>CAS Number</u>	<u>Concentration</u>
	<u>Min</u> <u>Max</u>
None	

15.4 SARA Section 313 Toxic Chemicals:

<u>Component(s)/</u> <u>CAS Number</u>	<u>Reporting</u> <u>Threshold</u>	<u>Concentration</u>
		<u>Min</u> <u>Max</u>
None		

15.5 California Proposition 65:

This product is not known to contain chemical(s) known to the State of California to cause cancer or reproductive harm.

15.6 Pennsylvania Worker and Community Right To Know Act: Hazardous Substances: none

15.7 New Jersey Worker and Community Right To Know Act: Hazardous Substances: none

15.8 International Regulations:

Canadian Regulations:

WHMIS Statement: This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the SDS contains all the information required by the *Controlled Products Regulations*. This product is classified as not controlled in accordance with the Canadian Controlled Products Regulations

This product complies with RoHS (Restriction on Hazardous Substances).

Other requirements: Inventroy Listing:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory	LISTED
DSL - Canadian Domestic Substances List	LISTED
NDSL Non-Domestic Substances List	NOT LISTED
EINECS - European Inventory of Existing Chemical Substances/European	LISTED
ELINCS List of Notified Chemical Substances	NOT LISTED
ENCS - Japan Existing and New Chemical Substances	LISTED
IECSC - China Inventory of Existing Chemical Substances	LISTED

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KECL - Korean Existing and Evaluated Chemical Substances

LISTED

PICCS - Philippines Inventory of Chemicals and Chemical Substances

LISTED

Australia - Australian Inventory of Chemical Substances

LISTED

Section 16. Other Information

16.1 NFPA and HMIS Hazard Ratings:

We assigned NFPA and HMIS ratings to this product based on the hazards of its ingredient(s). Because the customer is most aware of the application of the product, the customer must ensure that the proper personal protective equipment (PPE) is provided consistent with information contained in the product SDS. This information is intended solely for the use of individuals trained in the particular hazard rating system.

Key: 0 = least, 1 = slight, 2 = moderate, 3 = high, 4 = extreme

NFPA (National Fire Protection Association) - Classification

Health 1 slight
Flammability 0 minimal
Instability or Reactivity 0 minimal

HMIS® [Hazardous Materials Identification System (Paint & Coating)] - Classification

Health 1 slight
Flammability 0 minimal
Reactivity 0 minimal

NFPA, HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this SDS must be considered. This information is supplied solely for the use of individuals trained in the particular hazard rating system.

16.2 Revision information:

Date of the previous revision: 01/15/2015 (Version 3)

Date of this revision: 03/14/2015 (Version 4.0)

Revision summary: Revised GHS/OSHA compliant SDS

16.3 Training advice: Provide adequate information, instruction and training for operators.

16.4 Key or legend to abbreviations and acronyms used in the safety data sheet:

ACGIH	American Conference of Governmental Industrial Hygienists
BEI	Biological Exposure Index
OEL	Occupational Exposure Limit
PEL	Permissible Exposure Limit

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ppm	parts per million
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
TWA	Time Weighted Average
Action Level	An exposure value set by OSHA that is lower than the PEL that will trigger the need for activities such as exposure monitoring and medical surveillance.

16.5 Declare to reader: The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

END OF SDS
