	SAFETY DATA SHEET	
	Functionalized Synthetic Amorphous Silica N0144	
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SECTION 1: Identification

Product name: Functionalized Synthetic Amorphous Silica
Product code: N0144
Other means of identification: Agilon 400D; Agilon 400 G-D; Agilon 454D; Agilon 454 G-D; 8011775; 8011967; 8011981; 8012270; 8012343; 8012514; 8012684
Product type: Powder.

Relevant identified uses of the substance or mixture and uses advised against

Product use: Industrial applications.
Use of the substance/mixture: Reinforcing agent in rubber.; Additive
Uses advised against: Not applicable

Manufacturer: **QEMETICA US Silica LLC**
3150 Pete Manena Road,
Westlake, LA 70669, USA
Customer Service: 1-800-243-6745

QEMETICA NL Silica B.V.
Valgenweg 1-3, 9936 HV Farmsum
The Netherlands
Postal Adress: P.O. Box 181, 9930AD Delfzijl, The Netherlands
Customer Service: +31-596-676710
Technical Service: +31-596-676710

E-mail address for the person responsible for the safety data sheet:

sds@gemetica.com

Emergency telephone number

Washington DC: +1 703-741-5970 (Chemtrec Emergency number, CCN1020385)

SECTION 2: Hazards identification

OSHA/HCS status: While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture: Not classified.

GHS label elements:

Signal word: No signal word.
Hazard statements: No known significant effects or critical hazards.

Precautionary statements

Prevention: Not applicable.
Response: Not applicable.
Storage: Not applicable.
Disposal: Not applicable.
Supplemental label: Not applicable.

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Elements:
Hazards not otherwise Classified: Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

SECTION 3: Composition/information on ingredients

Substance/mixture	Mixture
Product name:	Functionalized Synthetic Amorphous Silica

Contains no detectable crystalline silica (detection limit <0.1% by weight).
SUB codes represent substances without registered CAS Numbers.

There are no 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

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Description of necessary first aid measures

Eye contact:	Protect the non-irritated eye, remove contact lenses. Rinse the contaminated eyes carefully with water for 10-15 minutes. Avoid strong streams of water – the risk of damaging the cornea. After rinsing put on an aseptic – sterile dressing and seek immediate medical advice.
Inhalation:	Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
Skin contact:	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
Ingestion:	If swallowed, seek medical advice immediately and show the packing or label. Keep person warm and at rest. Do NOT induce vomiting.

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.

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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.

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.

Specific treatment: 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

Extinguishing media

Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: When transferring material into flammable solvents, use proper grounding to avoid electrical sparks.

Hazardous thermal decomposition products: Decomposition products may include the following materials: carbon oxides, metal oxide/oxides, sulfur oxides.

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

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.

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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 nonemergency personnel".

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).

Methods and materials for containment and cleaning up

Small spill:

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.

Large spill:

Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

Precautions for safe handling

Protective measures:

Put on appropriate personal protective equipment (see Section 8). Avoid breathing dust.

Special precautions:


When transferring material into flammable solvents, use proper grounding to avoid electrical sparks. Product is stable up to 200 °C (392 °F).

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.

Conditions for safe storage, including any incompatibilities

Do not store below the following temperature: -30°C (-22°F). Store in accordance with local regulations. Store in original container protected from moisture, 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.

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SECTION 8: Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	CAS	Type	mg/m ³	mppcf ^a
Silica, amorphous, precipitated and gel	7631-86-9 112926-00-8	OSHA PEL	0.8	

According to Standard Number: 1910.1000 TABLE Z-3 Mineral Dusts

Note - Conversion factors - mppcf × 35.3 = million particles per cubic meter = particles per c.c.

^a Millions of particles per cubic foot of air, based on impinger samples counted by light-field techniques.

Key to abbreviations

- | | |
|--|---|
| A = Acceptable Maximum Peak | S = Potential skin absorption |
| ACGIH = American Conference of Governmental Industrial Hygienists. | SR = Respiratory sensitization |
| C = Ceiling Limit | SS = Skin sensitization |
| F = Fume | STEL = Short term Exposure limit values |
| IPEL = Internal Permissible Exposure Limit | TD = Total dust |
| OSHA = Occupational Safety and Health Administration. | TLV = Threshold Limit Value |
| R = Respirable | TWA = Time Weighted Average |
| Z = OSHA 29 CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances | |

Recommended monitoring procedures:

Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

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.

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Eye/face protection: Safety glasses with side shields.

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: Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The respiratory protection shall be in accordance to 29 CFR 1910.134.

SECTION 9: Physical and chemical properties

Appearance:

Physical state:	Solid. Powder.
Color:	Not available.
Odor:	Not available.
Odor threshold:	Not available.
pH:	5 to 9
Melting point:	Not available.
Boiling point:	Not available.
Flash point:	Not applicable. Product does not sustain combustion.
Auto-ignition temperature:	Not applicable.
Decomposition temperature:	Not available.
Flammability:	Not available.
Lower and upper explosive (flammable) limits:	Not applicable.
Evaporation rate:	Not available.
Vapor pressure:	Not available.
Vapor density:	Not applicable.
Relative density:	Not available.
Solubility(ies):	

Media	Result
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Water Solubility at room temperature:	cold water	Soluble
Partition coefficient: noctanol/water:	0.02 g/l	
Viscosity	Not applicable	

SECTION 10: Stability and reactivity

Reactivity

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

Chemical stability

The product is stable, when stored in normal conditions and handling at the temperature up to 200 °C (392 °F).

Possibility of hazardous reactions

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

Conditions to avoid

Avoid use at temperatures above 200 °C (392 °F).

High temperature (>800 °C) treatment (calcining). Avoid alteration of product properties before use. Calcining (which may result in crystalline formation) or mixing with additives may alter toxicological properties.

Refer to protective measures listed in sections 7 and 8.

Incompatible materials

Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.

Hazardous decomposition products

Depending on conditions, decomposition products may include the following materials: carbon oxides metal oxide/oxides, sulfur oxides, hydrogen sulphide.

SECTION 11: Toxicological information

Information on toxicological effects

Acute Toxicity:

Conclusion/Summary: There are no data available on the mixture itself. Classification is based on calculation method


Irritation/Corrosion:

Conclusion/Summary

Skin: There are no data available on the mixture itself. Mixture ingredients are not classified in hazar class skin irritation, therefore classification criteria are not met.

Eyes: There are no data available on the mixture itself. Mixture ingredients are not classified in hazar class eyes irritation, therefore classification criteria are not met.

Respiratory: There are no data available on the mixture itself. Mixture ingredients are not classified in hazar class respiratory irritation, therefore classification criteria are not met.

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Sensitization:**Conclusion/Summary**

Skin: There are no data available on the mixture itself. Mixture ingredients are not classified in hazar class skin sensitization, therefore classification criteria are not met.

Respiratory: There are no data available on the mixture itself. Mixture ingredients are not classified in hazar class respiratory sensitization, therefore classification criteria are not met.

Mutagenicity:

Conclusion/Summary: There are no data available on the mixture itself. Mixture ingredients are not classified in hazar class mutagenicity, therefore classification criteria are not met.

Carcinogenicity:

Conclusion/Summary: There are no data available on the mixture itself. Mixture ingredients are not classified in hazar class carcinogenicity, therefore classification criteria are not met.

Reproductive Toxicity:

Conclusion/Summary: There are no data available on the mixture itself. Mixture ingredients are not classified in hazar class reproductive toxicity, therefore classification criteria are not met.

Teratogenicity:

Conclusion/Summary: There are no data available on the mixture itself. Mixture ingredients are not classified in hazar class teratogenicity, therefore classification criteria are not met.

Specific target organ toxicity (single exposure):

Not available. Mixture ingredients are not classified in hazar class STOT SE, therefore classification criteria are not met.

Specific target organ toxicity (repeated exposure):

Not available. Mixture ingredients are not classified in hazar class STOT RE, therefore classification criteria are not met.

Target organs: Contains material which may cause damage to the following organs: upper respiratory tract, eyes.

Aspiration hazard:

Not available. Mixture ingredients are not classified in hazar class aspiration hazard, therefore classification criteria are not met.

Information on the likely routes of exposure**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:

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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

Conclusion/Summary: There are no data available on the mixture itself. 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 correlated only with smoking and age but not with the degree or duration of dust exposures. Laboratory studies have also been conducted in small animals via inhalation of levels of precipitated silica dust of up to 126 mg/cu.m. 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 results of all studies performed by, or known to, Qemetica indicate a very low order of pulmonary activity for synthetic precipitated silicas. Qemetica 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. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Ingestion may cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Short term exposure

Potential immediate effects: There are no data available on the mixture itself.

Potential delayed effects: There are no data available on the mixture itself.

Long term exposure

Potential immediate effects: There are no data available on the mixture itself.

Potential delayed effects: There are no data available on the mixture itself.

Potential chronic health effects

General: Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. 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

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adverse effects were noted in complete medical examinations (including chest roentgenograms) of these workers. Pulmonary function decrements were correlated only with smoking and age but not with the degree or duration of dust exposures. Laboratory studies have also been conducted in small animals via inhalation of levels of precipitated silica dust of up to 126 mg/cu.m. 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 results of all studies performed by, or known to, Qemetica indicate a very low order of pulmonary activity for synthetic precipitated silicas. Qemetica 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.

Carcinogenicity: No known significant effects or critical hazards.
 Mutagenicity: No known significant effects or critical hazards.
 Reproductive Toxicity: No known significant effects or critical hazards.

SECTION 12: Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

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

Other adverse effects (such as hazardous to the ozone layer)

The substance does not contribute to ozone layer depletion.

SECTION 13: Disposal considerations

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.

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Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

SECTION 14: Transport information

	DOT	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class (es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

Additional information:

DOT: None identified.

IMDG: None identified.

IATA: None identified.

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 IMO instruments:

Not applicable.

SECTION 15: Regulatory information

United States

United States inventory (TSCA 8b):

All components are active or exempted.

SARA 302/304

SARA 304 RQ

Not applicable.

Composition/information on ingredients:

No products were found.

SARA 311/312

Classification

Not applicable.

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the precautionary measures described in this data sheet or for any misuse of the products.