



MATERIAL SAFETY DATA SHEET

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SYLYSIA 440FCP

Effective Date: June 15, 2009

1. Product Identification

Synonyms: Silica, Amorphous; Silicic Acid; Amorphous Silicon Dioxide

CAS No: 7631-86-9

Molecular Weight: 60.08

Chemical Formula: SiO₂

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
Silica, Amorphous	7631-86-9	99.5 - 100%

3. Hazards Identification

GHS classification

Physicochemical hazards

Explosives	out of classification
Flammable/flammable gas	out of classification
Flammable/flammable aerosol	out of classification
Oxidizing gas	out of classification
Compressed gas	out of classification
Flammable liquid	out of classification
Flammable solid	out of category
Self-reactive substance	out of classification
Pyrophoric liquid	out of classification
Pyrophoric solid	out of category
Self-heating substance	out of category
Substance which, in contact with water, emits flammable gases	out of category



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Oxidizing liquid	out of classification
Oxidizing solid	can not be classified
Organic peroxide	out of classification
Corrosive to metal substance	can not be classified
Health hazards	
Acute toxicity (ingestion)	out of category
Acute toxicity (skin)	out of category
Acute toxicity (inhalation/gas)	out of classification
Acute toxicity (inhalation/vapor)	out of classification
Acute toxicity (inhalation/dust)	can not be classified
Acute toxicity (inhalation/mist)	can not be classified
Skin corrosive/irritation	out of category
Serious eye damage/eye irritation	category 2B
Respiratory sensitizer	can not be classified
Skin sensitizer	can not be classified
Generative cell mutagen	out of category
Carcinogen	out of category
Reproductive toxicity	can not be classified
Specific target organ systemic toxicity (single exposure)	can not be classified
Specific target organ systemic toxicity (repetition exposure)	can not be classified
Aspiration hazards	can not be classified
Environmental hazards	
Hazardous to the aquatic environment acute toxicity	can not be classified
Hazardous to the aquatic environment chronic toxicity	can not be classified



Emergency Overview

AFFECTS RESPIRATORY SYSTEM. CAUSES IRRITATION TO EYES.

Potential Health Effects

Inhalation:

May cause dryness and irritation to mucous membranes, nose, and throat. Symptoms may include coughing, sore throat, dyspnea, wheezing, and non-specific chest illnesses.

Ingestion:

No adverse effects expected.

Skin Contact:

May cause irritation with dryness and abrasion.

Eye Contact:

Causes irritation, redness, and pain.

Chronic Exposure:

Repeated exposure may cause symptoms similar to the effects on the above.

Aggravation of Pre-existing Conditions:

No information found.

NFPA Rating (Scale 0 – 4)



**Health = 1
Fire = 0
Reactivity = 0**

HMIS Rating (Scale 0 – 4)



**Health = 1
Fire = 0
Reactivity = 0**

4. First Aid Measures

Inhalation:

Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion:

Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

Skin Contact:

Wash exposed area with soap and water. Get medical advice if irritation develops.



Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire Fighting Measures

Fire: Not considered to be a fire hazard.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.

Special Information:

Use protective clothing and breathing equipment appropriate for the surrounding fire.

6. Accidental Release Measures

If its use requires manual handling, wear long sleeves and close-weave cotton glove with tight-fitting wristlets. An approved dust mask should be worn if dust is generated during handling. Sweep or preferably vacuum up and collect in suitable containers for recovery or disposal.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Take precautions a static electric spark. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

Amorphous Silica:

- OSHA Silica gel – PEL – $80\text{mg}/\text{m}^3$ /%SiO₂

- ACGIH Threshold Limit Value (TLV): 10 mg/m³ (TWA) inhalable particulate; 3 mg/m³ (TWA) respirable particulate.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.



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Personal Respirators:

If its use requires manual handling, wear long sleeves and close-weave cotton gloves with tight-fitting wristlets. If dusty conditions prevail, use of an approved NIOSH/MSHA dust respirator is recommended. Wear goggles if dust causes eye discomfort

Skin Protection:

Wear protective gloves and clean body-covering clothing.

Eye Protection:

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance	: Dry, white powder
Odor	: Odorless.
Solubility	: Insoluble in water.
Specific Gravity	: 2.20
pH	: 3.0-8.0
Boiling Point	: 2230 deg. C
Melting Point	: 1610 deg. C
Vapor Density (Air=1)	: No information found.
Vapor Pressure (mm Hg)	: 10 @ 1732 deg.C
Evaporation Rate (BuAc=1)	: No information found.

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

No information found.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Hydrogen fluoride, fluorine, xenon hexafluoride, oxygen difluoride, and chlorine trifluoride.

Conditions to Avoid:

Heat, flame, ignition sources, dusting, moisture and incompatibles.

11. Toxicological Information

ANIMAL TOXICOLOGY:



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TESTS FOR DOT HAZARD CLASSIFICATION:

1-hour LC50 (rat) > 2mg/l
48-hour Oral LD50 (rat) est. > 31,600 mg/kg
48-hour Dermal LD50 (rabbit) est. > 2,000 mg/kg
Not considered an ocular irritant.

TESTS FOR FDA APPROVAL FOR USE IN FOODS:

LD50 (mice) 8,000 mg/kg (limit of test)
LD50 (rats) 4,500 mg/kg (limit of test)
6 months² feeding tests (rats) at levels up to 10% of diet produced no effects.

-----Cancer Lists-----		
Ingredient	IARC	Category
Silica, Amorphous	(7631-86-9)	3

12. Ecological Information

Environmental Fate: No information found.
Environmental Toxicity: No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

U.S. Federal Regulations	TSCA 8 (b) inventory: SILICA GEL WHMIS (Canada): Not controlled under WHMIS (Canada) CEPA DSL: SILICA GEL
International regulations	EINECS: SILICA GEL 231-545-4 DSCL (EEC): R36/37/38-Irritating to eyes, respiratory system and skin.
International Lists	Australia (NICNAS): SILICA GEL Japan (MITI): SILICA GEL Korea (TCCL): SILICA GEL



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Philippines (RA6969): SILICA GEL
China: No products were found

16. Other Information

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