

**Chemical Name:** Silica Nanosprings<sup>™</sup> (2-propanol – water solution)

CAS Registry Number:

Formula: SiO<sub>2</sub> amorphous in water solution

EINECS Number: none

Chemical Family: metal oxide

Synonym: amorphous silica nanosprings

## SECTION 2: Composition and Information on Ingredients

Ingredient	CAS Number	Percent	ACGIH (TWA)	OSHA (PEL)
SiO <sub>2</sub>		3-4%		
Water		96-97%		

## SECTION 3: Hazards Identification

Emergency Overview: Harmful by inhalation. Irritating to eyes and respiratory system.

Primary Routes of Exposure: Inhalation when dry.

Eye Contact: Splashes cause severe irritation, possible corneal burns and eye damage. Causes slight to mild irritation of the eyes. Symptoms include redness, and pain.

Skin Contact: May cause irritation with redness and pain. May be absorbed through the skin with possible systemic effects. The dust may cause slight irritation and dryness of the skin.

Inhalation: Harmful by inhalation. Irritating to the nose, mucous membranes and respiratory tract. Symptoms include coughing, wheezing, and sore throat.

Ingestion: No information available on the effects of ingestion.

Acute Health Effects: Harmful by inhalation. Irritating to eyes and respiratory tract. Redness and pain in eyes and coughing and sore throat may result.

Chronic Health Effects: Chronic exposure may cause skin effects. Prolonged inhalation of silica dust can produce silicosis with impairment of the cardiopulmonary system.

NTP: No

IARC: No

OSHA: No

## SECTION 4: First Aid Measures

Eye Exposure: Immediately flush the eyes with copious amounts of water for at least 10-15 minutes. A victim may need assistance in keeping their eye lids open. Get immediate medical attention.

Skin Exposure: Wash the affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

Inhalation: Remove the victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases seek immediate medical assistance.

Ingestion: Seek medical attention immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

## SECTION 5: Fire Fighting Measures

Flash Point:	Not applicable
Autoignition Temperature:	none
Explosion Limits:	none
Extinguishing Medium:	Material is not flammable
Special Fire Fighting Procedures:	No special fire-fighting procedures. The material is not flammable.

## SECTION 6: Accidental Release Measures

Spill and Leak Procedures:	Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not flush to sewer!
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## SECTION 7: Handling and Storage

Handling and Storage: No special storage conditions

## SECTION 8: Exposure Controls and Personal Protection

Eye Protection:	Always wear approved safety glasses when handling a chemical substance in the laboratory.
Skin Protection:	Wear protective clothing and gloves.
Ventilation:	Material may form a fine dust if abraded. If possible, handle the material in an efficient fume hood.
Respirator:	A respirator is not required
Additional Protection:	No additional protection required.

## SECTION 9: Physical and Chemical Properties

Color and Form:	white reddish liquid
Molecular Weight:	60.09
Melting Point:	H2O: 0°C SiO <sub>2</sub> : 1035°C (sublimes)
Boiling Point:	H2O: 100°C SiO <sub>2</sub> : NA
Vapor Pressure:	NA
Specific Gravity:	no data
Odor:	none
Solubility in Water:	soluble

## SECTION 10: Stability and Reactivity

Stability:	air and moisture stable solid.
Hazardous Polymerization:	no hazardous polymerization
Conditions to Avoid:	none
Incompatibility:	hydrogen fluoride, wet fluorine, xenon hexafluoride, chlorine trifluoride.
Decomposition Products:	none

## SECTION 11: Toxicological Information

RTECS Data: No data available  
Carcinogenic Effects: No data available  
Mutagenic Effects: No data available  
Tetratogenic Effects: No data available

## SECTION 12: Ecological Information

Ecological Information: No information available

## SECTION 13: Disposal Considerations

Disposal: Dispose of according to local, state and federal regulations.

## SECTION 14: Transportation

Shipping Name (CFR): Non-Hazardous  
Hazard Class (CFR): NA  
Additional Hazard Class (CFR): NA  
Packaging Group (CFR): NA  
UN ID Number (CFR): NA  
Shipping Name (IATA): Non-hazardous  
Hazard Class (IATA): NA  
Additional Hazard Class (IATA): NA  
Packaging Group (IATA): NA  
UN ID Number (IATA): NA

## SECTION 15: Regulatory Information

TSCA: Title compound not listed  
SARA (Title 313): Title compound not listed  
Second Ingredient: none  
Third Ingredient: none

## SECTION 16: Other Information

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Preparation Date: 10/22/10  
Revision Date: