



## 10MSIO2-4F Silica (10,000 µg/mL in Water)

### High-Purity Standards

Catalogue number: 10MSIO2-4F

Version No: 1.1

Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Chemwatch Hazard Alert Code: 2

Issue Date: 07/29/2017

Print Date: 07/29/2017

S.GHS.USA.EN

## SECTION 1 IDENTIFICATION

### Product Identifier

Product name	10MSIO2-4F Silica (10,000 µg/mL in Water)
Synonyms	Not Available
Other means of identification	10MSIO2-4F

### Recommended use of the chemical and restrictions on use

Relevant identified uses	Use according to manufacturer's directions.
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### Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	High-Purity Standards
Address	PO Box 41727 SC 29423 United States
Telephone	843-767-7900
Fax	843-767-7906
Website	highpuritystandards.com
Email	Not Available

### Emergency phone number

Association / Organisation	INFOTRAC
Emergency telephone numbers	1-800-535-5053
Other emergency telephone numbers	1-352-323-3500

## SECTION 2 HAZARD(S) IDENTIFICATION

### Classification of the substance or mixture

Classification	Not Applicable
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### Label elements

Hazard pictogram(s)	Not Applicable
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SIGNAL WORD	NOT APPLICABLE
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### Hazard statement(s)

Not Applicable

### Hazard(s) not otherwise specified

Not Applicable

### Precautionary statement(s) Prevention

Not Applicable

### Precautionary statement(s) Response

Not Applicable

### Precautionary statement(s) Storage

Not Applicable

Continued...

## 10MSIO2-4F Silica (10,000 µg/mL in Water)

### Precautionary statement(s) Disposal

Not Applicable

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

### Substances

See section below for composition of Mixtures

### Mixtures

CAS No	%[weight]	Name
16919-19-0	1 (as SiO <sub>2</sub> )	ammonium fluorosilicate
7732-18-5	balance	water

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

## SECTION 4 FIRST-AID MEASURES

### Description of first aid measures

Eye Contact	<p>If this product comes in contact with eyes:</p> <ul style="list-style-type: none"><li>Wash out immediately with water.</li><li>If irritation continues, seek medical attention.</li><li>Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li></ul>
Skin Contact	<p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"><li>Flush skin and hair with running water (and soap if available).</li><li>Seek medical attention in event of irritation.</li></ul>
Inhalation	<ul style="list-style-type: none"><li>If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li><li>Other measures are usually unnecessary.</li></ul>
Ingestion	<ul style="list-style-type: none"><li>Immediately give a glass of water.</li><li>First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li></ul>

### Most important symptoms and effects, both acute and delayed

See Section 11

### Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5 FIRE-FIGHTING MEASURES

### Extinguishing media

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

### Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.
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### Special protective equipment and precautions for fire-fighters

Fire Fighting	<ul style="list-style-type: none"><li>Use water delivered as a fine spray to control fire and cool adjacent area.</li></ul>
Fire/Explosion Hazard	<ul style="list-style-type: none"><li>Non combustible.</li></ul>

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

See section 8

### Environmental precautions

See section 12

### Methods and material for containment and cleaning up

Minor Spills	<ul style="list-style-type: none"><li>Clean up all spills immediately.</li></ul>
Major Spills	<ul style="list-style-type: none"><li>Clear area of personnel and move upwind.</li></ul>

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 HANDLING AND STORAGE

### Precautions for safe handling

Safe handling	<ul style="list-style-type: none"><li>Limit all unnecessary personal contact.</li></ul>
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### Other information

#### Conditions for safe storage, including any incompatibilities

Suitable container	► Polyethylene or polypropylene container.
Storage incompatibility	Avoid contamination of water, foodstuffs, feed or seed. None known

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### OCCUPATIONAL EXPOSURE LIMITS (OEL)

#### INGREDIENT DATA


Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US ACGIH Threshold Limit Values (TLV)	ammonium fluorosilicate	Fluorides, as F	2.5 mg/m3	Not Available	Not Available	TLV® Basis: Bone dam; fluorosis; BEI
US OSHA Permissible Exposure Levels (PELs) - Table Z1	ammonium fluorosilicate	Fluorides	2.5 mg/m3	Not Available	Not Available	(as F)
US OSHA Permissible Exposure Levels (PELs) - Table Z2	ammonium fluorosilicate	Fluoride as dust	2.5 mg/m3	Not Available	Not Available	(Z37.28-1969)

#### EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
ammonium fluorosilicate	Ammonium hexafluorosilicate; (Ammonium silicofluoride)	12 mg/m3	130 mg/m3	780 mg/m3

Ingredient	Original IDLH	Revised IDLH
ammonium fluorosilicate	Not Available	Not Available
water	Not Available	Not Available

### Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard.
Personal protection	
Eye and face protection	► Safety glasses with side shields ► Chemical goggles.
Skin protection	See Hand protection below
Hands/feet protection	Wear general protective gloves, eg. light weight rubber gloves. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer.
Body protection	See Other protection below
Other protection	No special equipment needed when handling small quantities.
Thermal hazards	Not Available

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Appearance	Colourless		
Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available

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Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

### SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	Product is considered stable and hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

### SECTION 11 TOXICOLOGICAL INFORMATION

#### Information on toxicological effects

Inhaled	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models).
Ingestion	The material has <b>NOT</b> been classified by EC Directives or other classification systems as "harmful by ingestion".
Skin Contact	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models).
Eye	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
Chronic	Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

10MSIO2-4F Silica (10,000 µg/mL in Water)	TOXICITY	IRRITATION
	Not Available	Not Available
ammonium fluorosilicate	TOXICITY	IRRITATION
	Oral (mouse) LD50: 70 mg/kg <sup>[2]</sup>	Not Available
water	TOXICITY	IRRITATION
	Not Available	Not Available

**Legend:** 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. \* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

WATER	No significant acute toxicological data identified in literature search.
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Acute Toxicity	☐	Carcinogenicity	☐
Skin Irritation/Corrosion	☐	Reproductivity	☐
Serious Eye Damage/Irritation	☐	STOT - Single Exposure	☐
Respiratory or Skin sensitisation	☐	STOT - Repeated Exposure	☐
Mutagenicity	☐	Aspiration Hazard	☐

**Legend:** ✗ – Data available but does not fill the criteria for classification  
✓ – Data available to make classification  
 ☐ – Data Not Available to make classification

### SECTION 12 ECOLOGICAL INFORMATION

#### Toxicity

10MSIO2-4F Silica (10,000 µg/mL in Water)	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Available	Not Available	Not Available	Not Available	Not Available
ammonium fluorosilicate	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Available	Not Available	Not Available	Not Available	Not Available

Continued...

## 10MSIO2-4F Silica (10,000 µg/mL in Water)

**Legend:** Extracted from 1. IUCALD Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

For Fluorides: Small amounts of fluoride have beneficial effects however; excessive intake over long periods may cause dental and/or skeletal fluorosis.

### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
water	LOW	LOW

### Bioaccumulative potential

Ingredient	Bioaccumulation
water	LOW (LogKOW = -1.38)

### Mobility in soil

Ingredient	Mobility
water	LOW (KOC = 14.3)

## SECTION 13 DISPOSAL CONSIDERATIONS

### Waste treatment methods

Product / Packaging disposal	Legislation addressing waste disposal requirements may differ by country, state and/ or territory. ▶ <b>DO NOT</b> allow wash water from cleaning or process equipment to enter drains. ▶ Recycle wherever possible.
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## SECTION 14 TRANSPORT INFORMATION

### Labels Required

Marine Pollutant	NO
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Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

## SECTION 15 REGULATORY INFORMATION

### Safety, health and environmental regulations / legislation specific for the substance or mixture

#### AMMONIUM FLUOROSILICATE(16919-19-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs	US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants
US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs)	US - Washington Permissible exposure limits of air contaminants
US - Hawaii Air Contaminant Limits	US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants
US - Idaho - Limits for Air Contaminants	US - Wyoming Toxic and Hazardous Substances Table Z-2 Acceptable ceiling concentration, Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift
US - Massachusetts - Right To Know Listed Chemicals	US ACGIH Threshold Limit Values (TLV)
US - Michigan Exposure Limits for Air Contaminants	US CWA (Clean Water Act) - List of Hazardous Substances
US - Oregon Permissible Exposure Limits (Z-1)	US OSHA Permissible Exposure Levels (PELs) - Table Z1
US - Oregon Permissible Exposure Limits (Z-2)	US OSHA Permissible Exposure Levels (PELs) - Table Z2
US - Pennsylvania - Hazardous Substance List	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

#### WATER(7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US - Pennsylvania - Hazardous Substance List	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
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### Federal Regulations

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### SECTION 311/312 HAZARD CATEGORIES

Immediate (acute) health hazard	No
Delayed (chronic) health hazard	No
Fire hazard	No
Pressure hazard	No
Reactivity hazard	No

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10MSIO2-4F Silica (10,000 µg/mL in Water)

US. EPA CERCLA HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES (40 CFR 302.4)

Name	Reportable Quantity in Pounds (lb)	Reportable Quantity in kg
Ammonium silicofluoride	1000	454

State Regulations

US. CALIFORNIA PROPOSITION 65

None Reported

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (water; ammonium fluorosilicate)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (ammonium fluorosilicate)
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
<b>Legend:</b>	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

Other information

Ingredients with multiple cas numbers

Name	CAS No
ammonium fluorosilicate	16919-19-0, 1309-32-6

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment.

Definitions and abbreviations

PC — TWA: Permissible Concentration-Time Weighted Average  
PC — STEL: Permissible Concentration-Short Term Exposure Limit  
IARC: International Agency for Research on Cancer  
ACGIH: American Conference of Governmental Industrial Hygienists  
STEL: Short Term Exposure Limit  
TEEL: Temporary Emergency Exposure Limit,  
IDLH: Immediately Dangerous to Life or Health Concentrations  
OSF: Odour Safety Factor  
NOAEL :No Observed Adverse Effect Level  
LOAEL: Lowest Observed Adverse Effect Level  
TLV: Threshold Limit Value  
LOD: Limit Of Detection  
OTV: Odour Threshold Value  
BCF: BioConcentration Factors  
BEI: Biological Exposure Index

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