THATCHER COMPANY OF CALIFORNIA, INC.

8625 Unsworth Avenue, Sacramento, CA 95828



Phone (916) 389-2517 Fax (916) 389-2516

February 17, 2023

# AFFIDAVIT OF COMPLIANCE

# **Hydrofluorosilicic Acid**

This affidavit certifies and warrants the hydrofluorosilicic acid to be delivered to the Bay Area Chemical Consortium Agencies by Thatcher Company of California, Inc. fully complies with A.W.W.A. Specifications and ANSI/NSF Standard 60.

Scott K. Sorensen

President

# ATTACHMENT 1

General Manager: Phillip Belden

Phone Number (702) 219-2372

E-mail Address: <a href="mailto:philip.belden@tchem.com">philip.belden@tchem.com</a>

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# THORNTON LABORATORIES TESTING & INSPECTION SERVICES, INC.

1145 E. Cass St, Tampa, FL 33602 Phone: 813-223-9702 Fax: 813-223-9332 WWW.THORNTONLAB.COM

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Report For: DuBois Chemicals, Inc.

1717 E. Fargo Ave. Nampa, ID 83687 Attn: Laura Lanthier

Sample Identification: Fluorosilicic Acid (FSA)

3/16/21

Date Received: 23-Mar-2021

Laboratory Number: 437598, revised for Al, Fe recheck

#### CERTIFICATE OF ANALYSIS

Method	Parameter	Result	Units
AFPC IX.3.C	Phosphate, Total (P205)	0.22	%
AWWA B703	Fluorosilicic Acid (H <sub>2</sub> SiF <sub>6</sub> )	24.09	%
	Free Acid other than $H_2SiF_6$ (HF)	0.30	90
APHA	Color	0	PCU
ASTM	Specific Gravity @ 74 oF	1,2182	
	Pounds per gallon @ 74 oF	10.16	
AFPC IX.14.B	Fluoride (F)	18.66	%
EPA 6010	Aluminum (Al), Total	12	ppm
	Arsenic (As), Total	1.6	ppm
	Barium (Ba), Total	0.5	ppm
	Cadmium (Cd), Total	0.3	ppm
	Copper (Cu), Total	0.9	ppm
	Chromium (Cr), Total	1.0	ppm
	Iron (Fe), Total	7.5	ppm
	Lead (Pb), Total	< 1.0	ppm
	Manganese (Mn), Total	< 0.1	ppm
	Nickel (Ni), Total	0.6	ppm
	Selenium (Se), Total	< 0.3	ppm
	Titanium (Ti), Total	4.1	ppm
	Vanadium (V), Total	0.6	ppm
	Zinc (Zn), Total	2.4	ppm
EPA 7471			
	Mercury (Hg), Total	< 0.01	ppm
EPA 6010 *			
	Antimony (Sb), Total	0.52	ppm
	Beryllium (Be), Total	< 0.10	ppm
	Silver (Ag), Total	< 0.13	ppm
	Thallium (Tl), Total	0.47	ppm

<sup>\*</sup> Analysis performed by Precision Petroleum Labs.

THORNTON LABORATORIES Steve Fickett, III

TYPICAL



**CHEMICAL PROPERTIES** 

# FLUOROSILICIC ACID (FSA)

# HYDROFLUOROSILIC ACID (HFS) NSF<sup>(1)</sup> & AWWA<sup>(2)</sup> CERTIFIED

	(3)	(3)
ASSAY	23.0% Min - 25.0% Max	24.0%
FLUORINE (F)	18.0% Min 200.0 1.0% Max	
LEAD (Pb)		0.4
HYDROFLUORIC ACID (HF)	1.0% Max	0.5%
ARSENIC (As)		<40.0
IRON (Fe)		20.0
PHOSPHATE (P3O5)		<200.0
PHYSICAL PROPERTIES		
Chemical Formula (H <sub>2</sub> SiF <sub>6</sub> )		
Specific Gravity @ 60°F & 24% FSA		1.23
Density (lbs/gal) @ 24% FSA		10.25
Boiling Point °F		222.5
l Freezina Point °F		4.0
Color (APHA)		<10

SPECIFICATION

#### **SHIPPING POINT**

Visible Suspended Matter .....

Rock Springs, WY



PDS FSA RSF

<sup>(1)</sup>Meets NSF/ANSI Standard 60

<sup>&</sup>lt;sup>(2)</sup>Meets AWWA Standard B703-19

<sup>(3)</sup>ppm unless otherwise specified



The Public Health and Safety Organization

### **NSF Product and Service Listings**

These NSF Official Listings are current as of **Tuesday**, **February 22**, **2022** at 12:15 a.m. Eastern Time. Please contact NSF to confirm the status of any Listing, report errors, or make suggestions.

Alert: NSF is concerned about fraudulent downloading and manipulation of website text. Always confirm this information by clicking on the below link for the most accurate information: http://info.nsf.org/Certified/PwsChemicals/Listings.asp?CompanyName=dubois&

### NSF/ANSI/CAN 60 **Drinking Water Treatment Chemicals - Health Effects**

### DuBois Chemicals, Inc.

3630 East Kemper Road Cincinnati, OH 45241 **United States** 513-554-4277

Facility: # 1 USA

Aluminum Chlorohydrate[AL]

**Trade Designation Product Function** Max Use Coagulite 222 Coagulation & Flocculation 250mg/L

[AL] Based on an evaluation of health effects data, the level of aluminum in the finished drinking water shall not exceed 2 mg/L.

### DuBois Chemicals, Inc. formerly known as BHS Marketing LLC

3630 East Kemper Road Sharonville, OH 45241 **United States** 800-438-2647

Visit this company's website (http://www.duboischemicals.com)

Facility: Fremont, CA

Fluorosilicic Acid

Trade Designation **Product Function** Max Use Fluorosilicic Acid Fluoridation 5mg/L

Facility: Vernon, CA

Fluorosilicic Acid

Trade Designation **Product Function** Max Use Fluorosilicic Acid Fluoridation 5mg/L

Facility: Mulberry, FL

Fluorosilicic Acid

**Product Function Trade Designation** Max Use Fluoridation **FSA** 5mg/L

Facility: Nampa, ID

**Sodium Hydroxide** 

Trade Designation	Product Function	Max Use
Caustic Soda	Corrosion & Scale Control	100mg/L
	pH Adjustment	
Caustic Soda 50%	Corrosion & Scale Control	100mg/L
	pH Adjustment	
Sodium Hydroxide	Corrosion & Scale Control	100mg/L
	pH Adjustment	
Sodium Hydroxide 50%	Corrosion & Scale Control	100mg/L
	pH Adjustment	

Sodium Hypochlorite[HY]

Trade Designation	Product Function	Max Use
Sodium Hypochlorite	Disinfection & Oxidation	50mg/L
Sodium Hypochlorite 12.5%	Disinfection & Oxidation	50mg/L

50mg/L

[HY] The residual levels of chlorine (hypochlorite ion and hypochlorous acid), chlorine dioxide, chlorate ion, chloramine and disinfection by-products shall be monitored in the finished drinking water to ensure compliance to all applicable regulations. Also, reference the AWWA B300 (Hypochlorites) standard's Recommendations for the Handling and Storage of Hypochlorite Solutions appendix for information on preservation techniques for hypochlorite bleach in transit and storage.

Facility: Granite City, IL

Fluorosilicic Acid

**Trade Designation Product Function** Max Use Fluorosilicic Acid 5 Coagulation & Flocculation 5mg/L

Facility: Cincinnati, OH

**Blended Phosphates** 

Trade Designation	Product Function	Max Use
Assurance 4300	Corrosion & Scale Control	32mg/L
PW-320	Corrosion & Scale Control	27mg/L

**Miscellaneous Chemical Products** 

Trade Designation	Product Function	Max Use
RO-2605	Reverse Osmosis Antiscalant	10mg/L
RO-2610	Reverse Osmosis Antiscalant	10mg/L
RO-3613	Reverse Osmosis Antiscalant	50mg/L

**Miscellaneous Water Supply Products** 

Trade Designation	Product Function	Max Use	
RO-2010	Membrane Cleaner	NA	

**Monosodium Orthophosphate** 

Trade Designation	Product Function	Max Use	
PW-314	Corrosion & Scale Control	30mg/L	

Polyacrylamide[PC]

Trade Designation	Product Function	Max Use
P-142 PWG	Coagulation & Flocculation	.6mg/L
P-508 PG	Coagulation & Flocculation	1mg/L

[PC] Polyacrylamide Products Certified by NSF International comply with 40 CFR 141.111 requirements for percent monomer and dose.

Sodium	Acid	Pyro	nhosi	nhate
Souluii	11010	1 110		Dilute

Trade Designation	Product Function	Max Use
PW-300	Corrosion & Scale Control	12mg/L
	Sequestering	

#### **Sodium Polyacrylate**

Trade Designation	Product Function	Max Use
RO-1020P	Reverse Osmosis Antiscalant	9mg/L

#### Sodium Polyphosphates, Glassy

Trade Designation	Product Function	Max Use
Mir-A-Force	Corrosion & Scale Control	40mg/L
PW-304	Corrosion & Scale Control	29mg/L
	Sequestering	

#### Sodium Silicate

Soutum Sincate		
Trade Designation	Product Function	Max Use
PW-318	Corrosion & Scale Control	84mg/L
	Sequestering	
Sil-A-Force	Corrosion & Scale Control	25mg/L

Facility: Salt Lake City, UT

#### **Sodium Bicarbonate**

Trade Designation	Product Function	Max Use
Sodium Bicarbonate	pH Adjustment	100mg/L

#### **Sodium Carbonate**

Trade Designation	Product Function	Max Use
Soda Ash Briquettes	pH Adjustment	100mg/L
Soda Ash Dense	pH Adjustment	100mg/L
Soda Ash Lite	pH Adjustment	100mg/L
Sodium Carbonate	pH Adjustment	100mg/L

Facility: Distribution Center - Seattle, WA

Fluosilicic Acid

**Trade Designation** Fluosilicic Acid Hydrofluosilicic Acid

**Product Function** Max Use Fluoridation 6mg/L Fluoridation 6mg/L

Number of matching Manufacturers is 2 Number of matching Products is 34 Processing time was o seconds



#### Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 03/25/2021 Version: 1.0

#### **SECTION 1: Identification**

#### Identification

Product form : Substance

Substance name : Fluorosilicic Acid (FSA) Chemical name Hydro Fluorosilicic Acid (HSA)

Product code M17200

#### Recommended use and restrictions on use 1.2.

#### 1.3. Supplier

JR Simplot Company P.O. Box 70013 Boise, ID 83707 T 1-208-336-2110

#### **Emergency telephone number**

**Emergency number** : CHEMTREC 1-800-424-9300

#### SECTION 2: Hazard(s) identification

#### Classification of the substance or mixture

#### **GHS-US** classification

Corrosive to metals, Category 1 H290 May be corrosive to metals. H302 Harmful if swallowed. Acute toxicity (oral), Category 4

Skin corrosion/irritation, Category 1 H314 Causes severe skin burns and eye damage.

Full text of H statements : see section 16

#### GHS Label elements, including precautionary statements

#### **GHS US labelling**

Hazard pictograms (GHS US)





Signal word (GHS US) Danger

Hazard statements (GHS US) H290 - May be corrosive to metals. H302 - Harmful if swallowed.

H314 - Causes severe skin burns and eye damage.

Precautionary statements (GHS US) P234 - Keep only in original container.

P260 - Do not breathe dust/fume/gas/mist/vapours/spray.

P264 - Wash hands, forearms and face thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P280 - Wear protective gloves/protective clothing/eye protection/face protection. P301+P312 - If swallowed: Call a poison center/doctor/... if you feel unwell

P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting

P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse

skin with water/shower P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a poison center/doctor/...

P321 - Specific treatment (see supplemental first aid instruction on this label)

P330 - Rinse mouth.

P363 - Wash contaminated clothing before reuse.

P390 - Absorb spillage to prevent material damage.

P405 - Store locked up.

P406 - Store in corrosive resistant container with a resistant inner liner.

P501 - Dispose of contents/container to hazardous or special waste collection point, in

accordance with local, regional, national and/or international regulation

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#### 2.3. Other hazards which do not result in classification

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

#### **SECTION 3: Composition/information on ingredients**

#### 3.1. Substances

Name : Fluorosilicic Acid (FSA)

Name	Product identifier	%	GHS-US classification
Water	(CAS-No.) 7732-18-5	75 <b>–</b> 78	Not classified
hexafluorosilicic acid	(CAS-No.) 16961-83-4	23 – 25	Skin Corr. 1B, H314

Full text of hazard classes and H-statements : see section 16

#### 3.2. Mixtures

Not applicable

#### **SECTION 4: First-aid measures**

#### 4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice. Never give anything by mouth to an unconscious

person. If you feel unwell, seek medical advice (show the label where possible). Call a

physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Allow affected person to

breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed

by warm water rinse. Rinse skin with water/shower. Take off immediately all contaminated

clothing. Call a physician immediately.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness

persists. Rinse cautiously with water for several minutes. Remove contact lenses, if present

and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER/doctor if you feel unwell. Do not induce vomiting. Call a physician immediately.

#### 4.2. Most important symptoms and effects (acute and delayed)

Potential adverse human health effects and

symptoms

: Based on available data, the classification criteria are not met. Harmful if swallowed.

Symptoms/effects after skin contact : Burns.

Symptoms/effects after eye contact : Serious damage to eyes.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Burns.

#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

Protection during firefighting

#### **SECTION 5: Fire-fighting measures**

#### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of : Toxic

fire

: Toxic fumes may be released.

#### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any

: Do not attempt to take action without suitable protective equipment. Self-contained breathing

chemical fire. Prevent fire fighting water from entering the environment.

apparatus. Complete protective clothing. Do not enter fire area without proper protective

equipment, including respiratory protection.

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#### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. Avoid contact with skin and eyes. Do

not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection". Equip cleanup crew with proper

protection.

Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or

diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

Absorb spillage to prevent material damage.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13. See Heading 8. Exposure controls and personal protection.

#### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed : May be corrosive to metals.

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Wash hands

and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

Hygiene measures : Always wash hands after handling the product. Do not eat, drink or smoke when using this

product. Wash hands, forearms and face thoroughly after handling. Wash contaminated

clothing before reuse.

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

Storage conditions : Store in a well-ventilated place. Keep cool. Keep only in the original container in a cool, well

ventilated place away from : Keep container closed when not in use. Store in corrosive resistant

container with a resistant inner liner. Keep only in original container. Store locked up.

Incompatible products : Strong bases, Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Metals.

Packaging materials : Store in corrosive resistant container with a resistant inner liner.

#### **SECTION 8: Exposure controls/personal protection**

#### 8.1. Control parameters

#### Fluorosilicic Acid (FSA)

No additional information available

#### Water (7732-18-5)

No additional information available

#### hexafluorosilicic acid (16961-83-4)

#### **USA - ACGIH - Occupational Exposure Limits**

ACGIH TWA (mg/m³) 2.5 mg/m³

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

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#### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Avoid all unnecessary exposure.

#### Materials for protective clothing:

Use chemically protective clothing

#### Hand protection:

Acid proof gloves should be worn to prevent contact

#### Eye protection:

Splash proof goggles and full-face shield should be worn at all times. Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

Wear appropriate mask

#### Other information:

Do not eat, drink or smoke during use.

#### **SECTION 9: Physical and chemical properties**

#### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Clear, colorless to pale straw liquid.

Colour : Colourless
Odour : characteristic
Odour threshold : No data available

pH : 1

Melting point : Not applicable Freezing point : No data available

Boiling point : 105 °C

Flash point : No data available
Relative evaporation rate (butylacetate=1) : No data available
Flammability (solid, gas) : Non flammable.
Vapour pressure : No data available
Relative vapour density at 20 °C : No data available
Relative density : No data available

Solubility : Soluble.

Partition coefficient n-octanol/water (Log Pow) : No data available : No data available Auto-ignition temperature Decomposition temperature : No data available : No data available Viscosity, kinematic Viscosity, dynamic : No data available No data available **Explosive limits** Explosive properties : No data available Oxidising properties : No data available

#### 9.2. Other information

No additional information available

#### **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

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#### 10.2. Chemical stability

Stable. Not established.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Extremely high temperatures. Direct sunlight. Extremely high or low temperatures.

#### 10.5. Incompatible materials

Alkalis. Chlorites. Combustible solids and organic peroxides. Strong acids. Strong bases. metals. May be corrosive to metals.

#### 10.6. Hazardous decomposition products

Corrosive fumes of fluorides. fume. Carbon monoxide. Carbon dioxide.

#### **SECTION 11: Toxicological information**

#### 11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

Fluorosilicic Acid (FSA)		
	LD50 oral rat	430 mg/kg
	ATE US (oral)	430 mg/kg bodyweight

Skin corrosion/irritation : Causes severe skin burns.

pH: 1

Serious eye damage/irritation : Assumed to cause serious eye damage

pH: 1

Respiratory or skin sensitisation : Not classified Germ cell mutagenicity : Not classified Carcinogenicity : Not classified

hexafluorosilicic acid (	16961-83-4)
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IARC group	3 - Not classifiable
Reproductive toxicity	Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified
Viscosity, kinematic : No data available

Potential adverse human health effects and

symptoms

: Based on available data, the classification criteria are not met. Harmful if swallowed.  $\label{eq:classification}$ 

Symptoms/effects after skin contact : Burns.

Symptoms/effects after eye contact : Serious damage to eyes.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Burns.

#### **SECTION 12: Ecological information**

#### 12.1. Toxicity

Ecology - general	The product is not considered harmful to aquatic organisms nor to cause long-term adverse
	effects in the environment. Before neutralisation, the product may represent a danger to aquatic
	organisms.

hexafluorosilicic acid (16961-83-4)		
	LC50 fish 1	> 10 mg/l (96 h; Brachydanio rerio)
	Threshold limit algae 1	10 mg/l (96 h; Scenedesmus quadricauda; Cell numbers)

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#### 12.2. Persistence and degradability

Fluorosilicic Acid (FSA)	
Persistence and degradability	Not established.
Water (7732-18-5)	
Persistence and degradability	Not established.
hexafluorosilicic acid (16961-83-4)	
Persistence and degradability	Biodegradability: not applicable. Reacts with water: release of toxic/harmful substances. No (test)data on mobility of the components available. Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

#### 12.3. Bioaccumulative potential

Fluorosilicic Acid (FSA)	
Bioaccumulative potential	Not established.
Water (7732-18-5)	
Bioaccumulative potential	Not established.
hexafluorosilicic acid (16961-83-4)	
Bioaccumulative potential	Not bioaccumulative. Not established.

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Other information : Avoid unintentional release to the environment.

#### **SECTION 13: Disposal considerations**

#### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of

contents/container to hazardous or special waste collection point, in accordance with local,

regional, national and/or international regulation.

Ecology - waste materials : Avoid unintentional release to the environment.

#### **SECTION 14: Transport information**

#### **Department of Transportation (DOT)**

In accordance with DOT

Transport document description : UN1778 Fluorosilicic acid, 8, II

UN-No.(DOT) : UN1778

Proper Shipping Name (DOT) : Fluorosilicic acid

Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136

Packing group (DOT) : II - Medium Danger Hazard labels (DOT) : 8 - Corrosive



DOT Packaging Non Bulk (49 CFR 173.xxx) : 202 DOT Packaging Bulk (49 CFR 173.xxx) : 242

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DOT Special Provisions (49 CFR 172,102)

A6 - For combination packagings, if plastic inner packagings are used, they must be packed in tightly closed metal receptacles before packing in outer packagings.

A7 - Steel packagings must be corrosion-resistant or have protection against corrosion. B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized.

B15 - Packagings must be protected with non-metallic linings impervious to the lading or have a suitable corrosion allowance.

IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.

N3 - Glass inner packagings are permitted in combination or composite packagings only if the hazardous material is free from hydrofluoric acid.

N34 - Aluminum construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material.

T8 - 4 178.274(d)(2) Normal..... Prohibited

TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.

TP12 - This material is considered highly corrosive to steel.

DOT Packaging Exceptions (49 CFR 173.xxx) DOT Quantity Limitations Passenger aircraft/rail : 1 L

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 30 L

CFR 175.75)

**DOT Vessel Stowage Location** 

: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a

passenger vessel.

Other information : No supplementary information available.

**Transportation of Dangerous Goods** 

Transport by sea

Air transport

#### **SECTION 15: Regulatory information**

#### 15.1. US Federal regulations

#### Fluorosilicic Acid (FSA)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

#### 15.2. International regulations

#### **CANADA**

#### Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

#### hexafluorosilicic acid (16961-83-4)

Listed on the Canadian DSL (Domestic Substances List)

#### **EU-Regulations**

No additional information available

**National regulations** 

No additional information available

#### 15,3, US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

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Component	State or local regulations
hexafluorosilicic acid(16961-83-4)	U.S Massachusetts - Right To Know List; U.S New Jersey - Right to Know Hazardous Substance List

#### **SECTION 16: Other information**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Other information : None.

#### Full text of H-statements:

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

NFPA health hazard

: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

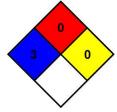
NFPA fire hazard

: 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even

under fire conditions.



Hazard Rating

Health

: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is

Flammability

: 0 Minimal Hazard - Materials that will not burn

Physical

: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT

react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

#### SDS US (GHS HazCom 2012)

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