

**MATERIAL SAFETY DATA SHEET**

Issue Date: (Rev. 11/85)

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FIRE	N.F.P.A. Hazard Rating <sup>1</sup>
NR <sup>2</sup>	Least ▶ Slight ▶ Moderate ▶ High ▶ Extreme
	0                      1                      2                      3                      4

HEALTH                      REACT.  
NR<sup>2</sup>                              NR<sup>2</sup>

24 HOUR EMERGENCY PHONE NUMBER: 877 974-0630

MSDS Number 6002

**I. IDENTIFICATION                      SPECIFIC**

Product Name/Number:	SHUR-HARD MSF	Magnesium Silicofluoride
Chemical Family:	Inorganic Fluoride	
Department of Hazard Classification:	1	
Formula:	MgSiF <sub>6</sub> -6H <sub>2</sub> O	

**II. INGREDIENTS**

ITEM			OSHA CAS #
=====			=====
Magnesium Silicofluoride	MgSiF <sub>6</sub> -6H <sub>2</sub> O	98.36%	16949-65-8
Chlorides (Nacl)		0.04%	
Iron	(Fe <sub>2</sub> O <sub>3</sub> )	0.19%	
Moisture		0.73%	

**III. PHYSICAL DATA**

BOILING POINT °F: NA	MELTING POINT °F: - 212°F	VAPOR PRESSURE (mmHg): NA
SPECIFIC GRAVITY (H <sub>2</sub> O =1): 1.788	% VOLATILE BY VOLUME: NA	VAPOR DENSITY (AIR = 1): NA
SOLUBILITY IN WATER: 60%	EVAPORATION RATE (BURLY ACETATE = 1): NA	MOLECULAR WEIGHT: 274.48
PHYSICAL STATE: Solid	DENSITY: PACKING 66.5 lbs. per cu. ft.	pH: 3.1- 1% aqueous solution
APPERANCE AND ORDOR: White odorless granular crystals		

**IV. FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT AND METHOD USED: NA                      FLAMMABLE LIMITS % BY VOLUME IN AIR : L.E.L. NA U.E.L. NA

EXTINGUISHING MEDIA: Small Fire - Dry Chemical, CO<sub>2</sub>, Water Spray or Foam  
Large Fire - Ware Spray, Fog or Foam

SPECIAL FIRE FIGHTING PROCEDURES: NA

AUTOIGNITION TEMPERATURE: NA °C NA °F

UNUSUAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS: NA

**V. REACTIVITY DATA**

Stability: Stable                      HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS AND MATIERALS TO AVOID: Contact with strong acids may cause formation of toxic and irritating hydrogen fluoride gas.

HAZARDOUS DECOMPOSITION PRODUCTS: None

**VI. HEALTH INFORMATION**

OSHA Permissible Exposure Limit (PEL)<sup>3</sup>

ACGIH THRESHOLD LIMIT VALUE (TLV) <sup>3</sup>: 2.5mg/m<sup>3</sup>

LISTED IN: IARC Monographs - No - NTP List - No

OSHA HAZARD CLASSIFICATION: Toxic

PRIMARY ROUTE(S) OF ENTRY: Inhalation

SYMPTOMS OF EVEREXPOSURE:

ACUTE: Fluoride dust may cause irritation to eyes and respiratory tract. Swallowing fluoride dust may cause vomiting, abdominal pain, diarrhea, shortness of breath, difficulty in speaking, thirst, weakness of pulse, disturbed color vision, muscular weakness, convulsions, loss of consciousness and death. Kidney injury and bleeding from injury may occur.

CHRONIC: Repeated exposure above the PEL or TLV to fluoride dust may cause excessive calcification of ligaments of the ribs, pelvis and spinal column. Stiffness and limitation of motion may result. Repeated or prolonged exposure to the skin may cause skin rash.

AGGRAVATED MEDICAL CONDITION: Preexisting respiratory disease including asthma and emphysema.

TOXIC DATA: LD<sub>50</sub>: 200 mg/kg (Oral-gpg)

## VII. EMERGENCY ACTION - (SPILL OR LEAK PROCEDURES)

### EMERGENCY ACTION:

Keep unnecessary people away; isolate hazard area and deny entry. Avoid breathing dust and prolonged contact with skin. Wear respiratory protection and personal protective clothing as needed.

### SMALL SPILLS:

With clean shovel, place material into clean dry container and cover, move containers from spill site.

### LARGE SPILLS:

Use same procedures as above.

## VIII. SPECIAL PERSONAL PROTECTION INFORMATION

### RESPIRATORY PROTECTION (specify type):

12.5mg/m<sup>3</sup> or less: A single-use dust respirator. 25 mg/m<sup>3</sup> or less: Any dust respirator (except single-use or 1/4 mask respirator), any supplied air respirator or self-contained breathing apparatus. All respirators should be NIOSH/MSHA approved.

### ENGINEERING CONTROLS

Adequate ventilation to maintain fluoride concentrations below applicable standards, when possible.

### SKIN PROTECTION:

Employees should be required to wear splash-proof goggles where there is a splash hazard.

### EYE PROTECTION:

Employees should be required to wear splash-proof goggles where there is a splash hazard (chemical splash goggles).

### OTHER PROTECTIVE EQUIPMENT:

Impervious clothing, gloves, face shield (eighth inch minimum) should be worn where splash or mist-containing fluoride may occur.

## IX. STORAGE AND SPECIAL PRECAUTIONS

### HANDLING AND STORAGE PRECAUTIONS:

Wear recommended personal protective equipment (Section VII) as required by nature of work. Store in original container, do not store near food or feed since appearance is similar to salt and sugar.

### OTHER PRECAUTIONS:

Segregate from strong acids.

## X. EMERGENCY AND FIRST AID PROCEDURES

**EYE CONTACT:** If fluoride or liquids containing fluoride get into the eyes, wash eyes immediately with large amounts of water, lifting the lower and upper lids occasionally. If irritation is present after washing get medical attention.

**SKIN CONTACT:** If fluoride or liquids containing fluoride get on the skin, promptly wash the contaminated skin using soap or mild detergent and water. If fluoride or liquids containing fluoride soak through the clothing, remove the clothing promptly and wash the skin using soap or mild detergent and water. If irritation persists after washing, get medical attention.

**INHALATION:** If a person breathes in large amounts of fluoride, move the exposed person to fresh air at once. If breathing has stopped, perform artificial respiration. Keep the affected person warm and at rest. Get medical attention as soon as possible.

**INGESTION:** When liquids containing fluoride have been swallowed and the person is conscious, give the person large quantities of water immediately. After the water has been swallowed, induce vomiting. Get medical attention.

**NOTE TO THE PHYSICIAN:** Symptomatic treatment only.

## XI. TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION: NA

UN 2853 - International Shipment Only

REPORTABLE QUANTITY: NA

STANDARD TRANSPORTATION COMMODITY CODE: NA

DOT PROPER SHIPPING NAME: NA

OTHER REQUIREMENTS: NA

### DISCLAIMER

This Material Safety Data Sheet (MSDS) has been prepared in compliance with the Federal OSHA Hazard communication Standard 29 CFR 1910.1200.

The information and recommendations herein are taken from data contained in independent; industry recognized references, including NIOSH, OSHA, ANSI and NFPA. Thus Paul M. Wolff Co. itself makes no guarantee, warranty or other representation concerning this substance, or with respect to the information contained herein since the conditions of its use are beyond our control. Paul M. Wolff Co. disclaims any liability for loss or damage incurred in connection with the use of this substance.

For further information contact: Paul M. Wolff Co. 877-974-0630

### Footnotes:

1. This NFTP rating applies only to short term exposure such as might be encountered under fire or related emergency conditions.
2. Note: NR means Not Related.
3. As Fluoride.
4. Note: NA means Not Applicable.
5. Symptoms of overexposure are based on generic fluoride dust. Information not available on sodium silicofluoride perse.