

Harcros Chemicals Inc  
 Kansas City, Kansas

W.I

MATERIAL SAFETY DATA SHEET Page 1

PRODUCT NAME : HYDROFLUOSILICIC ACID 23%  
 PRODUCT CODE : 10715  
 CAS # : 016961834  
 BULK/#  
 MSDS No. 000605  
 Date: 18-JAN-2007 00:25:45.46  
 Revision No./Date 03 050414  
 Detail Number 00275/02

FORMULA: H2SiF6  
 CHEM. FAMILY: inorganic acids  
 CHEMICAL NAME AND SYNONYMS:  
 Hydrofluosilicic Acid, 20-30%  
 Fluosilicic Acid;  
 Hexafluosilicic Acid;  
 HFS;  
 FSA;  
 MSDS 000605 DETAIL 00275  
 SUPPLIERS NAME : Harcros Chemicals Inc.  
 5200 Speaker Road  
 Kansas City KS 66106-1095

SUPPLIERS PHONE NUMBER : 913-321-3131  
 TRANSPORTATION EMERGENCY PHONE NUMBER : 1-800-424-9300

S.A.R.A. INFORMATION

HAZARDS : Acute Chronic  
 PHYSICAL DATA : Pure Liquid

SECTION I HAZARDOUS INGREDIENTS

Ingredient Cas Number	MAX % W/W	SARA APPLIES			TWA/TLV (ppm)	AIR CONTAMINANT STEEL (ppm)	LEVELS CEIL (ppm)	SKIN AGENT
		Y	N	N				
Hydrofluosilicic Acid Fluosilicic Acid (CAS # 16961-83-4 )	30.0	Y	N	N	As Fluorine TWA/TLV	2.5 mg/m3	OSHA/ACGIH	

SECTION II HEALTH HAZARDS

POTENTIAL EFFECTS OF EXPOSURE  
 EYES  
 Eye contact with product may cause severe irritation severe burns irreversible damage  
 Blindness Effects may be delayed.  
 SKIN

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SECTION II HEALTH HAZARDS

(CONTINUED)

Skin contact may cause burning sensation pain severe burns tissue destruction skin damage  
May be absorbed in harmful amounts.  
Absorption thru skin may cause symptoms described under inhalation and ingestion. Effects may  
be delayed.

INHALATION

Inhalation may cause severe irritation coughing choking chest pain bronchitis burns  
tissue ulceration excess fluid retention (pulmonary edema) lung damage, damage to respiratory  
system lowered calcium level in the blood (hypocalcemia) coma even death  
Effects may be delayed.

INGESTION

Ingestion may cause nausea vomiting diarrhea burns tissue ulceration gastrointestinal damage  
Lowered calcium level in the blood (hypocalcemia) coma even death Effects may be delayed.

TARGET ORGANS

OVEREXPOSURE MAY CAUSE DAMAGE TO,  
bones teeth respiratory system blood kidneys liver

FIRST AID EYES

Immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids apart  
to ensure flushing of entire surface. Call a physician.

FIRST AID SKIN

Immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated  
clothing and shoes. Thoroughly clean clothing and shoes before reuse. Call a physician.

FIRST AID INHALATION

Remove to fresh air. If not breathing give artificial respiration, preferably mouth to mouth.  
If breathing is difficult give oxygen. Call a physician.

FIRST AID INGESTION

DO NOT induce vomiting. Rinse mouth with water. Dilute stomach contents by drinking water. IF  
vomiting occurs spontaneously, keep head below hips to prevent breathing vomit into lungs. NEVER  
GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Call a physician immediately.

OTHER INFORMATION

ROUTES OF ENTRY

eye contact skin contact skin absorption inhalation  
OVEREXPOSURE MAY AGGRAVATE DISORDERS OF THE  
eyes skin respiratory system

SECTION III SPECIAL PROTECTION

PROTECTIVE EQUIPMENT  
PROTECTIVE EQUIPMENT EYES  
chemical goggles safety glasses with side shield Always wear eye protection when working with

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SECTION III SPECIAL PROTECTION

(CONTINUED)

chemicals.

PROTECTIVE EQUIPMENT SKIN  
impervious gloves acid proof clothing rubber boots rubber apron

PROTECTIVE EQUIPMENT INHALATION

If exposure limits are exceeded, or if exposure may occur, use a NIOSH/MSHA respirator approved for your conditions of exposure. Refer to the most recent NIOSH publications concerning chemical hazards, or consult your safety equipment supplier. Respiratory protection programs must be in compliance with OSHA requirements in 29 CFR 1910.134. For emergencies, a NIOSH/MSHA approved positive pressure breathing apparatus should be readily available.

VENTILATION REQUIRED:

Adequate ventilation is required to minimize exposure or to maintain exposure levels below OSHA/ACGIH requirements.

ADDITIONAL PROTECTIVE MEASURES

Safety shower, eye wash fountain, and washing facilities should be readily available.

SECTION IV FIRE & EXPLOSION HAZARD DATA

Flash Point (METHOD) : > OR = N/A  
Flammable Limits (% Volume in Air) UPPER: N/D Lower: N/D

HMIS Info Health : 3  
Fire : 0  
React : 0  
Special : X

EXTINGUISHING MEDIA

media appropriate for surrounding fire

FIRE FIGHTING PROCEDURES

Prevent human exposure to fire, fumes, smoke, and products of combustion. Evacuate non essential personnel. Firefighters should wear full face, self contained breathing apparatus and impervious protective clothing. Use water to cool containers exposed to fire.

UNUSUAL FIRE & EXPLOSION HAZARDS

Toxic fumes may be released.

SECTION V PHYSICAL DATA

Boiling Point: > OR = 222 deg. F  
Freezing Point: 16 deg. F  
Specific Gravity (H(2)O=1): 1.1700 to 1.2700 @ 68 deg. F  
Vapor Pressure (MM HG.): > OR = 24.000 @ 77 deg. F

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SECTION V PHYSICAL DATA

(CONTINUED)

Vapor Density (AIR=1) : N/D  
Evaporation Rate ( NA =1) : N/D  
Solubility in Water: COMPLETE  
Percent Volatile by Volume: N/D  
PH: aqueous approx. > OR = 1.200  
Appearance:  
COLORED LIQUID

Odor :  
SHARP

SECTION VI REACTIVITY DATA

STABILITY

Stable  
INCOMPATIBILITY  
metals/metal blends inorganic acids organic bases clays organic nitrogen compounds Contact  
with some metals can generate explosive hydrogen gas.  
HAZARDOUS DECOMPOSITION PRODUCTS  
hydrogen fluoride  
HAZARDOUS POLYMERIZATION  
Will not occur

SECTION VII SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Evacuate non essential personnel, eliminate ignition sources, and wear protective equipment (See Section III). Shut off source of leak only if safe to do so. Contain spill. Recover free product. To clean up residue, flush sparingly with water or use an absorbent. Avoid runoff to ground water, surface waters, and sewers. It may be necessary to remove contaminated soil. If product is flammable or combustible, use non sparking tools. If acidity (low pH) is a problem, neutralize with hydrated lime, soda ash, or sodium bicarbonate. If alkalinity (high pH) is a problem neutralize with dilute acetic acid or dilute hydrochloric (muriatic) acid. If required, notify state and local authorities.

DISPOSAL METHOD

Avoid discharge to sewers or waterways. Solids must be disposed of in a permitted waste management facility. Recovered liquids may be reprocessed or incinerated. Incineration must be handled in a permitted facility. Dispose of material in accordance with all Federal, State and local regulations. Local regulations may be more stringent than Federal or State.

SECTION VIII

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SECTION VIII

(CONTINUED)

Proper Shipping Name: FLUROSILICIC ACID

Hazard Class: 8, UN1778, PGII  
Label Requirements: CORROSIVE  
Reportable Quantity: None

SECTION IX ADDITIONAL INFORMATION

PRECAUTIONS

Wear protective equipment when handling. Use only with adequate ventilation. Wash thoroughly after handling. Do Not breathe vapor, mist, or dust. Do Not get in eyes, on skin, or clothing. Do not swallow.

HANDLING

Do not use glass containers. For industrial use only. ATTENTION: This container hazardous when emptied. Since emptied container contains product residues (vapor or liquid), all labeled hazard precautions must be observed.

STORAGE

Keep container closed when not in use. Store in a cool dry place. Keep out of reach of children. Do not use glass containers.

SECTION X COMPLIANCE INFORMATION

TSCA INVENTORY STATUS :  
Listed

MAXIMUM USE LEVEL IN POTABLE WATER:  
For 23% Hydrofluosilicic Acid (23% Fluosilicic Acid) : 6 mg/L.

NAME : GENE TURNER

DATE ISSUED: 930512  
DATE REVISED: 050414  
UNK = UNKNOWN

< = LESS THAN  
> = MORE THAN  
N/A = NOT APPLICABLE  
N/D = NOT DETERMINED  
N/E = NOT ESTABLISHED

The information provided in this Material Safety data sheet has been obtained from sources believed to be reliable. Harcros Chemicals Inc provides no warranties, either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your information, consideration, and investigation. You should satisfy yourself that you have all current data relevant to your particular use. Harcros Chemicals Inc knows of no medical condition, other than those noted on this material safety data sheet, which are generally recognized as being aggravated by exposure to this product.

