



## MATERIAL SAFETY DATA SHEET Printed: 02/06/2004

I Chemical Product and Company Indentification II Composition/ Information	Product Name Product Code Manufacturer Chemical Family Chemical Name of HYDROFLUORC (1309-45-1)	3630 E. KEM CINCINNAT LIQUID LA Hazardous Ingr	I, OH 45241-2046 UNDRY SOUR edient	9 SCC	% <14	Exposur TLV 2.5	Emergency Medical(Collect) Chemtree Date e Limits 5; PEL 2.5 (AS F)	(800)831-98 (303)592-10 (800)424-93 04/30/2003 Units MG/N	924 900	
on Ingredients										
III Haz ards	Signs       CORROSIVE TO EYES AND SKIN. MAY BE FATAL         Signs       IF SWALLOWED. BURNS OR IRRITATION MAY NOT         and       BE IMMEDIATELY APPARENT. FLUORIDE POISONING         CAN RESULT FROM LARGE DOSES; MAY AFFECT CNS         AND KIDNEYS.         of       H         Exposure       DECALCIFICATION OF BONES AND MOTTLING OF TEETH.									
Identific ation	HMIS:     Health 3     Flammability 0     Reactivity 0     Personal Protection D									
	Conditions Aggravated <b>DERMATITIS, RESPIRATORY CONDITIONS.</b>									
	Carcinogen Info NONE NTP IARC OSHA									
	Target Organs or System									
	Routes of Exposure: Inhalation 🗖 Skin 🕱 Ingestion 🕱									
	Inhalation IF INHALED, REMOVE TO FRESH AIR. GET MEDICAL ATTENTION.									
IV	Eyes FLUSH THOROUGHLY WITH FRESH WATER FOR AT LEAST 15 MINUTES, GET MEDICAL ATTENTION.									
First Aid Measures	Skin FLUSH WITH FRESH WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHES AND SHOES.									
	Ingestion GIVE WATER - DO NOT INDUCE VOMITING. GET MEDICAL ATTENTION. NEVER GIVE FLUIDS BY MOUTH TO AN UNCONSCIOUS PERSON.									
V	Fire Control WEAR FULL PROTECTIVE GEAR TO PREVENT SKIN CONTACT AND SCBA. Measures/ Equipment									
	Flammable Property Info									
Fire Fighting Measures	Explosion Info       HEAT OR FIRE MAY RELEASE VAPORS OF HYDROFLUORIC ACID.									
	Extinguishing Media WATER, C02, DRY CHEMICAL, FOAM									
	Gases									

VI Accidental Measures	Spill and Leak       NEUTRALIZE SPILL WITH SODA ASH OR LIME. COLLECT MATERIAL WITH CLEAN SHOVEL AND PLACE IN PROPER CONTAINER FOR DISPOSAL AS HAZARDOUS WASTE. FLUSH SPILL AREA WITH WATER.         Procedures       Procedures								
	Environmental Precautions								
	Ventilation Required? NO Instructions NORMAL AIR DILUTION								
VII Handling and Storage	Safe Storage, HandlingKEEP CONTAINER TIGHTLY CLOSED. STORE IN CORROSION PROOF AREA.DO NOT STORE NEAR OXIDIZING MATERIALS OR CHLORINATED CLEANERSand UseOR BLEACHES. SOLUTIONS OFPRODUCT WILL ETCH GLASS.InstructionsUSE ONLY IN STAINLESS STEEL MACHINES.								
	Imcompatible Materials								
	Protective Gloves ACID RESISTANT, RUBBER OR PVC								
VIII	Eye Protection CHEMICAL GOGGLES/FACE SHIELD SIDE SHIELD SAFETY GLASSES								
Exposure Controls/ Personal Protection	Respiratory     USUALLY NOT REQUIRED UNLESS EXPOSURE LIMITS ARE EXCEEDED       Protection     THEN NIOSH ACID RESPIRATOR.								
	Other ProtectiveWEAR APRON WHEN HANDLING AND CHEMICALLY IMPERVIOUS CLOTHING AND FOOTWEAR; SAFETY SHOWER/EYE WASH IN USE AREA.								
	Characteristics o of Hazardous Chemcial								
IX	Vapor Pressure 12.8 MmHg@ 20 °C Vapor Density(Air=1 >1 pH Water Solubility 100% %								
Physical and Chemical	Appearance & Odor       CLEAR COLORLESS LIQUID         Boiling Point       °F         Melting Point       °F         Flammability Limits in Air By Volume: Upper N/A       Lower N/A								
Properties	Flash Point     NONE °F     Auto Ignition     N/A     °F     Oxidizing Properties								
	Specific Gravity 1.10 Volatile by Volume 87 %								
	Evaporation Rate(n-Butyl Acetate=1) >1								
	Peroxide, Pyrophoric, Unstable or Water Reactive MODERATE								
Х	Reactivity and Hazardous Polymerization NONE KNOWN Possible Hazardous Reactions								
	Conditions to Avoid								
Stability and Reactivity	Materials       MOST COMMON METALS, STRONG BASES, AMINES, CARBONATES, METAL         To Avoid       OXIDES.								
	Hazardous     ABOVE 200 DEGREES F MAY RELEASE TOXIC VAPORS OF       Decomposition Products     HYDROFLUORIC ACID.								
XI Toxicological Information									
XII	Possible Effects and Environmental Fate								
Ecological Information	Degradability								
Information	Aquatic Toxicity Method of ADJUST PH BEFORE DISPOSAL OF SMALL AMOUNTS. USE UNTIL LESS THAN								
XIII Disposal Consideration	Method of ADJUST PH BEFORE DISPOSAL OF SMALL AMOUNTS. USE UNTIL LESS THAN         Disposal,         Disposal,         Residues and         Safe         Handling								
	Disposal of Contaminated Material ABOVE 200 DEGREES F MAY RELEASE TOXIC VAPORS OF HYDROFLUORIC ACID.								
XIV Transport Information	CORROSIVE LIQUID,ACIDIC,INORGANIC, N.O.S.,(FLUOROSILICIC ACID),8,UN3264, PG II, ERG NO.60, NAERG NO. 154								
XV-Regulatory Information XVI-Other Information									
S.A.R.A. Title III Section 313	NONE ALL CHEMICAL INGREDIENTS ARE LISTED ON THE TSCA INVENTORY.								
State Right to Know Information	HYDROFLUOROSILICIC ACID - CAS #1309-45-1 WATER - CAS #7732-18-5 ETHOXYLATED ALCOHOL - CAS #68213-23-0 BLUE DYE - CAS #72139-17-4 RED DYE - CAS #PROPRIETARY								