



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

I Chemical Product and Company Indentification Indentification Indentification/ Information on Ingredients	Product Name Product Code Manufacturer Chemical Family Chemical Name of 1 HYDROFLUORO (1309-45-1)	3630 E. KEMI CINCINNATI LIQUID LA Hazardous Ingre	t, OH 45241-2046 UNDRY SOUR	0 SCC	% <14	Exposure TLV 2.5	Emergency Medical(Collect Chemtree Date e Limits 5; PEL 2.5 (AS F)	t) (303 (800	)831-9889 )592-1024 )424-9300 0/2003 Units MG/M3
III Haz ards Identific ation	Signs       A       CORROSIVE TO EYES AND SKIN. MAY BE FATAL         Signs       C       F SWALLOWED. BURNS OR IRRITATION MAY NOT         BE IMMEDIATELY APPARENT. FLUORIDE POISONING       CAN RESULT FROM LARGE DOSES; MAY AFFECT CNS         Symptoms       C         of       H         Exposure       B         N       C         HMIS:       Health         3       Flammability         0       Reactivity         0       Reactivity         0       Personal Protection         D       Conditions Aggravated								
	Carcinogen Info Target Organs or Sy Routes of Exposure		n 🔲 Skin	X	Ingestion	n X	NTP IA	IRC	OSHA
IV	Inhalation       IF INHALED, REMOVE TO FRESH AIR. GET MEDICAL ATTENTION.         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.         Fire Control       WEAR FULL PROTECTIVE GEAR TO PREVENT SKIN CONTACT AND SCBA.								
V Fire Fighting Measures	Measures/       Equipment         Flammable Property Info         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.HandlingDO 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 ProtectionUSUALLY NOT REQUIRED UNLESS EXPOSURE LIMITS ARE EXCEEDED THEN NIOSH ACID RESPIRATOR.								
	Other Protective Clothing EquipmentWEAR 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 To Avoid       MOST COMMON METALS, STRONG BASES, AMINES, CARBONATES, METAL         Materials To Avoid       OXIDES.         Hazardous Decomposition Products       ABOVE 200 DEGREES F MAY RELEASE TOXIC VAPORS OF 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	Mended if       ADJOST FIT BEFORE DISPOSAL OF SMALL AMOUNTS. USE UNTIL LESS HIAT         Disposal,       ONE INCH REMAINS IN CONTAINER. EMPTY CONTAINER. TRIPLE RINSE         WITH WATER, ADD TO OPERATION. REMOVE OR DEFACE CONTAINER LABEL         Before SELLING OR DISPOSAL. CONSULT LOCA OR STATE REGULATIONS         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								