

BEBBINGTON INDUSTRIES SAFETY DATA SHEET

HYDROFLUORIC ACID 49%

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

SUPPLIER
 BEBBINGTON INDUSTRIES
 44 WRIGHT AVENUE
 DARTMOUTH, NOVA SCOTIA, CANADA B3B 1G6

PRODUCT NAME
 HYDROFLUORIC ACID 49%

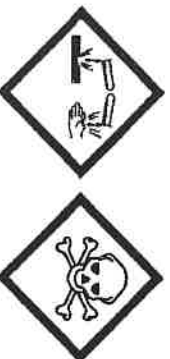
CHEMICAL FORMULA
 HF

CHEMICAL FAMILY
 INORGANIC ACID

MATERIAL USE
 VARIOUS

EMERGENCY NUMBER
 CANUTEC 1 613 996 6666

SECTION 02: HAZARDS IDENTIFICATION



SIGNAL WORD.....
 HAZARD CLASSIFICATION.....

HAZARD STATEMENT.....

PRECAUTIONARY STATEMENT.....

DANGER.
 CORROSIVE TO METALS — CATEGORY 1. ACUTE TOXICITY (ORAL) — CATEGORY 2. ACUTE TOXICITY (DERMAL) — CATEGORY 1. ACUTE TOXICITY (INHALATION) — CATEGORY 2. SKIN CORROSION — CATEGORY 1A. SERIOUS EYE DAMAGE — CATEGORY 1. SPECIFIC TARGET ORGAN TOXICITY — REPEATED EXPOSURE — CATEGORY 1.
 H290 MAY BE CORROSIVE TO METALS. H300+H310+H330 FATAL IF SWALLOWED, IN CONTACT WITH SKIN OR IF INHALED. H314 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. H335 MAY CAUSE RESPIRATORY IRRITATION.
 P260 DO NOT BREATHE THE DUST/FUME/GAS/MIST/VAPOURS/SPRAY. P262 DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING. P264 WASH... THOROUGHLY AFTER HANDLING. P270 DO NO EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT. P271 USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA. P280 WEAR PROTECTIVE GLOVES/PROTECTIVE CLOTHING/EYE PROTECTION/FACE PROTECTION. P284 WEAR RESPIRATORY PROTECTION. P301+P310 IF SWALLOWED: IMMEDIATELY CALL A POISON CENTER OR DOCTOR/PHYSICIAN. P330 RINSE MOUTH. P331 DO NOT INDUCE VOMITING. P303+P361+P353 IF ON SKIN (OR HAIR): REMOVE/TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/SHOWER. P304+P340 IF INHALED: REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING. P310 IMMEDIATELY CALL A POISON CENTER OR DOCTOR/PHYSICIAN. P305+P351+P338 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING. P361+P364 TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING AND WASH IT BEFORE REUSE. P403+P233 STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED. P405 STORE LOCKED UP. P501 DISPOSE OF CONTENTS/CONTAINER ACCORDING TO ALL APPLICABLE REGULATIONS.
 NOT ASSESSED.

OTHER HAZARDS.....

SECTION 03: COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	CAS #	WT. %
HYDROFLUORIC ACID (HF)	7664-39-3	49

SECTION 04: FIRST AID MEASURES

GENERAL ADVICE:.....
 GENERAL ADVICE: HYDROFLUORIC (HF) ACID BURNS REQUIRE IMMEDIATE AND SPECIALIZED FIRST AID AND MEDICAL TREATMENT. SYMPTOMS MAY BE

PRODUCT: HYDROFLUORIC ACID 49%

SECTION 04: FIRST AID MEASURES

GENERAL ADVICE:.....

DELAYED UP TO 24 HOURS DEPENDING ON THE CONCENTRATION OF HF. AFTER DECONTAMINATION WITH WATER FURTHER DAMAGE CAN OCCUR DUE TO PENETRATION/ABSORPTION OF THE FLUORIDE ION. TREATMENT SHOULD BE DIRECTED TOWARD BINDING THE FLUORIDE ION AS WELL AS EFFECTS OF EXPOSURE. SKIN EXPOSURES CAN BE TREATED WITH A 2.5% CALCIUM GLUCONATE GEL.

BY ROUTE OF ENTRY:.....

MOVE TO FRESH AIR. KEEP THE VICTIM LYING DOWN. QUIET AND WARM. GET COMPETENT MEDICAL ATTENTION IMMEDIATELY. IF BREATHING HAS STOPPED, START ARTIFICIAL RESPIRATION AT ONCE. AN AUTHORIZED PERSON SHOULD ADMINISTER OXYGEN TO A VICTIM WHO IS HAVING DIFFICULTY BREATHING, UNTIL THE VICTIM IS ABLE TO BREATHE EASILY BY HIMSELF. CALCIUM GLUCONATE 2.5% IN NORMAL SALINE MAY BE GIVEN BY NEBULIZER WITH OXYGEN. DO NOT GIVE STIMULANTS UNLESS INSTRUCTED TO DO SO BY A PHYSICIAN. VICTIM SHOULD BE EXAMINED BY A PHYSICIAN AND HELD UNDER OBSERVATION FOR AT LEAST 24 HOURS.

IN CASE OF SKIN CONTACT:.....

REMOVE THE VICTIM FROM THE CONTAMINATED AREA AND IMMEDIATELY WASH THE BURNED AREA WITH PLENTY OF WATER FOR A MINIMUM OF 15 MINUTES. LIMIT WASHING TO 5 MINUTES. IF TREATMENT SPECIFIC FOR HF EXPOSURE IS AVAILABLE, AFTER THOROUGH WASHING FOR AT LEAST 5 MINUTES, THE BURNED AREA SHOULD BE IMMERSSED IN A SOLUTION OF 0.13% ICED AQUEOUS "ZEPHIRAN CHLORIDE" UNTIL PAIN IS RELIEVED. REMOVE ALL CONTAMINATED CLOTHING WHILE WASHING CONTINUOUSLY. AS AN ALTERNATIVE FIRST AID TREATMENT, 2.5% CALCIUM GLUCONATE GEL MAY BE CONTINUOUSLY MASSAGED INTO THE BURN AREA UNTIL THE PAIN IS RELIEVED. FOR LARGER BURNS OR BURNS TREATED WITH CALCIUM GLUCONATE GEL, IN WHICH PAIN IS PRESENT FOR LONGER THAN 30 MINUTES), A PHYSICIAN SHOULD INJECT 5% AQUEOUS CALCIUM GLUCONATE BENEATH, AROUND AND IN THE BURNED AREA, USE OF LOCAL ANESTHETICS IS NOT RECOMMENDED. AS REDUCTION IN PAIN IS AN INDICATOR OF EFFECTIVENESS OF TREATMENT. GET MEDICAL ATTENTION AS SOON AS POSSIBLE.

IN CASE OF EYE CONTACT:.....

IRRIGATE EYES FOR AT LEAST 15 MINUTES WITH COPIOUS AMOUNTS OF WATER. KEEPING EYELIDS APART AND AWAY FROM EYEBALLS DURING IRRIGATION. GET COMPETENT MEDICAL ATTENTION IMMEDIATELY. PREFERABLY AN EYE SPECIALIST. IF A PHYSICIAN IS NOT IMMEDIATELY AVAILABLE, APPLY ONE OR TWO DROPS OF 0.5% "PONTOCALCINE HYDROCHLORIDE SOLUTION" FOLLOWED BY A SECOND IRRIGATION FOR 15 MINUTES. DO NOT USE THE SOLUTION DESCRIBED FOR SKIN TREATMENT. USE NO OILS OR GREASES UNLESS INSTRUCTED TO DO SO BY A PHYSICIAN. IRRIGATE WITH 1% CALCIUM GLUCONATE IN NORMAL SALINE FOR 1 TO 2 HOURS TO PREVENT OR LESSEN CORNEAL DAMAGE.

IF SWALLOWED:.....

DRINK LARGE AMOUNT OF WATER TO DILUTE. DO NOT INDUCE VOMITING. SEVERAL GLASSES OF MILK OR SEVERAL OUNCES OF MILK OF MAGNESIA MAY BE GIVEN FOR THEIR SOOTHING EFFECT. GET MEDICAL ATTENTION IMMEDIATELY.

NOTES TO PHYSICIAN:.....

FOR BURNS OF LARGE SKIN AREAS, (GREATER THAN 25 SQUARE INCHES), FOR INGESTION AND FOR SIGNIFICANT INHALATION EXPOSURE, SEVERE SYSTEMIC EFFECTS MAY OCCUR. MONITOR AND CORRECT FOR HYPOCALCEMIA, CARDIAC ARRHYTHMIAS, HYPOMAGNESEMIA AND HYPERKALEMIA. IN SOME CASES RENAL DIALYSIS MAY BE INDICATED. FOR CERTAIN BURNS, ESPECIALLY OF THE DIGITS, USE OF INTRA-ARTERIAL CALCIUM GLUCONATE MAY BE INDICATED. TREAT AS CHEMICAL PNEUMONIA. MONITOR FOR HYPOCALCEMIA. 2.5% CALCIUM GLUCONATE IN NORMAL SALINE BY NEBULIZER OR BY IPPB WITH 100% OXYGEN MAY DECREASE PULMONARY DAMAGE. BRONCHODILATORS MAY ALSO BE ADMINISTERED. BRONCHODILATORS MAY ALSO BE ADMINISTERED.

SECTION 05: FIRE FIGHTING MEASURES

FLAMMABILITY:.....

SUITABLE EXTINGUISHING MEDIA:.....

NOT COMBUSTIBLE/NOT FLAMMABLE.

HAZARDOUS COMBUSTION PRODUCTS

USE WATER OR SUITABLE AGENTS FOR FIRES ADJACENT TO NON-LEAKING TANKS OR CONTAINERS OF HF. DO NOT USE SOLID WATER STREAMS NEAR RUPTURED TANKS OR SPILLES OF HF. ACID REACTS WITH WATER AND CAN SPATTER ACID ONTO PERSONNEL.

EXPLOSIVE POWER:.....

RATE OF BURNING:.....

SEE HAZARDOUS DECOMPOSITION PRODUCTS. BOILS AWAY AS HYDROGEN FLUORIDE GAS AND WATER.

SPECIFIC HAZARDS ARISING FROM THE

REACTION WITH CERTAIN METALS GENERATES FLAMMABLE AND POTENTIALLY

CHEMICAL

EXPLOSIVE HYDROGEN GAS. CONSIDERABLE HEAT IS EVOLVED WHEN

CONTACTED WITH MANY SUBSTANCES. HEAT INCREASES PRESSURE AND MAY EXPLODE CONTAINER. WILL REACT VIOLENTLY WITH WATER.

PRODUCT: HYDROFLUORIC ACID 49%**SECTION 05: FIRE FIGHTING MEASURES**

SPECIAL PROCEDURES.....

WEAR SELF-CONTAINED BREATHING APPARATUS APPROVED BY NIOSH AND FULL CHEMICAL PROTECTIVE CLOTHING. EVACUATE HAZARD AREA. USE WATER-SPRAY TO KEEP CONTAINERS COOL. USE WATER ON COMBUSTIBLE BURNING IN THE VICINITY OF THIS MATERIAL BUT USE CARE AS WATER APPLIED DIRECTLY TO ACID CAUSES SPATTERING OF THE ACID. DO NOT GET WATER INSIDE CONTAINER. NOTE... RUN OFF FROM FIRE CONTROL MAY BE A POLLUTION HAZARD.

SECTION 06: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS.....

ALWAYS WEAR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT. GOOD VENTILATION IS NECESSARY. DISCHARGE WILL ORDINARILY BE A VAPOR OR A LIQUID THAT GIVES OFF FUMES OF HF GAS. THOSE TREATING SPILLS OR REPAIRING LEAKS MUST USE FULL PROTECTIVE EQUIPMENT. RAPID DILUTION OF THE SPILL WITH WATER TO <50% WILL REDUCE THE AMOUNT OF FUMES GIVEN OFF. CAREFULLY NEUTRALIZE THE DILUTE LIQUID WITH CAUSTIC SODA, LIME OR OTHER ALKALINE MATERIAL.

ENVIRONMENTAL PRECAUTIONS:.....

TAKE ACTION TO MINIMIZE ENVIRONMENTAL IMPACT. TRY TO CONTAIN SPILLAGE AND AVOID DRAINAGE TO AREAS WHICH CAN NOT BE TREATED, SPILLS AND RELEASES MAY HAVE TO BE REPORTED TO FEDERAL AND/OR LOCAL AUTHORITIES. DO NOT ALLOW PRODUCT TO ENTER DRAINS.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN UP:.....

SOAK UP WITH INERT ABSORBENT MATERIAL AND DISPOSE OF AS HAZARDOUS WASTE. KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.

SECTION 07: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING.....

ALWAYS WEAR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT. DO NOT BREATHE VAPOR OR MIST. USE ONLY WITH ADEQUATE VENTILATION. AVOID ALL CONTACT WITH SKIN, EYES AND CLOTHING. EVEN DILUTE SOLUTIONS. DO NOT ADD WATER TO ACID. HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICES. EMPTY CONTAINERS MAY CONTAIN HAZARDOUS PRODUCT RESIDUES. FOLLOW LABEL WARNINGS EVEN AFTER CONTAINER IS EMPTIED.

CONDITIONS FOR SAFE STORAGE.....

STORE IN APPROVED CONTAINERS ONLY. STORE IN COOL, WELL-VENTILATED AREA. FLAMMABLE HYDROGEN GAS CAN BE GENERATED IN METAL STORAGE CONTAINERS. DIKING OF STORAGE TANKS IS RECOMMENDED. UNLINED CARBON STEEL STORAGE TANKS IN HF SERVICE MAY BE SUBJECT TO INDISTINGUISHABLE HYDROGEN BUSTERING AND SHOULD THEREFORE BE ROUTINELY INSPECTED AND REPAIRED IF NEEDED. NON-DESTRUCTIVE TANK THICKNESS TESTING (NDT) SHOULD BE UTILIZED FOR PERIODIC CHECKS OF TANK WALL THICKNESS.

SECTION 08: EXPOSURE CONTROL/PERSONAL PROTECTION

INGREDIENTS	TWA	ACGIH TLV STEL	OSHA PEL STEL	REL	NIOSH
HYDROFLUORIC ACID (HF)	0.5 ppm				

EXPOSURE LIMIT OF MATERIAL.....

HYDROFLUORIC ACID. ACGIH-TLV: 3 PPM-CEILING. OSHA - PEL: 3 PPM (TWA), OSHA-STEL: 6 PPM (15 MIN). OTHER LIMIT: 3 MG(F)/G CREATININE IN URIN PRE-SHIFT, 10 MG(F)/G CREATININE POST-SHIFT***. IDLH: 30 PPM. AIHA EMERGENCY RESPONSE PLANNING GUIDELINE: ERPG-1 - 2PPM, ERPG-2 - 20 PPM, ERPG-3 - 50 PPM. *** = BIOLOGICAL EXPOSURE INDEX. OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS: NONE.

ENGINEERING CONTROLS.....

SUFFICIENT TO REDUCE VAPOR AND ACID MISTS BELOW PERMISSIBLE TLV LEVELS. PACKAGING AND UNLOADING AREAS AND OPEN PROCESSING EQUIPMENT MAY REQUIRE MECHANICAL EXHAUST SYSTEMS.

SKIN AND BODY PROTECTION.....

GAUNTLET GLOVES.

WHERE REQUIRED. USE A RESPIRATOR APPROVED BY NIOSH FOR HF GAS OR MISTS, AS APPLICABLE. SOME EXPOSURES MAY REQUIRE NIOSH APPROVED, SELF-CONTAINED BREATHING APPARATUS OR AIR-SUPPLIED RESPIRATOR, AS A MINIMUM WEAR HAT, CHEMICAL SAFETY GOGGLES (PLASTIC LENSES), FULL FACE PLASTIC SHIELD. DO NOT WEAR CONTACT LENSES. FOR INCREASED PROTECTION, USE AIR-SUPPLIED ACID HOOD.

EYE/FACE PROTECTION.....

CHEMICAL RESISTANT BOOTS.

FOOTWEAR/TYPE.....

FOR ROUTINE PRODUCT USE, WEAR ACID-RESISTANT JACKET, TROUSERS, FOR INCREASED PROTECTION, USE AIR-SUPPLIED TOTALLY ENCAPSULATING CHEMICAL PROTECTIVE SUIT.

CLOTHING/TYPE.....

PRODUCT: HYDROFLUORIC ACID 49%

SECTION 08: EXPOSURE CONTROL/PERSONAL PROTECTION

OTHER/TYPE:.....

EYEWASH AND QUICK-DRENCH SHOWER FACILITIES, PROTECTED FROM FREEZING, SHOULD BE AVAILABLE WHERE HF IS STORED AND HANDLED.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE.....
 ODOUR.....
 ODOUR THRESHOLD.....
 PH.....
 FREEZING POINT (C).....
 BOILING POINT.....
 FLASH POINT (C), METHOD.....
 EVAPORATION RATE.....
 PERCENT VOLATILE.....
 FLAMMABILITY (SOLIDS AND GASES).....
 UPPER FLAMMABLE LIMIT (% BY VOL.).....
 LOWER FLAMMABLE LIMIT (% BY VOL.).....
 VAPOUR PRESSURE.....
 VAPOUR DENSITY (AIR=1).....
 SPECIFIC GRAVITY (WATER=1).....
 SOLUBILITY IN WATER (% W/W).....
 COEFFICIENT OF WATER/OIL DIST.....
 AUTOIGNITION TEMPERATURE.....
 DECOMPOSITION TEMPERATURE.....
 VISCOSITY.....
 MOLECULAR WEIGHT.....

COLORLESS LIQUID, FUMES IN AIR.
 SHARP, ODORLESS.
 N.A.V.
 3.1
 -37 C (-35 F),
 104.4 (C)
 NOT FLAMMABLE.
 N.A.V.
 100.
 NOT APPLICABLE.
 NOT APPLICABLE.
 NOT APPLICABLE.
 N.A.V.
 N.A.V.
 1.134,
 100% BY WEIGHT.
 -3.7
 NOT AVAILABLE.
 N.A.V.
 N.A.V.
 20.01 (HF).

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY CONDITIONS.....

GLASS, CONCRETE, AND OTHER SILICON-BEARING MATERIALS: YIELD SILICON TETRAFLUORIDE GAS. PRESSURE BUILD-UP FROM THIS PROCESS HAS BEEN KNOWN TO BLOW UP GLASS CONTAINERS. CARBONATES, SULPHIDES, AND CYANIDES: YIELD TOXIC GASES. CARBON DIOXIDE, HYDROGEN SULPHIDE AND HYDROGEN CYANIDE, ALKALIS, SOME OXIDES: CAUSE STRONG VIOLENT EXOTHERMIC REACTIONS. COMMON METALS: YIELD HYDROGEN GAS. A FIRE AND EXPLOSIVE REACTIVE HAZARD. CORROSIVE TO MANY MATERIALS, INCLUDING LEATHER, RUBBER AND MANY ORGANICS. CONSIDERABLE HEAT IS EVOLVED AND A VIOLENT REACTION CAN OCCUR WHEN WATER IS ADDED TO HF. CONSIDERABLE HEAT IS EVOLVED AND A VIOLENT REACTION CAN OCCUR WHEN WATER IS ADDED. REACT VIOLENTLY WITH ACETIC ANHYDRIDE, ETHANOLAMINE, AMMONIA, CAO, ETHYLENEDIAMINE, ETHYLENEIMINE, PROPOLACTONE, PROPYLENE OXIDE, VINYL ACETATE, SILICATES, P2O5, AS2O3. STABLE UNDER RECOMMENDED HANDLING AND STORAGE CONDITIONS.
 N.A.V.

NO DATA AVAILABLE.
 BASES, HALIDES, ORGANIC MATERIALS, CARBIDES, FULMINATES, NITRATES, PICRATES, CYANIDES, CHLORATES, ALKALI HALIDES, ZINC SALTS, PERMANGANATES, HYDROGEN PEROXIDE, AZIDES, PERCHLORATES, NITROMETHANE, PHOSPHOROUS, REACTS VIOLENTLY WITH CYCLOPENTADIENE, CYCLOPENTANONE, OXIME, NITROARYL AMINES, HEXALITHIUM DISILICIDE, PHOSPHOROUS (III) OXIDE, POWDERED METALS, METALS, ALKALI METALS, STRONG BASES,
 BOILS AWAY AS HYDROGEN FLUORIDE GAS AND WATER.

HAZARDOUS DECOMPOSITION.....
 PRODUCTS.....

SECTION 11: TOXICOLOGICAL INFORMATION

INGREDIENTS	LC50	LD50

ACUTE TOXICITY:
 LC 50 OF MATERIAL, SPECIES & ROUTE
 SKIN CORROSION / IRRITATION.....

INHALATION: 5, 100 PPM/5 MIN., 1,300 PPM/60 MIN (RAT); 6,247 PPM/5 MIN (MUSE).
 N.A.V.
 BOTH LIQUID AND VAPOUR CAN CAUSE SEVERE BURNS WHICH MAY NOT BE IMMEDIATELY PAINFUL OR VISIBLE. PRODUCT WILL PENETRATE SKIN AND ATTACK UNDERLYING TISSUES AND BONE. LARGE BURNS (OVER 25 SQUARE INCHES) MAY ALSO CAUSE HYPOCALCEMIA (DEPLETION OF CALCIUM IN THE BODY) AND OTHER TOXIC EFFECTS WHICH MAY BE FATAL. SOLUTIONS AS DILUTE AS 2% OR LOWER MAY CAUSE BURNS WITH PROLONGED CONTACT.

PRODUCT: HYDROFLUORIC ACID 49%**SECTION 11: TOXICOLOGICAL INFORMATION**

SERIOUS EYE DAMAGE / EYE IRRITATION BOTH LIQUID AND VAPOUR CAN CAUSE IRRITATION OR CORNEAL BURNS. SOLUTIONS AS DILUTE AS 2% MAY CAUSE BURNS.

RESPIRATORY OR SKIN SENSITIZATION NO DATA AVAILABLE.

GERM CELL MUTAGENICITY NO DATA AVAILABLE.

CARCINOGENICITY NO DATA AVAILABLE.

HYDROFLUORIC ACID IS NOT LISTED BY NTP, IARC, OSHA OR ACGIH AS A CARCINOGEN.

NO DATA AVAILABLE.

REPRODUCTIVE TOXICITY NO DATA AVAILABLE.

STOT - SINGLE EXPOSURE NO DATA AVAILABLE.

STOT - REPEAT EXPOSURE NO DATA AVAILABLE.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE NO DATA AVAILABLE.

INHALATION MAY AGGRAVATE AN EXISTING DERMATITIS, ASTHMA, AND INFLAMMATORY OR FIBROTIC PULMONARY DISEASE.

MILD EXPOSURE: CAN IRRITATE NOSE, THROAT AND RESPIRATORY SYSTEM.

ONSET OF SYMPTOMS MAY BE DELAYED FOR SEVERAL HOURS. SEVERE EXPOSURE: CAN CAUSE NOSE AND THROAT BURNS, LUNG INFLAMMATION AND PULMONARY EDEMA (FLUID IN THE LUNGS), ALSO RESULTS IN OTHER TOXIC EFFECTS INCLUDING HYPOCALCEMIA (DEPLETION OF CALCIUM IN THE BODY) WHICH IF NOT PROMPTLY TREATED CAN RESULT IN DEATH.

CAN CAUSE SEVERE MOUTH, THROAT AND STOMACH BURNS AND MAY BE FATAL IF SWALLOWED. EVEN WITH SMALL AMOUNTS OR DILUTE SOLUTIONS.

PROFOUND AND POSSIBLY FATAL HYPOCALCEMIA (DEPLETION OF CALCIUM IN BODY) AND SYSTEMIC TOXICITY IS LIKELY TO OCCUR UNLESS MEDICAL TREATMENT IS PROMPTLY INITIATED.

N.A.V.

SKIN: 2% SOLUTION OF HF WAS CORROSIVE TO RABBIT SKIN WITH 1 HOUR EXPOSURE. BUT NOT WITH 1 MINUTE EXPOSURE.

PROLONGED EXPOSURE CAN CAUSE BONE AND JOINT CHANGES IN HUMANS. (FLUOROSIS - MOTTLING OF TEETH AND BONES). PROLONGED CONTACT WITH VERY DILUTE SOLUTIONS WILL CAUSE BURNS.

FLUORIDE ION CAN REDUCE SERUM CALCIUM LEVELS POSSIBLY CAUSING FATAL HYPOCALCEMIA. MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES, AND SKIN. PROLONGED EXPOSURE CAN CAUSE BONE AND JOINT CHANGES IN HUMANS. (FLUOROSIS - INCREASED BONE DENSITY AND MOTTLING OF TEETH). OTHER DATA: TESTS ON LABORATORY ANIMALS INDICATE HF IN CONCENTRATE FORM MAY PRODUCE ADVERSE MUTAGENIC AND REPRODUCTIVE EFFECTS. CITED IN RTEC (REGISTRY OF TOXIC EFFECTS OF SUBSTANCES).

THE EFFECTS OF CONTACT WITH DILUTE SOLUTIONS OF HYDROFLUORIC ACID OR ITS VAPORS MAY BE DELAYED. THE POTENTIAL DELAY IN CLINICAL SIGNS OR SYMPTOMS FOR DILUTE SOLUTIONS IS GIVEN BELOW: HF CONCENTRATION: 20%-50% DELAY IN SYMPTOMS - 1-8 HOURS. CAN ALSO CAUSE BONE AND JOINT CHANGES IN HUMANS (FLUOROSIS).

SECTION 12: ECOLOGICAL INFORMATION

PERSISTENCE AND DEGRADABILITY THE METHODS FOR DETERMINING THE BIOLOGICAL DEGRADABILITY ARE NOT APPLICABLE TO INORGANIC SUBSTANCES.

BIOACCUMULATIVE POTENTIAL NO DATA AVAILABLE.

TOXICITY NO DATA AVAILABLE.

MOBILITY IN SOIL NO DATA AVAILABLE.

OTHER ADVERSE EFFECTS NO DATA AVAILABLE.

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: IN ACCORDANCE WITH MUNICIPAL, PROVINCIAL AND FEDERAL REGULATIONS, DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER. OTHER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO A LICENSED DISPOSAL COMPANY.

PACKAGING: IMPROPER DISPOSAL OR RE-USE OF THIS CONTAINER MAY BE DANGEROUS AND ILLEGAL. REFER TO APPLICABLE LOCAL, PROVINCIAL AND FEDERAL REGULATIONS. DISPOSE EMPTY CONTAINER IN A SANITARY LANDFILL OR BY INCINERATION AS ALLOWED BY PROVINCIAL AND LOCAL AUTHORITIES. AVOID INHALATION OF SMOKE IF INCINERATED.

SECTION 14: TRANSPORT INFORMATION

UN NUMBER 1790.

TDG CLASSIFICATION 8 (6-1).

PACKING GROUP II.

SPECIAL SHIPPING INSTRUCTIONS

PRODUCT: HYDROFLUORIC ACID 49%

SECTION 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION
HPR COMPLIANCE.....

D1A, E
THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD
CRITERIA OF THE HPR AND THE SDS CONTAINS ALL THE INFORMATION
REQUIRED BY THE HPR.

SECTION 16: OTHER INFORMATION

PREPARED BY BEBBINGTON INDUSTRIES

JULY 2023

DISCLAIMER:

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. BEBBINGTON INDUSTRIES SHALL NOT BE HELD LIABLE FOR ANY DAMAGE OR INJURY RESULTING FROM HANDLING OR, OR FROM CONTACT WITH THE ABOVE PRODUCT. ALL PERSONS USING THIS PRODUCT SHOULD BE WHMIS TRAINED.