Chem-Impex International Inc.

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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #:	36629
NAME:	Potassium hydrogen difluoride
SYNONYMS:	
24 HOUR EMERGENCY TELEPHONE:	(800) 535-5053(USA) 352-323-3500 (INTERNATIONAL)
TO REQUEST AN MSDS:	(800) 869-9290
CUSTOMER SERVICE:	(630) 766-2112

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS) ACUTE TOXICITY, ORAL (CATEGORY 3), H301 SKIN CORROSION (CATEGORY 1B), H314 SERIOUS EYE DAMAGE (CATEGORY 1), H318 FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

PICTOGRAM	



SIGNAL WORD

ILAZADD STATEMENIT(S'

HAZARD STATEMENT	(S)
H301	TOXIC IF SWALLOWED.
H314	CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
PRECAUTIONARY STA	TEMENT(S)
P260	DO NOT BREATHE DUST OR MIST.
P264	WASH SKIN THOROUGHLY AFTER HANDLING.
P270	DO NOT EAT, DRINK OR SMOKE WHEN USING THIS
	PRODUCT.
P280	WEAR PROTECTIVE GLOVES/ PROTECTIVE CLOTHING/ EYE
	PROTECTION/ FACE PROTECTION.
P301 + P310 + P330	IF SWALLOWED: IMMEDIATELY CALL A POISON
	CENTER/DOCTOR. RINSE MOUTH.
P301 + P330 + P331	IF SWALLOWED: RINSE MOUTH. 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 + P310	IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP
	COMFORTABLE FOR BREATHING. IMMEDIATELY CALL A
	POISON CENTER/DOCTOR.
P305 + P351 + P338 +	IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL
P310	MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND
	EASY TO DO. CONTINUE RINSING. IMMEDIATELY CALL A
	POISON CENTER/DOCTOR.
P363	WASH CONTAMINATED CLOTHING BEFORE REUSE.
P405	STORE LOCKED UP.
P501	DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED
	WASTE DISPOSAL PLANT.
HAZARDS NOT	NONE
OTHERWISE	
CLASSIFIED (HNOC)	
OD NOT COVEDED	

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF:

BY GHS

OR NOT COVERED

MW: 78.1

CAS-NO. 7789-29-9

PURITY: 98.5 - 101.5% (Assay by titration)

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
Potassium hydrogen difl	uoride	
	ACUTE TOX. 3; SKIN CORR.	<= 100 %
	1B; EYE DAM. 1; H301, H314,	
	H318	

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

SECTION 4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

GENERAL ADVICE	CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.MOVE OUT OF DANGEROUS AREA.
IF INHALED	IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. CONSULT A PHYSICIAN.
IN CASE OF SKIN CONTACT	TAKE OFF CONTAMINATED CLOTHING AND SHOES IMMEDIATELY. WASH OFF WITH SOAP AND PLENTY OF WATER. TAKE VICTIM IMMEDIATELY TO HOSPITAL. CONSULT A PHYSICIAN.
IN CASE OF EYE CONTACT	RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND CONSULT A PHYSICIAN.CONTINUE RINSING EYES DURING TRANSPORT TO HOSPITAL.
IF SWALLOWED	DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER. CONSULT A PHYSICIAN.
MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED	THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE SECTION 2.2) AND/OR IN SECTION 11
INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND	NO DATA AVAILABLE

SECTION 5. FIRE AND EXPLOSION DATA

EXTINGUISHING MEDIA

SUITABLE	USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY
EXTINGUISHING MEDIA	CHEMICAL OR CARBON DIOXIDE.
SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE	HYDROGEN FLUORIDE, POTASSIUM OXIDES NOT COMBUSTIBLE.
ADVICE FOR	WEAR SELF-CONTAINED BREATHING APPARATUS FOR
FIREFIGHTERS	FIREFIGHTING IF NECESSARY.

FURTHER INFORMATION NO DATA AVAILABLE

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES	WEAR RESPIRATORY PROTECTION. AVOID DUST FORMATION. AVOID BREATHING VAPOURS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. EVACUATE PERSONNEL TO SAFE AREAS. AVOID BREATHING DUST. FOR PERSONAL PROTECTION SEE SECTION 8.
ENVIRONMENTAL PRECAUTIONS	PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.
METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP	PICK UP AND ARRANGE DISPOSAL WITHOUT CREATING DUST. SWEEP UP AND SHOVEL. KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.
REFERENCE TO OTHER SECTIONS	FOR DISPOSAL SEE SECTION 13.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE	AVOID CONTACT WITH SKIN AND EYES. AVOID
HANDLING	FORMATION OF DUST AND AEROSOLS.

PROVIDE APPROPRIATE EXHAUST VENTILATION AT PLACES WHERE DUST IS FORMED. FOR PRECAUTIONS SEE SECTION 2.2.

CONDITIONS FOR SAFEKEEP CONTAINER TIGHTLY CLOSED IN A DRY ANDSTORAGE, INCLUDINGWELL-VENTILATED PLACE.ANY INCOMPATIBILITIESIncluding

HYGROSCOPIC

Store at RT

SPECIFIC END USE(S)APART FROM THE USES MENTIONED IN SECTION 1.2
NO OTHER SPECIFIC USES ARE STIPULATED

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

COMPONENT	CAS-NO.	VALUE	CONTROL	BASIS
			PARAMETERS	
Potassium hydrogen	7789-29-9	TWA	2.5 MG/M3	USA. OCCUPATIONAL
difluoride				EXPOSURE LIMITS (OSHA) -
				TABLE Z-1 LIMITS FOR AIR
				CONTAMINANTS
	REMARKS	CAS NUM	IBER VARIES WI	TH COMPOUND
		TWA	2.5 MG/M3	USA. ACGIH THRESHOLD
				LIMIT VALUES (TLV)
		BONE DAMAGE		
		FLUOROSIS		
		SUBSTANCES FOR WHICH THERE IS A BIOLOGICAL		
		EXPOSURE INDEX OR INDICES (SEE BEI SECTION)		
		NOT CLASSIFIABLE AS A HUMAN CARCINOGEN		
		VARIES		
		PEL	2.5 MG/M3	CALIFORNIA PERMISSIBLE
				EXPOSURE LIMITS FOR
				CHEMICAL CONTAMINANTS

BIOLOGICAL OCCUPATIONAL EXPOSURE LIMITS

COMPONENT	CAS-NO.	PARAMETERS	VALUE	BIOLOGICAL SPECIMEN	BASIS
Potassium hydrogen	7789-29-9	FLUORIDE	2 MG/L	URINE	ACGIH -
difluoride					BIOLOGICAL
					EXPOSURE
					INDICES (BEI)
	REMARKS	PRIOR TO SHIF	T (16 HOU	RS AFTER EXP	OSURE CEASES)
		FLUORIDE	3 MG/L	URINE	ACGIH -
					BIOLOGICAL
					EXPOSURE
					INDICES (BEI)

ENI	O OF SHIFT (AS SOON AS POSSIBLE AFTER
EXF	OSURE CEASES)

EXPOSURE CONTROLS

APPROPRIATE	AVOID CONTACT WITH SKIN, EYES AND CLOTHING. WASH
ENGINEERING	HANDS BEFORE BREAKS AND IMMEDIATELY AFTER
CONTROLS	HANDLING THE PRODUCT.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE	FACE SHIELD AND SAFETY GLASSES USE EQUIPMENT FOR EYE
PROTECTION	PROTECTION TESTED AND APPROVED UNDER APPROPRIATE
	GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN
	166(EU).

SKIN PROTECTIONHANDLE WITH GLOVES. GLOVES MUST BE INSPECTED PRIOR
TO USE. USE PROPER GLOVE REMOVAL TECHNIQUE (WITHOUT
TOUCHING GLOVE'S OUTER SURFACE) TO AVOID SKIN
CONTACT WITH THIS PRODUCT. DISPOSE OF CONTAMINATED
GLOVES AFTER USE IN ACCORDANCE WITH APPLICABLE
LAWS AND GOOD LABORATORY PRACTICES. WASH AND DRY
HANDS.

FULL CONTACT MATERIAL: NITRILE RUBBER MINIMUM LAYER THICKNESS: 0.11 MM BREAK THROUGH TIME: 480 MIN MATERIAL TESTED:DERMATRIL (KCL 740, SIZE M)

SPLASH CONTACT MATERIAL: NITRILE RUBBER MINIMUM LAYER THICKNESS: 0.11 MM BREAK THROUGH TIME: 480 MIN MATERIAL TESTED:DERMATRIL (KCL 740, SIZE M)

IF USED IN SOLUTION, OR MIXED WITH OTHER SUBSTANCES, AND UNDER CONDITIONS WHICH DIFFER FROM EN 374, CONTACT THE SUPPLIER OF THE CE APPROVED GLOVES. THIS RECOMMENDATION IS ADVISORY ONLY AND MUST BE EVALUATED BY AN INDUSTRIAL HYGIENIST AND SAFETY OFFICER FAMILIAR WITH THE SPECIFIC SITUATION OF ANTICIPATED USE BY OUR CUSTOMERS. IT SHOULD NOT BE CONSTRUED AS OFFERING AN APPROVAL FOR ANY SPECIFIC USE SCENARIO.

BODY PROTECTION COMPLETE SUIT PROTECTING AGAINST CHEMICALS, THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE.

RESPIRATORY PROTECTION	WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A FULL-FACE PARTICLE RESPIRATOR TYPE N100 (US) OR TYPE P3 (EN 143) RESPIRATOR CARTRIDGES AS A BACKUP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU).
CONTROL OF ENVIRONMENTAL EXPOSURE	PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

·_____

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON D	DASIC PHYSICAL AND CHEWIICAL PROPERTY
APPEARANCE	White to off-white crystalline powder
ODOUR	NO DATA AVAILABLE
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	NO DATA AVAILABLE
MELTING	239 °C (dec.)
POINT/FREEZING POI	NT
INITIAL BOILING POI	NT
AND BOILING RANGE	3
FLASH POINT	
EVAPORATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOL	LID, THE PRODUCT IS NOT FLAMMABLE.
GAS)	
UPPER/LOWER	NO DATA AVAILABLE
FLAMMABILITY OR	
EXPLOSIVE LIMITS	
VAPOUR PRESSURE	NO DATA AVAILABLE
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	2.37
WATER SOLUBILITY	NO DATA AVAILABLE
PARTITION COEFFICI	ENT: NO DATA AVAILABLE
N- OCTANOL/WATER	
AUTO-IGNITION	NO DATA AVAILABLE
TEMPERATURE	
DECOMPOSITION	NO DATA AVAILABLE
TEMPERATURE	
VISCOSITY	NO DATA AVAILABLE
EXPLOSIVE PROPERT	
OXIDIZING PROPERT	IES NO DATA AVAILABLE

OTHER SAFETY INFORMATION

BULK DENSITY 1.3 G/L
BULK DENSITY 1.3 G/L

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY	NO DATA AVAILABLE	
CHEMICAL STABILITY	STABLE UNDER RECOMMENDED STORAGE CONDITIONS.	
POSSIBILITY OF HAZARDOUS REACTIONS	NO DATA AVAILABLE	
CONDITIONS TO AVOID	NO DATA AVAILABLE	
INCOMPATIBLE MATERIALS	STRONG OXIDIZING AGENTS	
HAZARDOUS DECOMPOSITION PRODUCTS	HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS HYDROGEN FLUORIDE, POTASSIUM OXIDES OTHER DECOMPOSITION PRODUCTS - NO DATA AVAILABLE IN THE EVENT OF FIRE: SEE SECTION 5	

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY	NO DATA AVAILABLE	
	INHALATION: NO DATA AVAILABLE	
	DERMAL: NO DATA AVAILABLE	
	NO DATA AVAILABLE	
SKIN CORROSION/IRRITATION	NO DATA AVAILABLE	
SERIOUS EYE DAMAGE/EYE IRRITATION	NO DATA AVAILABLE	
RESPIRATORY OR SKIN SENSITISATION	NO DATA AVAILABLE	
GERM CELL MUTAGENICITY	NO DATA AVAILABLE	
CARCINOGENICITY		

IARC: NTP: OSHA:	NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED HUMAN CARCINOGEN BY IARC. NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A KNOWN OR ANTICIPATED CARCINOGEN BY NTP. NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS ON OSHA S LIST OF REGULATED CARCINOGENS.
REPRODUCTIVE TOXICITY	NO DATA AVAILABLE
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	NO DATA AVAILABLE
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	NO DATA AVAILABLE
ASPIRATION HAZARD	NO DATA AVAILABLE
ADDITIONAL INFORMATION	RTECS: TS6650000
	SALIVATION, NAUSEA, VOMITING, FEVER, TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED. MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES, AND SKIN.
	STOMACH - IRREGULARITIES - BASED ON HUMAN EVIDENCE

SECTION 12. ECOLOGICAL INFORMATION

ΤΟΧΙCITY	NO DATA AVAILABLE
PERSISTENCE AND DEGRADABILITY	NO DATA AVAILABLE
BIOACCUMULATIVE POTENTIAL	NO DATA AVAILABLE
MOBILITY IN SOIL	NO DATA AVAILABLE

RESULTS OF PBT AND	PBT/VPVB ASSESSMENT NOT AVAILABLE AS	
VPVB ASSESSMENT	CHEMICAL SAFETY ASSESSMENT NOT	
	REQUIRED/NOT CONDUCTED	

OTHER ADVERSE EFFECTS NO DATA AVAILABLE

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCT	OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS
	TO A LICENSED DISPOSAL COMPANY. CONTACT A
	LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE
	TO DISPOSE OF THIS MATERIAL. DISSOLVE OR MIX THE
	MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN
	IN A CHEMICAL INCINERATOR EQUIPPED WITH AN
	AFTERBURNER AND SCRUBBER.

CONTAMINATEDDISPOSE OF AS UNUSED PRODUCT.PACKAGING

SECTION 14. TRANSPORT INFORMATION

DOT (US) PROPER SHIPPING NAME: UN NUMBER: CLASS: PACKING GROUP: POISON INHALATION HAZARD:	POTASSIUM HYDROGEN DIFLUORIDE SOLID 1811 8 (6.1) II NO
IMDG PROPER SHIPPING NAME: UN NUMBER: CLASS: PACKING GROUP: EMS-NO:	POTASSIUM HYDROGEN DIFLUORIDE SOLID 1811 8 (6.1) II F-A, S-B
IATA PROPER SHIPPING NAME: UN NUMBER: CLASS: PACKING GROUP:	POTASSIUM HYDROGEN DIFLUORIDE SOLID 1811 8 (6.1) II

REGULATORY INFORMATION SECTION 15.

SARA 302 COMPONENTS	NO CHEMICALS IN THIS M THE REPORTING REQUIRE SECTION 302.		
SARA 313 COMPONENTS	COMPONENTS WITH KNOW EXCEED THE THRESHOLD		
SARA 311/312 HAZARDS	ACUTE HEALTH HAZARD,	CHRONIC HEALTH HAZARD	
MASSACHUSETTS RIGHT TO KNOW COMPONENTS NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT.			
PENNSYLVANIA RIGHT TO	KNOW COMPONENTS		
	CAS-NO.	REVISION DATE	
Potassium hydrogen difluoride	7789-29-9	03-01-2007	
NEW JERSEY RIGHT TO KI	NOW COMPONENTS		
	CAS-NO.	REVISION DATE	

Potassium hydrogen difluoride 7789-29-9

REVISION DATE 03-01-2007

CALIFORNIA PROP. 65 COMPONENTS

THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALS KNOWN TO STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR ANY OTHER REPRODUCTIVE HARM.

SECTION 16. OTHER INFORMATION

FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.	
H301	TOXIC IF SWALLOWED.
H314	CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.

MSDS LEGEND		
MW:	MOLECULAR WEIGHT	
MF:	MOLECULAR FORMULA	
VOC:	VOLATILE ORGANIC COMPOUNDS	
ACGIH:	AMERICAN CONFERENCE OF GOVERNMENENTAL INDUSTRIAL	
	HYGINISTS	
CAS:	CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER	
OSHA:	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION	
PEL:	PERMISSIBLE EXPOSURE LIMIT (OSHA)	
TLV:	THRESHOLD LIMIT VALUE (ACGIH)	
IMPORTANT:		
THE INFORMATION ABOVE IS BELIEVED TO BE ACCURATE AND REPRESENTS THE BEST		

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