# **Chem-Impex International Inc.**

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### SAFETY DATA SHEET

#### SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #:	45089
NAME:	Octafluorotoluene
SYNONYMS:	Perfluorotoluene
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) FLAMMABLE LIQUIDS (CATEGORY 2), H225 ACUTE TOXICITY, ORAL (CATEGORY 4), H302 ACUTE TOXICITY, INHALATION (CATEGORY 3), H331

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

#### GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

PICTOGRAM



SIGNAL WORD

#### HAZARD STATEMENT(S)

H225	HIGHLY FLAMMABLE LIQUID AND VAPOUR.
H302	HARMFUL IF SWALLOWED.
H331	TOXIC IF INHALED.

#### PRECAUTIONARY STATEMENT(S)

PRECAUTIONARY STA	ATEMENT(S)
P210	KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT
	SURFACES. NO SMOKING.
P233	KEEP CONTAINER TIGHTLY CLOSED.
P240	GROUND/BOND CONTAINER AND RECEIVING EQUIPMENT.
P241	USE EXPLOSION-PROOF ELECTRICAL/ VENTILATING/
	LIGHTING EQUIPMENT.
P242	USE ONLY NON-SPARKING TOOLS.
P243	TAKE PRECAUTIONARY MEASURES AGAINST STATIC
	DISCHARGE.
P261	AVOID BREATHING DUST/ FUME/ GAS/ MIST/ VAPORS/
	SPRAY.
P264	WASH SKIN THOROUGHLY AFTER HANDLING.
P270	DO NOT 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.
P301 + P312 + P330	IF SWALLOWED: CALL A POISON CENTER/DOCTOR IF YOU
	FEEL UNWELL. RINSE MOUTH.
P303 + P361 + P353	IF ON SKIN (OR HAIR): TAKE OFF IMMEDIATELY ALL
	CONTAMINATED CLOTHING. RINSE SKIN WITH
	WATER/SHOWER.
P304 + P340 + P311	IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP
	COMFORTABLE FOR BREATHING. CALL A POISON CENTER/
	DOCTOR.
P370 + P378	IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR
	ALCOHOL-RESISTANT FOAM TO EXTINGUISH.
P403 + P233	STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER
	TIGHTLY CLOSED.
P403 + P235	STORE IN A WELL-VENTILATED PLACE. KEEP COOL.
P405	STORE LOCKED UP.
P501	DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED
	WASTE DISPOSAL PLANT.

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS

NONE

#### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MW: 236.06

CAS-NO. 434-64-0

PURITY:  $\geq 98\%$  (GC)

COMPONENT	CLASSIFICATION	CONCENTRATION
Octafluorotoluene		
	FLAM. LIQ. 2; ACUTE TOX. 4;	<= 100 %
	ACUTE TOX. 3; H225, H302,	
	H331	

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 MATERIAL 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	WASH OFF WITH SOAP AND PLENTY OF WATER. TAKE VICTIM IMMEDIATELY TO HOSPITAL. CONSULT A PHYSICIAN.
IN CASE OF EYE CONTACT	FLUSH EYES WITH WATER AS A PRECAUTION.
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 SPECIAL TREATMENT NEEDED

#### SECTION 5. FIRE AND EXPLOSION DATA

#### **EXTINGUISHING MEDIA**

SUITABLE EXTINGUISHING MEDIA	SUITABLE EXTINGUISHING MEDIA DRY POWDER DRY SAND	
	UNSUITABLE EXTINGUISHING MEDIA DO NOT USE WATER JET.	
SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE	CARBON OXIDES HYDROGEN FLUORIDE COMBUSTIBLE.	
ADVICE FOR FIREFIGHTERS	WEAR SELF-CONTAINED BREATHING APPARATUS FOR FIREFIGHTING IF NECESSARY.	
FURTHER INFORMATION	USE WATER SPRAY TO COOL UNOPENED CONTAINERS.	

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES	WEAR RESPIRATORY PROTECTION. AVOID BREATHING VAPOURS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. REMOVE ALL SOURCES OF IGNITION. EVACUATE PERSONNEL TO SAFE AREAS. BEWARE OF VAPOURS ACCUMULATING TO FORM EXPLOSIVE CONCENTRATIONS. VAPOURS CAN ACCUMULATE IN LOW AREAS. FOR PERSONAL PROTECTION SEE SECTION 8.
ENVIRONMENTAL PRECAUTIONS METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP	PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS. CONTAIN SPILLAGE, AND THEN COLLECT WITH NON- COMBUSTIBLE ABSORBENT MATERIAL, (E.G. SAND, EARTH, DIATOMACEOUS EARTH, VERMICULITE) AND

PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO LOCAL / NATIONAL REGULATIONS (SEE SECTION 13).

**REFERENCE TO OTHER** FOR DISPOSAL SEE SECTION 13. **SECTIONS** 

#### SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING	AVOID CONTACT WITH SKIN AND EYES. AVOID INHALATION OF VAPOR OR MIST. USE EXPLOSION-PROOF EQUIPMENT. KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.TAKE MEASURES TO PREVENT THE BUILD UP OF ELECTROSTATIC CHARGE. AVOID CONTACT WITH SKIN, EYES AND CLOTHING. WASH HANDS BEFORE BREAKS AND IMMEDIATELY AFTER HANDLING THE PRODUCT. FOR PRECAUTIONS SEE SECTION 2.2.
CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES	KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE. CONTAINERS WHICH ARE OPENED MUST BE CAREFULLY RESEALED AND KEPT UPRIGHT TO PREVENT LEAKAGE.
SPECIFIC END USE(S)	Store at RT 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** CONTAINS NO SUBSTANCES WITH OCCUPATIONAL EXPOSURE LIMIT VALUES.

#### **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/FACEFACE SHIELD AND SAFETY GLASSES USE EQUIPMENT FORPROTECTIONEYE PROTECTION TESTED AND APPROVED UNDERAPPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH<br/>(US) OR EN 166(EU).
- SKIN PROTECTIONHANDLE WITH GLOVES. GLOVES MUST BE INSPECTED<br/>PRIOR TO USE. USE PROPER GLOVE REMOVAL TECHNIQUE<br/>(WITHOUT TOUCHING GLOVE'S OUTER SURFACE) TO<br/>AVOID SKIN CONTACT WITH THIS PRODUCT. DISPOSE OF<br/>CONTAMINATED GLOVES AFTER USE IN ACCORDANCE<br/>WITH APPLICABLE LAWS AND GOOD LABORATORY<br/>PRACTICES. WASH AND DRY HANDS.
- BODY PROTECTIONCOMPLETE SUIT PROTECTING AGAINST CHEMICALS,<br/>FLAME RETARDANT ANTISTATIC PROTECTIVE CLOTHING.<br/>THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED<br/>ACCORDING TO THE CONCENTRATION AND AMOUNT OF<br/>THE DANGEROUS SUBSTANCE AT THE SPECIFIC<br/>WORKPLACE.
- RESPIRATORY<br/>PROTECTIONWHERE RISK ASSESSMENT SHOWS AIR-PURIFYING<br/>RESPIRATORS ARE APPROPRIATE USE A FULLFACE<br/>RESPIRATOR WITH MULTI-PURPOSE COMBINATION (US) OR<br/>TYPE ABEK (EN 14387) RESPIRATOR CARTRIDGES AS A<br/>BACKUP TO ENGINEERING CONTROLS. IF THE RESPIRATOR<br/>IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE<br/>SUPPLIED AIR RESPIRATOR. USE RESPIRATORS AND<br/>COMPONENTS TESTED AND APPROVED UNDER<br/>APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH<br/>(US) OR CEN (EU).
- CONTROL OFPREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DOENVIRONMENTALSO. DO NOT LET PRODUCT ENTER DRAINS.EXPOSUREConstruction

#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

	PHYSICAL AND CHEMICAL PROPERTIES
APPEARANCE	Colorless to almost colorless clear liquid
ODOUR	NO DATA AVAILABLE
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	NO DATA AVAILABLE
MELTING	-66 °C
POINT/FREEZING POINT	
INITIAL BOILING POINT	104 °C
AND BOILING RANGE	
FLASH POINT	20 °C
EVAPORATION RATE	NO DATA AVAILABLE

FLAMMABILITY (SOLID,	NO DATA AVAILABLE
GAS) UPPER/LOWER	NO DATA AVAILABLE
FLAMMABILITY OR	NU DATA AVAILABLE
EXPLOSIVE LIMITS	
VAPOUR PRESSURE	39 HPA AT 25 C
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	1.68
WATER SOLUBILITY	NO DATA AVAILABLE
PARTITION COEFFICIENT:	NO DATA AVAILABLE
N- OCTANOL/WATER	
AUTO-IGNITION	NO DATA AVAILABLE
TEMPERATURE	
DECOMPOSITION	NO DATA AVAILABLE
TEMPERATURE	
VISCOSITY	NO DATA AVAILABLE
EXPLOSIVE PROPERTIES	NO DATA AVAILABLE
OXIDIZING PROPERTIES	NO DATA AVAILABLE

**OTHER SAFETY INFORMATION** NO DATA AVAILABLE

#### SECTION 10. STABILITY AND REACTIVITY

REACTIVITY	NO DATA AVAILABLE

- **CHEMICAL STABILITY** STABLE UNDER RECOMMENDED STORAGE CONDITIONS.
- POSSIBILITY OFVAPORS MAY FORM EXPLOSIVE MIXTURE WITH AIR.HAZARDOUSREACTIONS

**CONDITIONS TO AVOID** HEAT, FLAMES AND SPARKS.

INCOMPATIBLE STRONG OXIDIZING AGENTS MATERIALS

HAZARDOUSIN THE EVENT OF FIRE: SEE SECTION 5DECOMPOSITIONPRODUCTS

#### SECTION 11. TOXICOLOGICAL INFORMATION

#### INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY	LD50 ORAL - MOUSE - 600 MG/KG REMARKS: (RTECS)LD50 ORAL - RAT - 1,000 MG/KG SYMPTOMS: RISK OF ASPIRATION UPON VOMITING, ASPIRATION MAY CAUSE PULMONARY EDEMA AND PNEUMONITIS. REMARKS: (RTECS)
	LC50 INHALATION - RAT - 4 H - 2.8 MG/L REMARKS: BRAIN AND COVERINGS:RECORDINGS FROM SPECIFIC AREAS OF CNS.BEHAVIORAL:CONVULSIONS OR EFFECT ON SEIZURE THRESHOLD.(RTECS)
	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:	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.
NTP:	NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A KNOWN OR ANTICIPATED
OSHA:	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.
<b>REPRODUCTIVE TOXICITY</b>	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: NOT AVAILABLE

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

OTHER DANGEROUS PROPERTIES CAN NOT BE EXCLUDED.

HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICE.

#### SECTION 12. **ECOLOGICAL INFORMATION**

TOXICITY	NO DATA AVAILABLE
PERSISTENCE AND DEGRADABILITY	NO DATA AVAILABLE
BIOACCUMULATIVE POTENTIAL	NO DATA AVAILABLE
MOBILITY IN SOIL	NO DATA AVAILABLE
RESULTS OF PBT AND VPVB ASSESSMENT	PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT CONDUCTED
OTHER ADVERSE EFFECTS	NO DATA AVAILABLE

#### SECTION 13. **DISPOSAL CONSIDERATIONS**

#### WASTE TREATMENT METHODS

PRODUCT CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL. OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO A LICENSED DISPOSAL COMPANY. BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER BUT EXERT EXTRA CARE IN IGNITING AS THIS MATERIAL IS HIGHLY FLAMMABLE.

CONTAMINATED DISPOSE OF AS UNUSED PRODUCT. PACKAGING

## SECTION 14. TRANSPORT INFORMATION

<b>DOT (US)</b> PROPER SHIPPING NAME: UN NUMBER: CLASS: PACKING GROUP: REPORTABLE QUANTITY (RQ):	FLAMMABLE LIQUIDS, N.O.S. (Octafluorotoluene) 1993 3 II
POISON INHALATION	NO
HAZARD:	
IMDG PROPER SHIPPING NAME: UN NUMBER: CLASS: PACKING GROUP: EMS-NO:	FLAMMABLE LIQUIDS, N.O.S. (Octafluorotoluene) 1993 3 II F-E, S-E
IATA PROPER SHIPPING NAME: UN NUMBER: CLASS: PACKING GROUP:	FLAMMABLE LIQUIDS, N.O.S. (Octafluorotoluene) 1993 3 II

## SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS	THIS MATERIAL DOES NOT CONTAIN ANY COMPONENTS WITH A SECTION 302 EHS TPQ.
SARA 313 COMPONENTS	THIS MATERIAL DOES NOT CONTAIN ANY CHEMICAL COMPONENTS WITH KNOWN CAS NUMBERS THAT EXCEED THE THRESHOLD (DE MINIMIS) REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313.
SARA 311/312 HAZARDS	FIRE HAZARD, ACUTE HEALTH HAZARD
MASSACHUSETTS RIGHT TO KNOW COMPONENTS	NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT.

### SECTION 16. OTHER INFORMATION

FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.	
H225	HIGHLY FLAMMABLE LIQUID AND VAPOUR.
H302	HARMFUL IF SWALLOWED.
H331	TOXIC IF INHALED.

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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DAMAGES, HOWSOEV	VER ARISING, EVEN IF <b>CII</b> HAS BEEN ADVISED OF THE POSSIBILITY

VERSION: 3.2.

OF SUCH DAMAGES.

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