# **Chem-Impex International Inc.**

Tel: (630) 766-2112 E-mail: <u>sales@chemimpex.com</u> Shipping and Correspondence: 935 Dillon Drive Wood Dale, IL 60191 USA

Fax: (630) 766-2218 Web site: www.chemimpex.com Manufacturing site: 825 Dillon Drive Wood Dale, IL 60191 USA

## SAFETY DATA SHEET

## SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #:	36876
NAME:	Methyl trifluoromethanesulfonate
SYNONYMS:	Methyl triflate
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 3), H226 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

#### HAZARD STATEMENT(S)

HAZARD STATEMENT(S)			
H226	FLAMMABLE LIQUID AND VAPOUR.		
H314	CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.		
H318	CAUSES SERIOUS EYE DAMAGE.		
PRECAUTIONARY STA	TEMENT(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.		
P264	WASH SKIN THOROUGHLY AFTER HANDLING.		
P280	WEAR PROTECTIVE GLOVES/ PROTECTIVE CLOTHING/ EYE		
	PROTECTION/ FACE PROTECTION.		
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 VICTIM TO FRESH AIR AND KEEP AT		
	REST IN A POSITION COMFORTABLE FOR BREATHING.		
	IMMEDIATELY CALL A POISON CENTER OR DOCTOR/		
	PHYSICIAN.		
P305 + P351 + P338 +	F 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.		
P370 + P378	IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR		
	ALCOHOL-RESISTANT FOAM TO EXTINGUISH.		
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	NONE		
OTHEDWICE			

OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF: $C_2H_3I$
---------------

MW: 164.10

CAS-NO. 333-27-7

PURITY:  $\geq 96\%$  (GC)

COMPONENT	CLASSIFICATION	CONCENTRATION
Methyl trifluoromethanesulfonate		
	FLAM. LIQ. 3; SKIN CORR. 1B;	<= 100 %
	EYE DAM. 1; H226, 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. 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	THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE SECTION 2.2) AND/OR IN SECTION 11.

EFFECTS, BOTH ACUTE AND DELAYED

INDICATION OF ANYNO DATA AVAILABLEIMMEDIATE MEDICALATTENTION ANDSPECIAL TREATMENTSPECIAL TREATMENTNEEDEDImage: State State

## 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	CARBON OXIDES, SULPHUR OXIDES, HYDROGEN FLUORIDE
ADVICE FOR	WEAR SELF CONTAINED BREATHING APPARATUS FOR
FIREFIGHTERS	FIRE FIGHTING IF NECESSARY.
FURTHER INFORMATION	USE WATER SPRAY TO COOL UNOPENED CONTAINERS.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES	USE PERSONAL PROTECTIVE EQUIPMENT. 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	PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.
METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP	CONTAIN SPILLAGE, AND THEN COLLECT WITH AN ELECTRICALLY PROTECTED VACUUM CLEANER OR BY WETBRUSHING AND PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO LOCAL REGULATIONS (SEE SECTION 13).
REFERENCE TO OTHER SECTIONS	FOR DISPOSAL SEE SECTION 13.

#### SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING	AVOID INHALATION OF VAPOUR OR MIST. KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.TAKE MEASURES TO PREVENT THE BUILD UP OF ELECTROSTATIC CHARGE. 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. STORE UNDER INERT GAS. AIR AND MOISTURE SENSITIVE.
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	HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL
ENGINEERING CONTROLS	HYGIENE AND SAFETY PRACTICE. WASH HANDS
	BEFORE BREAKS AND AT THE END OF WORKDAY.

#### PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTIONTIGHTLY FITTING SAFETY GOGGLES. FACESHIELD<br/>(8-INCH MINIMUM). USE EQUIPMENT FOR EYE<br/>PROTECTION TESTED AND APPROVED UNDER<br/>APPROPRIATE GOVERNMENT STANDARDS SUCH AS<br/>NIOSH (US) OR EN 166(EU).

SKIN PROTECTION	HANDLE 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: 0.4 MM BREAK THROUGH TIME: 480 MIN MATERIAL TESTED:CAMATRIL (KCL 730, SIZE M)
	SPLASH CONTACT MATERIAL: NITRILE RUBBER MINIMUM LAYER THICKNESS: 0.4 MM BREAK THROUGH TIME: 480 MIN MATERIAL TESTED:CAMATRIL (KCL 730, 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, FLAME RETARDANT ANTISTATIC PROTECTIVE CLOTHING. THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE.
<b>RESPIRATORY</b> <b>PROTECTION</b>	WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A FULL-FACE RESPIRATOR WITH MULTI-PURPOSE COMBINATION (US) OR TYPE ABEK (EN 14387) 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

APPEARANCE	Clear, colorless liquid
ODOUR	NO DATA AVAILABLE
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	NO DATA AVAILABLE
MELTING	
POINT/FREEZING POINT	
INITIAL BOILING POINT	
AND BOILING RANGE	
FLASH POINT	
EVAPORATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID,	NO DATA AVAILABLE
GAS)	
UPPER/LOWER	NO DATA AVAILABLE
FLAMMABILITY OR	
EXPLOSIVE LIMITS	
VAPOUR PRESSURE	NO DATA AVAILABLE
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	1.45 g/mL at 25 °C (Lit.)
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 OF HAZARDOUS REACTIONS	NO DATA AVAILABLE
CONDITIONS TO AVOID	HEAT, FLAMES AND SPARKS.
INCOMPATIBLE MATERIALS	STRONG OXIDIZING AGENTS, STRONG ACIDS, STRONG BASES, STRONG REDUCING AGENTS
HAZARDOUS DECOMPOSITION PRODUCTS	HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS CARBON OXIDES, SULPHUR OXIDES, HYDROGEN FLUORIDE 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: RISK OF DELAYED PULMONARY OEDEMA.	
	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	
<b>CARCINOGENICITY</b> IARC: ACGIH:	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 CARCINOGEN OR POTENTIAL CARCINOGEN BY ACGIH.	

NTP: OSHA:	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.
<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
	MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE
	OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES, AND SKIN, SPASM,
	INFLAMMATION AND EDEMA OF THE LARYNX,
	SPASM, INFLAMMATION AND EDEMA OF THE
	BRONCHI, PNEUMONITIS, PULMONARY EDEMA,
	BURNING SENSATION, COUGH, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA

## 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 VPVB ASSESSMENT	PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT CONDUCTED.

### SECTION 13. DISPOSAL CONSIDERATIONS

#### WASTE TREATMENT METHODS

**PRODUCT**BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH<br/>AN AFTERBURNER AND SCRUBBER BUT EXERT EXTRA<br/>CARE IN IGNITING AS THIS MATERIAL IS HIGHLY<br/>FLAMMABLE. OFFER SURPLUS AND NON-RECYCLABLE<br/>SOLUTIONS TO A LICENSED DISPOSAL COMPANY.

CONTAMINATEDDISPOSE OF AS UNUSED PRODUCT.PACKAGINGDispose of a subscription

## SECTION 14. TRANSPORT INFORMATION

(RQ):
POISON INHALATION NO HAZARD:
IMDG
PROPER SHIPPING NAME: CORROSIVE LIQUID, FLAMMABLE, N.O.S. (METHYL TRIFLUOROMETHANESULPHONATE)
UN NUMBER: 2920   CLASS: 8 (3)
PACKING GROUP: II
EMS-NO: F-E, S-C
IATA PROPER SHIPPING NAME: CORROSIVE LIQUID, FLAMMABLE, N.O.S. (METHYL
TRIFLUOROMETHANESULPHONATE)
UN NUMBER: 2920
CLASS: 8 (3) PACKING GROUP: II

## SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS		THIS MATERIAL ARE SUBJECT TO QUIREMENTS OF SARA TITLE III,
SARA 313 COMPONENTS	COMPONENTS WITH EXCEED THE THRES	ES NOT CONTAIN ANY CHEMICAL I KNOWN CAS NUMBERS THAT SHOLD (DE MINIMIS) REPORTING ED BY SARA TITLE III, SECTION 313.
SARA 311/312 HAZARDS	FIRE HAZARD	
MASSACHUSETTS RIGHT TO KNOW COMPONENTS NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT.		
PENNSYLVANIA RIGHT TO		
	CAS-NO.	REVISION DATE
Methyl	333-27-7	
trifluoromethanesulfonate		
νιένα μέραεν ρίζιμε το μ	NOWCOMPONENTS	

#### NEW JERSEY RIGHT TO KNOW COMPONENTS

CAS-NO. Methyl 333-27-7 trifluoromethanesulfonate

#### **CALIFORNIA PROP. 65 COMPONENTS**

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

**REVISION DATE** 

## SECTION 16. OTHER INFORMATION

#### FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.

H226	FLAMMABLE LIQUID AND VAPOUR.
H314	CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
H318	CAUSES SERIOUS 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: IMPORTANT:

#### THRESHOLD LIMIT VALUE (ACGIH)

THE INFORMATION ABOVE IS BELIEVED TO BE ACCURATE AND REPRESENTS THE BEST INFORMATION CURRENTLY AVAILABLE TO US. HOWEVER, WE MAKE NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO SUCH INFORMATION, AND WE ASSUME NO LIABILITY RESULTING FROM ITS USE. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION FOR THEIR PARTICULAR PURPOSES. IN NO EVENT SHALL **CII** BE LIABLE FOR ANY CLAIMS, LOSSES, OR DAMAGES OF ANY THIRD PARTY OR FOR LOST PROFITS OR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES, HOWSOEVER ARISING, EVEN IF **CII** HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

VERSION: 3.1.

*REVISION DATE: 01/27/2017*