Chem-Impex International Inc.

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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 31534 NAME: Methyl methanesulfonate SYNONYMS: Methanesulfonic acid methyl ester Methyl mesylate 24 HOUR EMERGENCY (800) 535-5053(USA) **TELEPHONE:** 352-323-3500 (INTERNATIONAL) TO REQUEST AN MSDS: (800) 869-9290 **CUSTOMER** (630) 766-2112 SERVICE:

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 IRRITATION (CATEGORY 2), H315 EYE IRRITATION (CATEGORY 2A), H319 CARCINOGENICITY (CATEGORY 1B), H350

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (CATEGORY 3), RESPIRATORY SYSTEM, H335 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)
H301	TOXIC IF SWALLOWED.
H315	CAUSES SKIN IRRITATION.
H319	CAUSES SERIOUS EYE IRRITATION.
H335	MAY CAUSE RESPIRATORY IRRITATION.
H350	MAY CAUSE CANCER.
11550	
PRECAUTIONARY STA	
P201	OBTAIN SPECIAL INSTRUCTIONS BEFORE USE.
P202	DO NOT HANDLE UNTIL ALL SAFETY PRECAUTIONS HAVE
	BEEN READ AND UNDERSTOOD.
P261	AVOID BREATHING DUST/ FUME/ GAS/ MIST/ VAPOURS/
	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 EYE PROTECTION/ FACE PROTECTION. WEAR
	PROTECTIVE GLOVES.
P281	USE PERSONAL PROTECTIVE EQUIPMENT AS REQUIRED.
P301 + P310 + P330	IF SWALLOWED: IMMEDIATELY CALL A POISON
	CENTER/DOCTOR. RINSE MOUTH.
P302 + P352	IF ON SKIN: WASH WITH PLENTY OF SOAP AND WATER.
P304 + P340 + P312	IF INHALED: REMOVE VICTIM TO FRESH AIR AND KEEP AT
	REST IN A POSITION COMFORTABLE FOR BREATHING. CALL
	A POISON CENTER OR DOCTOR/ PHYSICIAN IF YOU FEEL
	UNWELL.
P305 + P351 + P338	IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL
	MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND
	EASY TO DO. CONTINUE RINSING.
P308 + P313	IF EXPOSED OR CONCERNED: GET MEDICAL ADVICE/
	ATTENTION.
P332 + P313	IF SKIN IRRITATION OCCURS: GET MEDICAL ADVICE/
	ATTENTION.
P337 + P313	IF EYE IRRITATION PERSISTS: GET MEDICAL ADVICE/
	ATTENTION.
P362	TAKE OFF CONTAMINATED CLOTHING AND WASH BEFORE
D 402 - D222	REUSE.
P403 + P233	STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER
D 40.5	TIGHTLY CLOSED.
P405	STORE LOCKED UP.
P501	DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED
	WASTE DISPOSAL PLANT.

HAZARDS NOTNONEOTHERWISECLASSIFIED (HNOC)OR NOT COVEREDBY GHS

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF:	$C_2H_6O_3S$
MW:	110.13
CAS-NO.	66-27-3
PURITY:	≥99%(GC)

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
Methyl methanesulfonate		
	ACUTE TOX. 3; SKIN IRRIT. 2;	<= 100 %
	EYE IRRIT. 2A; CARC. 1B;	
	STOT SE 3; H301, H315, H319,	
	H335, H350	
FOR THE FULL TEXT O	F THE H-STATEMENTS MENTION	ED IN THIS SECTION, SEE

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	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.

IF SWALLOWED	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	NO DATA AVAILABLE

SECTION 5. FIRE AND EXPLOSION DATA

EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING MEDIA	USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY CHEMICAL OR CARBON DIOXIDE.
SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE	NO DATA AVAILABLE
ADVICE FOR FIREFIGHTERS	WEAR SELF-CONTAINED BREATHING APPARATUS FOR FIREFIGHTING IF NECESSARY.
FURTHER INFORMATION	NO DATA AVAILABLE

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL	WEAR RESPIRATORY PROTECTION. AVOID BREATHING
PRECAUTIONS,	VAPOURS, MIST OR GAS. ENSURE ADEQUATE
PROTECTIVE	VENTILATION. EVACUATE PERSONNEL TO SAFE
EQUIPMENT AND	AREAS.
EMERGENCY PROCEDURES	FOR PERSONAL PROTECTION SEE SECTION 8.
ENVIRONMENTAL	PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE
PRECAUTIONS	TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.
METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP	SOAK UP WITH INERT ABSORBENT MATERIAL AND DISPOSE OF AS HAZARDOUS WASTE. KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.

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 VAPOUR OR MIST. 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. STORAGE CLASS (TRGS 510): NON-COMBUSTIBLE, ACUTE TOXIC CAT.3 / TOXIC HAZARDOUS MATERIALS OR HAZARDOUS MATERIALS CAUSING CHRONIC EFFECTS.
SPECIFIC END USE(S)	Store at RT

SPECIFIC END USE(S)APART FROM THE USES MENTIONED IN SECTION 1.2NO 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
(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: BUTYL-RUBBER MINIMUM LAYER THICKNESS: 0.3 MM BREAK THROUGH TIME: 480 MIN MATERIAL TESTED:BUTOJECT (KCL 897, SIZE M)
	SPLASH CONTACT MATERIAL: NITRILE RUBBER MINIMUM LAYER THICKNESS: 0.2 MM BREAK THROUGH TIME: 68 MIN MATERIAL TESTED:DERMATRIL P (KCL 743, 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 RESPIRATOR WITH MULTIPURPOSE 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

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INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Colorless to yellow liquid
ODOUR	NO DATA AVAILABLE
ODOUR THRESHOLD	NO DATA AVAILABLE
РН	NO DATA AVAILABLE
MELTING	
POINT/FREEZING POINT	
INITIAL BOILING POINT	202 - 203 °C
AND BOILING RANGE	
FLASH POINT	104 °C
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	1.30
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	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 NO DATA AVAILABLE HAZARDOUS

REACTIONS

CONDITIONS TO AVOID NO DATA AVAILABLE

INCOMPATIBLESTRONG OXIDIZING AGENTS, STRONG ACIDS, STRONGMATERIALSBASES

HAZARDOUS DECOMPOSITION PRODUCTS FORMED
UNDER FIRE CONDITIONS CARBON OXIDES, SULPHUR
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	LD50 ORAL - RAT - 225 MG/KG	
	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 MUTACENICITY	NO DATA AVAILABLE	

MUTAGENICITY

CARCINOGENICITY

THIS PRODUCT IS OR CONTAINS A COMPONENT THAT HAS BEEN REPORTED TO BE PROBABLY CARCINOGENIC BASED ON ITS IARC, OSHA, ACGIH, NTP, OR EPA CLASSIFICATION.

POSSIBLE HUMAN CARCINOC	JEN
IARC:	2A - GROUP 2A: PROBABLY CARCINOGENIC TO
	HUMANS (METHYL METHANESULPHONATE)
ACGIH:	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:	REASONABLY ANTICIPATED TO BE A HUMAN
	CARCINOGEN (METHYL METHANESULPHONATE)
OSHA:	NO COMPONENT OF THIS PRODUCT PRESENT AT
	LEVELS GREATER THAN OR EQUAL TO 0.1% IS
	IDENTIFIED AS A CARCINOGEN OR POTENTIAL
	CARCINOGEN BY OSHA.

REPRODUCTIVE TOXICITY NO DATA AVAILABLE

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	INHALATION - MAY CAUSE RESPIRATORY IRRITATION
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	NO DATA AVAILABLE
ASPIRATION HAZARD	NO DATA AVAILABLE
ADDITIONAL INFORMATION	RTECS: PB2625000
	TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

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

PRODUCTOFFER 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.

SECTION 14. TRANSPORT INFORMATION

DOT (US) PROPER SHIPPING NAME:	TOXIC, LIQUIDS, ORGANIC, N.O.S. (Methyl methanesulfonate)
UN NUMBER:	2810
CLASS:	6.1
PACKING GROUP:	III
REPORTABLE QUANTITY	
(RQ):	
POISON INHALATION	NO
HAZARD:	
IMDG	
PROPER SHIPPING NAME:	TOXIC, LIQUIDS, ORGANIC, N.O.S. (Methyl methanesulfonate)
UN NUMBER:	2810
CLASS:	6.1
PACKING GROUP:	III
EMS-NO:	F-A, S-A
IATA	
PROPER SHIPPING NAME:	TOXIC, LIQUIDS, ORGANIC, N.O.S. (Methyl methanesulfonate)
UN NUMBER:	2810
CLASS:	6.1
PACKING GROUP:	III

SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS	NO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III, SECTION 302.
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 ACUTE HEALTH HAZARD, CHRONIC HEALTH HAZARD

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MASSACHUSETTS RIGHT TO KNOW COMPONENTS

	CAS-NO.	REVISION DATE
Methyl methanesulfonate	66-27-3	07/01/1991
PENNSYLVANIA RIGHT TO	O KNOW COMPONENTS	
	CAS-NO.	REVISION DATE
Methyl methanesulfonate	66-27-3	07/01/1991
NEW JERSEY RIGHT TO KNOW COMPONENTS		
	CAS-NO.	REVISION DATE
Methyl methanesulfonate	66-27-3	07/01/1991
CALIFORNIA PROP. 65 CO	MPONENTS	
WARNING! THIS PRODUCT	CONTAINS A CHEMICAL K	NOWN TO THE STATE OF
CALIFORNIA TO CAUSE CA	ANCER.	

CAS-NO.

66-27-3

REVISION DATE 11/09/1992

SECTION 16. OTHER INFORMATION

Methyl methanesulfonate

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

ACUTE TOX	ACUTE TOXICITY
CARC.	CARCINOGENICITY
EYE IRRIT.	EYE IRRITATION
H301	TOXIC IF SWALLOWED.
H315	CAUSES SKIN IRRITATION.
H319	CAUSES SERIOUS EYE IRRITATION.
H335	MAY CAUSE RESPIRATORY IRRITATION.
H350	MAY CAUSE CANCER.
SKIN IRRIT.	SKIN IRRITATION
HMIS RATING	
HEALTH HAZARD:	2
CHRONIC HEALTH	*
HAZARD:	
FLAMMABILITY:	1
PHYSICAL HAZARD	0
NFPA RATING	
HEALTH HAZARD:	2
FIRE HAZARD:	1
REACTIVITY HAZARD:	0

MOLECULAR WEIGHT
MOLECULAR FORMULA
VOLATILE ORGANIC COMPOUNDS
AMERICAN CONFERENCE OF GOVERNMENENTAL INDUSTRIAL
HYGINISTS
CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

PEL:PERMISSIBLE EXPOSURE LIMIT (OSHA)TLV:THRESHOLD LIMIT VALUE (ACGIH)

IMPORTANT:

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