# **Chem-Impex International Inc.**

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# SAFETY DATA SHEET

#### SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #:	34151
NAME:	Ethyl acetoacetate
SYNONYMS:	Acetoacetic acid ethyl ester Ethyl 3-oxobutyrate
24 HOUR EMERGENCY	(800) 535-5053(USA)
TELEPHONE:	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 4), H227 FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

**GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS** SIGNAL WORD WARNING

HAZARD STATEMENT(S) H227 COMBUSTIBLE LIQUID.

#### **PRECAUTIONARY STATEMENT(S)**

P501	DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED WASTE DISPOSAL PLANT.
P403 + P235 P501	ALCOHOL-RESISTANT FOAM TO EXTINGUISH. STORE IN A WELL-VENTILATED PLACE. KEEP COOL.
P370 + P378	PROTECTION. IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR
P280	SURFACES. NO SMOKING. WEAR PROTECTIVE GLOVES/ EYE PROTECTION/ FACE
P210	KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT

OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF:	$C_{6}H_{10}O_{3}$
MW:	130.14
CAS-NO.	141-97-9
PURITY:	97 - 100% (GC)

#### HAZARDOUS COMPONENTS

CLASSIFICATION	CONCENTRATION
FLAM. LIQ. 4; H227	<= 100 %

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. 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	NO DATA AVAILABLE

## SECTION 5. FIRE AND EXPLOSION DATA

#### **EXTINGUISHING MEDIA**

SUITABLE EXTINGUISHING MEDIA	SUITABLE EXTINGUISHING MEDIA USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY CHEMICAL OR CARBON DIOXIDE.
	UNSUITABLE EXTINGUISHING MEDIA DO NOT USE WATER JET.
SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE	CARBON OXIDES
ADVICE FOR FIREFIGHTERS	WEAR SELF-CONTAINED BREATHING APPARATUS FOR FIREFIGHTING IF NECESSARY.
FURTHER INFORMATION	USE WATER SPRAY TO COOL UNOPENED CONTAINERS.

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## 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. 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 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). KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.
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.
	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

CONTAINS NO SUBSTANCES WITH OCCUPATIONAL EXPOSURE LIMIT VALUES. HAZARDOUS COMPONENTS WITHOUT WORKPLACE CONTROL PARAMETERS

### **EXPOSURE CONTROLS**

APPROPRIATE	HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE
ENGINEERING	AND SAFETY PRACTICE. WASH HANDS BEFORE BREAKS AND
CONTROLS	AT THE END OF WORKDAY.

### PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION	SAFETY GLASSES WITH SIDE-SHIELDS CONFORMING TO EN166 USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE 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: 0.4 MM BREAK THROUGH TIME: 30 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	IMPERVIOUS CLOTHING, THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE.

RESPIRATORY	WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING
PROTECTION	<b>RESPIRATORS ARE APPROPRIATE USE A FULLFACE</b>
	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	PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO
ENVIRONMENTAL	SO. DO NOT LET PRODUCT ENTER DRAINS.
EXPOSURE	

# SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES		
APPEARANCE	Colorless liquid	
ODOUR	CHARACTERISTIC, ESTER-LIKE	
ODOUR THRESHOLD	NO DATA AVAILABLE	
PH	NO DATA AVAILABLE	
MELTING		
POINT/FREEZING POINT		
INITIAL BOILING POINT	179 - 181 °C	
AND BOILING RANGE		
FLASH POINT	84 °C	
EVAPORATION RATE	NO DATA AVAILABLE	
FLAMMABILITY (SOLID,	NO DATA AVAILABLE	
GAS)		
UPPER/LOWER	UPPER EXPLOSION LIMIT: 9.5 %(V)	
FLAMMABILITY OR	LOWER EXPLOSION LIMIT: 1.4 %(V)	
EXPLOSIVE LIMITS		
VAPOUR PRESSURE	0.26 HPA AT 20 C - OECD TEST GUIDELINE 104	
	0.42 HPA AT 25 C - OECD TEST GUIDELINE 104	
	3.5 HPA AT 50 C - OECD TEST GUIDELINE 104	
VAPOUR DENSITY	4.49 - (AIR = 1.0)	
RELATIVE DENSITY		
WATER SOLUBILITY	130 G/L AT 20 C - OECD TEST GUIDELINE 105	
PARTITION COEFFICIENT:	LOG POW: 0.8 AT 20 C - OECD TEST GUIDELINE 117	
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		

## 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	ACIDS, BASES, OXIDIZING AGENTS, REDUCING AGENTS
HAZARDOUS DECOMPOSITION PRODUCTS	HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS CARBON 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 - FEMALE - 10,800 MG/KG (OECD TEST GUIDELINE 401)
	LC50 INHALATION - RABBIT - MALE AND FEMALE - 4 H - > 49.2 MG/L REMARKS: (IN ANALOGY TO SIMILAR PRODUCTS) (ECHA)
	LD50 DERMAL - RAT - MALE AND FEMALE - > 2,000 MG/KG (OECD TEST GUIDELINE 402)
	NO DATA AVAILABLE
SKIN CORROSION/IRRITATION	SKIN - RABBIT RESULT: NO SKIN IRRITATION - 4 H (OECD TEST GUIDELINE 404)

SERIOUS EYE DAMAGE/EYE IRRITATION	EYES - RABBIT RESULT: NO EYE IRRITATION - 24 H (OECD TEST GUIDELINE 405)
RESPIRATORY OR SKIN SENSITISATION	FREUND"S COMPLETE ADJUVANT TEST - GUINEA PIG RESULT: NEGATIVE (OECD TEST GUIDELINE 406)
GERM CELL MUTAGENICITY	IN VITRO MAMMALIAN CELL GENE MUTATION TEST CHINESE HAMSTER LUNG CELLS RESULT: NEGATIVE AMES TEST ESCHERICHIA COLI/SALMONELLA TYPHIMURIUM RESULT: NEGATIVE
CARCINOGENICITY IARC:	NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS
NTP: OSHA:	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	ACUTE INHALATION TOXICITY - POSSIBLE DAMAGES: MUCOSAL IRRITATIONS
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	NO DATA AVAILABLE
ASPIRATION HAZARD	NO DATA AVAILABLE

ADDITIONALREPEATED DOSE TOXICITY - RAT - MALE ANDINFORMATIONFEMALE - ORAL - 28 D - NO OBSERVED ADVERSEEFFECT LEVEL - 1,000 MG/KGSUBACUTE TOXICITY NO SIGNIFICANT ADVERSEEFFECTS WERE REPORTED

RTECS: AK5250000

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

AFTER ABSORPTION: HEADACHE, DIZZINESS, NAUSEA OTHER DANGEROUS PROPERTIES CAN NOT BE EXCLUDED. HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICE.

## SECTION 12. ECOLOGICAL INFORMATION

ΤΟΧΙCITY	
TOXICITY TO FISH	SEMI-STATIC TEST LC50 - DANIO RERIO (ZEBRA FISH)
	- > 100  MG/L - 96  H
TOXICITY TO DAPHNIA AND	(OECD TEST GUIDELINE 203) STATIC TEST ECCO., DADUNIA MACNA (WATER ELEA)
OTHER AQUATIC	STATIC TEST EC50 - DAPHNIA MAGNA (WATER FLEA) - > 100 MG/L - 48 H
INVERTEBRATES	(OECD TEST GUIDELINE 202)
TOXICITY TO ALGAE	STATIC TEST ERC50 - DESMODESMUS SUBSPICATUS
	(GREEN ALGAE) - > 100 MG/L - 72 H
	(OECD TEST GUIDELINE 201)
DEDGISTENCE AND DECDAD	
PERSISTENCE AND DEGRAD	
BIODEGRADABILITY	AEROBIC CHEMICAL OXYGEN DEMAND - EXPOSURE TIME 28 D
	RESULT: 66 % - READILY BIODEGRADABLE.
	(OECD TEST GUIDELINE 301D)
BIOACCUMULATIVE	NO DATA AVAILABLE
POTENTIAL	
MOBILITY IN SOIL	NO DATA AVAILABLE
RESULTS OF PBT AND	PBT/VPVB ASSESSMENT NOT AVAILABLE AS
VPVB ASSESSMENT	CHEMICAL SAFETY ASSESSMENT NOT
VI VDASSESSMENT	REQUIRED/NOT CONDUCTED.
OTHER ADVERSE EFFECTS	DISCHARGE INTO THE ENVIRONMENT MUST BE
	AVOIDED.

## SECTION 13. DISPOSAL CONSIDERATIONS

#### WASTE TREATMENT METHODS

**PRODUCT**OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS<br/>TO A LICENSED DISPOSAL COMPANY. THIS<br/>COMBUSTIBLE MATERIAL MAY BE BURNED IN A<br/>CHEMICAL INCINERATOR EQUIPPED WITH AN<br/>AFTERBURNER AND SCRUBBER.

CONTAMINATEDDISPOSE OF AS UNUSED PRODUCT.PACKAGINGDispose of a subscription

### SECTION 14. TRANSPORT INFORMATION

<b>DOT (US)</b> PROPER SHIPPING NAME: NA-NUMBER: CLASS: PACKING GROUP: REPORTABLE QUANTITY (RQ):	COMBUSTIBLE LIQUID, N.O.S. (Ethyl acetoacetate) 1993 NONE III
POISON INHALATION HAZARD:	NO
IMDG	NOT DANGEROUS GOODS
IATA	NOT DANGEROUS GOODS

### 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	FIRE HAZARD

#### MASSACHUSETTS RIGHT TO KNOW COMPONENTS

	CAS-NO.	REVISION DATE
Ethyl acetoacetate	141-97-9	04-24-1993

#### PENNSYLVANIA RIGHT TO KNOW COMPONENTS

	CAS-NO.	<b>REVISION DATE</b>
Ethyl acetoacetate	141-97-9	04-24-1993

#### NEW JERSEY RIGHT TO KNOW COMPONENTS

	CAS-NO.	REVISION DATE
Ethyl acetoacetate	141-97-9	04-24-1993

#### **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.H227COMBUSTIBLE LIQUID.

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:	

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VERSION: 3.1.

REVISION DATE: 01/27/2017