

# *Chem-Impex International Inc.*

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## SAFETY DATA SHEET

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### SECTION 1. CHEMICAL IDENTIFICATION

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CATALOG #:	41481
NAME:	b-Butyrolactone
SYNONYMS:	b-Methyl- $\alpha$ -propiolactone 3-Hydroxybutyric acid b-lactone 4-Methyl-2-oxetanone
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

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CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)



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

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### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

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MF: C<sub>4</sub>H<sub>6</sub>O<sub>2</sub>  
MW: 86.09  
CAS-NO. 3068-88-0  
PURITY: ≥ 98% (GC)

#### HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
<b>b-Butyrolactone</b>		
	FLAM. LIQ. 3; SKIN IRRIT. 2; EYE IRRIT. 2A; CARC. 2; H226, H315, H319, H351	≤ 100 %

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

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### SECTION 4. FIRST-AID MEASURES

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#### 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.

<b>IN CASE OF EYE CONTACT</b>	RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND CONSULT A PHYSICIAN.
<b>IF SWALLOWED</b>	DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER. CONSULT A PHYSICIAN.
<b>MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED</b>	THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE SECTION 2.2) AND/OR IN SECTION 11.
<b>INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED</b>	NO DATA AVAILABLE

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## **SECTION 5. FIRE AND EXPLOSION DATA**

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### **EXTINGUISHING MEDIA**

<b>SUITABLE EXTINGUISHING MEDIA</b>	USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY CHEMICAL OR CARBON DIOXIDE.
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<b>SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE</b>	CARBON OXIDES
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<b>ADVICE FOR FIREFIGHTERS</b>	WEAR SELF CONTAINED BREATHING APPARATUS FOR FIRE FIGHTING IF NECESSARY.
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<b>FURTHER INFORMATION</b>	USE WATER SPRAY TO COOL UNOPENED CONTAINERS.
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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

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<b>PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES</b>	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.
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<b>ENVIRONMENTAL PRECAUTIONS</b>	PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.
<b>METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP</b>	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).
<b>REFERENCE TO OTHER SECTIONS</b>	FOR DISPOSAL SEE SECTION 13.

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## **SECTION 7. HANDLING AND STORAGE**

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<b>PRECAUTIONS FOR SAFE HANDLING</b>	AVOID CONTACT WITH SKIN AND EYES. 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.
<b>CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES</b>	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 at RT
<b>SPECIFIC END USE(S)</b>	APART FROM THE USES MENTIONED IN SECTION 1.2 NO OTHER SPECIFIC USES ARE STIPULATED.

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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### **CONTROL PARAMETERS**

#### **COMPONENTS WITH WORKPLACE CONTROL PARAMETERS**

CONTAINS NO SUBSTANCES WITH OCCUPATIONAL EXPOSURE LIMIT VALUES.

### **EXPOSURE CONTROLS**

#### **APPROPRIATE ENGINEERING CONTROLS**

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

### **PERSONAL PROTECTIVE EQUIPMENT**

<b>EYE/FACE PROTECTION</b>	FACE SHIELD AND SAFETY GLASSES USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU).
<b>SKIN PROTECTION</b>	<p>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.</p> <p>FULL CONTACT  MATERIAL: BUTYL-RUBBER  MINIMUM LAYER THICKNESS: 0.3 MM  BREAK THROUGH TIME: 480 MIN  MATERIAL TESTED: BUTOJECT (KCL 897, SIZE M)</p> <p>SPLASH CONTACT  MATERIAL: NATURE LATEX/CHLOROPRENE  MINIMUM LAYER THICKNESS: 0.6 MM  BREAK THROUGH TIME: 60 MIN  MATERIAL TESTED: LAPREN (KCL 706, SIZE M)</p> <p>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.</p>
<b>BODY PROTECTION</b>	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 PROTECTION</b>	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.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

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**INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE	Colorless to faint yellow liquid
ODOUR	NO DATA AVAILABLE
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	NO DATA AVAILABLE
MELTING POINT/FREEZING POINT	-43.5 °C (Lit.)
INITIAL BOILING POINT AND BOILING RANGE	71 - 73 °C / 29 mmHg (Lit.)
FLASH POINT	60 °C
EVAPORATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID, GAS)	NO DATA AVAILABLE
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	NO DATA AVAILABLE
VAPOUR PRESSURE	NO DATA AVAILABLE
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	1.056 g/mL at 25 °C (Lit.)
WATER SOLUBILITY	NO DATA AVAILABLE
PARTITION COEFFICIENT: N- OCTANOL/WATER	NO DATA AVAILABLE
AUTO-IGNITION TEMPERATURE	NO DATA AVAILABLE
DECOMPOSITION TEMPERATURE	NO DATA AVAILABLE
VISCOSITY	NO DATA AVAILABLE
EXPLOSIVE PROPERTIES	NO DATA AVAILABLE
OXIDIZING PROPERTIES	NO DATA AVAILABLE

**OTHER SAFETY INFORMATION**

NO DATA AVAILABLE

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**SECTION 10. STABILITY AND REACTIVITY**

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**REACTIVITY** NO DATA AVAILABLE

**CHEMICAL STABILITY** STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

<b>POSSIBILITY OF HAZARDOUS REACTIONS</b>	NO DATA AVAILABLE
<b>CONDITIONS TO AVOID</b>	HEAT, FLAMES AND SPARKS
<b>INCOMPATIBLE MATERIALS</b>	STRONG OXIDIZING AGENTS, STRONG BASES
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS. - CARBON OXIDES OTHER DECOMPOSITION PRODUCTS - NO DATA AVAILABLE IN THE EVENT OF FIRE: SEE SECTION 5

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

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### **INFORMATION ON TOXICOLOGICAL EFFECTS**

<b>ACUTE TOXICITY</b>	NO DATA AVAILABLE  INHALATION: NO DATA AVAILABLE  DERMAL: NO DATA AVAILABLE  NO DATA AVAILABLE
<b>SKIN CORROSION/IRRITATION</b>	NO DATA AVAILABLE
<b>SERIOUS EYE DAMAGE/EYE IRRITATION</b>	NO DATA AVAILABLE
<b>RESPIRATORY OR SKIN SENSITISATION</b>	NO DATA AVAILABLE
<b>GERM CELL MUTAGENICITY</b>	NO DATA AVAILABLE
<b>CARCINOGENICITY</b>	
IARC:	2B - GROUP 2B: POSSIBLY CARCINOGENIC TO HUMANS (B-BUTYROLACTONE)
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:	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.



OSHA:	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
<b>SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE</b>	NO DATA AVAILABLE
<b>SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE</b>	NO DATA AVAILABLE
<b>ASPIRATION HAZARD</b>	NO DATA AVAILABLE
<b>ADDITIONAL INFORMATION</b>	RTECS: RQ8050000  TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

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## SECTION 12. ECOLOGICAL INFORMATION

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

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## SECTION 13. DISPOSAL CONSIDERATIONS

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### WASTE TREATMENT METHODS

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

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**SECTION 14. TRANSPORT INFORMATION**

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**DOT (US)**

PROPER SHIPPING NAME:	FLAMMABLE LIQUID, N.O.S. (b-Butyrolactone)
UN NUMBER:	1993
CLASS:	3
PACKING GROUP:	III
REPORTABLE QUANTITY (RQ):	
POISON INHALATION HAZARD:	NO

**IMDG**

PROPER SHIPPING NAME:	FLAMMABLE LIQUID, N.O.S. (b-Butyrolactone)
UN NUMBER:	1993
CLASS:	3
PACKING GROUP:	III
EMS-NO:	F-E, S-E

**IATA**

PROPER SHIPPING NAME:	FLAMMABLE LIQUID, N.O.S. (b-Butyrolactone)
UN NUMBER:	1993
CLASS:	3
PACKING GROUP:	III

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**SECTION 15. REGULATORY INFORMATION**

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<b>SARA 302 COMPONENTS</b>	NO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III, SECTION 302.
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<b>SARA 313 COMPONENTS</b>	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.
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**SARA 311/312 HAZARDS** FIRE HAZARD, ACUTE HEALTH HAZARD, CHRONIC HEALTH HAZARD

**MASSACHUSETTS RIGHT TO KNOW COMPONENTS**

	CAS-NO.	REVISION DATE
b-Butyrolactone	3068-88-0	02/16/1993

**PENNSYLVANIA RIGHT TO KNOW COMPONENTS**

	CAS-NO.	REVISION DATE
b-Butyrolactone	3068-88-0	02/16/1993

**NEW JERSEY RIGHT TO KNOW COMPONENTS**

	CAS-NO.	REVISION DATE
b-Butyrolactone	3068-88-0	02/16/1993

**CALIFORNIA PROP. 65 COMPONENTS**

WARNING! THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

	CAS-NO.	REVISION DATE
b-Butyrolactone	3068-88-0	09/28/2007

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**SECTION 16. OTHER INFORMATION**

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

H226	FLAMMABLE LIQUID AND VAPOUR.
H315	CAUSES SKIN IRRITATION.
H319	CAUSES SERIOUS EYE IRRITATION.
H351	SUSPECTED OF CAUSING CANCER.

**MSDS LEGEND**

MW:	MOLECULAR WEIGHT
MF:	MOLECULAR FORMULA
VOC:	VOLATILE ORGANIC COMPOUNDS
ACGIH:	AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGINISTS
CAS:	CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER
OSHA:	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PEL:	PERMISSIBLE EXPOSURE LIMIT (OSHA)
TLV:	THRESHOLD LIMIT VALUE (ACGIH)

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