Chem-Impex International Inc.

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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #:	38921
NAME:	Butyraldehyde
SYNONYMS:	Butanal
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 EYE IRRITATION (CATEGORY 2A), H319 SHORT-TERM (ACUTE) AQUATIC HAZARD (CATEGORY 3), H402 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.
H319	CAUSES SERIOUS EYE IRRITATION.
H402	HARMFUL TO AQUATIC LIFE.
PRECAUTIONARY STAT	TEMENT(S)

FRECAUTIONART STAT	EMENT(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.
P273	AVOID RELEASE TO THE ENVIRONMENT.
P280	WEAR PROTECTIVE GLOVES/ PROTECTIVE CLOTHING/ EYE
	PROTECTION/ FACE PROTECTION.
P303 + P361 + P353	IF ON SKIN (OR HAIR): REMOVE/ TAKE OFF IMMEDIATELY
	ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/
	SHOWER.
P305 + P351 + P338	IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL
	MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND
	EASY TO DO. CONTINUE RINSING.
P337 + P313	IF EYE IRRITATION PERSISTS: GET MEDICAL ADVICE/
	ATTENTION.
P370 + P378	IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR
	ALCOHOL-RESISTANT FOAM FOR EXTINCTION.
P403 + P235	STORE IN A WELL-VENTILATED PLACE. KEEP COOL.
P501	DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED
	WASTE DISPOSAL PLANT.
HAZARDS NOT	NONE
OTHERWISE	
CLASSIFIED (HNOC)	

CLASSIFIED (HNOC) OR NOT COVERED BY GHS

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF:	$\mathrm{C_4H_8O}$
MW:	72.11
CAS-NO.	123-72-8
PURITY:	\geq 99% (GC)

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
Butyraldehyde		
	FLAM. LIQ. 2; EYE IRRIT. 2A;	<= 100 %
	AQUATIC ACUTE 3; H225,	
	H319, H402	
FOR THE FULL TEX	T OF THE H-STATEMENTS MENTIO	NED 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. 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	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 UNSUITABLE	DRY POWDER, DRY SAND DO NOT USE WATER JET
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.

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. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.
METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP	CONTAIN SPILLAGE, AND THEN COLLECT WITH AN ELECTRICALLY PROTECTED VACUUM CLEANER OR BY WET-BRUSHING 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 CONTACT WITH SKIN AND EYES. AVOID INHALATION OF VAPOUR OR MIST. USE EXPLOSION-PROOF EQUIPMENT.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.
SPECIFIC END USE(S)	Store at 0-8 °C 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

COMPONENT	CAS-NO.	VALUE	CONTROL PARAMETERS	BASIS
BUTYRALDEHYDE	123-72-8	TWA	25 PPM 75 MG/M3	USA. WORKPLACE ENVIRONMENTAL EXPOSURE LEVELS (WEEL)

EXPOSURE CONTROLS

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

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION 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).

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.
	SPLASH CONTACT MATERIAL: BUTYL- RUBBER MINIMUM LAYER THICKNESS: 0.3 MM BREAK THROUGH TIME: 30 MIN MATERIAL TESTED:BUTOJECT (KCL 897, 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, 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.
RESPIRATORY PROTECTION	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

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	PHYSICAL AND CHEMICAL PROPERTIES
APPEARANCE	Colorless to almost colorless clear liquid
ODOUR	PUNGENT
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	6 - 7 AT 71 G/L AT 20 C
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	UPPER EXPLOSION LIMIT: 11.1 %(V)
FLAMMABILITY OR	LOWER EXPLOSION LIMIT: 1.7 %(V)
EXPLOSIVE LIMITS	
VAPOUR PRESSURE	144 HPA AT 20 C
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	0.810 (Lit.)
WATER SOLUBILITY	50 G/L AT 20 C COMPLETELY SOLUBLE
PARTITION COEFFICIENT:	LOG POW: 1.3 AT 20 C - BIOACCUMULATION IS NOT
N- OCTANOL/WATER	EXPECTED.
AUTO-IGNITION	190 C AT 1,013 HPA
TEMPERATURE	
DECOMPOSITION	NO DATA AVAILABLE
TEMPERATURE	
VISCOSITY	NO DATA AVAILABLE
EXPLOSIVE PROPERTIES	NO DATA AVAILABLE
OXIDIZING PROPERTIES	NO DATA AVAILABLE

OTHER SAFETY INFORMATION

SURFACE TENSION 70 MN/M AT 1G/L AT 20 C

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY	NO DATA AVAILABLE
CHEMICAL STABILITY	STABLE UNDER RECOMMENDED STORAGE CONDITIONS.
POSSIBILITY OF HAZARDOUS REACTIONS	VAPOURS MAY FORM EXPLOSIVE MIXTURE WITH AIR.
CONDITIONS TO AVOID	HEAT, FLAMES AND SPARKS.
INCOMPATIBLE MATERIALS	OXIDIZING AGENTS, STRONG BASES, STRONG REDUCING AGENTS, STRONG ACIDS

HAZARDOUS	HAZARDOUS DECOMPOSITION PRODUCTS FORMED
DECOMPOSITION	UNDER FIRE CONDITIONS CARBON OXIDES
PRODUCTS	
	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 - MALE AND FEMALE - 5,890 MG/KG (OECD TEST GUIDELINE 401)
	LC50 INHALATION - RAT - MALE AND FEMALE - 4 H - > 5.46 MG/L (OECD TEST GUIDELINE 403)
	LD50 DERMAL - RABBIT - 3,560 MG/KG
	NO DATA AVAILABLE
SKIN CORROSION/IRRITATION	SKIN - RABBIT RESULT: NO SKIN IRRITATION - 4 H (OECD TEST GUIDELINE 404) REPEATED OR PROLONGED EXPOSURE MAY CAUSE SKIN IRRITATION AND DERMATITIS, DUE TO DEGREASING PROPERTIES OF THE PRODUCT.
SERIOUS EYE DAMAGE/EYE IRRITATION	EYES RABBIT RESULT: IRRITATING TO EYES 24 H
RESPIRATORY OR SKIN SENSITISATION	BUEHLER TEST - GUINEA PIG RESULT: NEGATIVE
GERM CELL MUTAGENICITY	AMES TEST SALMONELLA TYPHIMURIUM RESULT: NEGATIVE
	MOUSE - BONE MARROW RESULT: POSITIVE
CARCINOGENICITY IARC:	NO COMPONENT OF THIS PRODUCT PRESENT AT
	LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED
NTP:	HUMAN CARCINOGEN BY IARC. NO COMPONENT OF THIS PRODUCT PRESENT AT
	LEVELS GREATER THAN OR EQUAL TO 0.1% IS

CARCINOGEN BY NTP.

IDENTIFIED AS A KNOWN OR ANTICIPATED

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	ACUTE INHALATION TOXICITY - POSSIBLE DAMAGES:, MUCOSAL IRRITATIONS, LUNG OEDEMA, SYMPTOMS MAY BE DELAYED.
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	NO DATA AVAILABLE
ASPIRATION HAZARD	NO DATA AVAILABLE
ADDITIONAL INFORMATION	RTECS: ES2275000
	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

STATIC TEST LC50 - PIMEPHALES PROMELAS
(FATHEAD MINNOW) - 25.8 MG/L - 96 H
STATIC TEST EC50 - DAPHNIA MAGNA (WATER FLEA) -
195 MG/L - 24 H
ABILITY
AEROBIC - EXPOSURE TIME 5 D RESULT: 46 - 57 % -
READILY BIODEGRADABLE.
28 - 43 %
NO BIOACCUMULATION IS TO BE EXPECTED (LOG
POW <= 4).
NO DATA AVAILABLE

RESULTS OF PBT AND
VPVB ASSESSMENTPBT/VPVB ASSESSMENT NOT AVAILABLE AS
CHEMICAL SAFETY ASSESSMENT NOT
REQUIRED/NOT CONDUCTEDOTHER ADVERSE EFFECTSAN ENVIRONMENTAL HAZARD CANNOT BE
EXCLUDED IN THE EVENT OF UNPROFESSIONAL
HANDLING OR DISPOSAL. HARMFUL TO AQUATIC

LIFE.

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCTBURN 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.

CONTAMINATEDDISPOSE OF AS UNUSED PRODUCT.PACKAGINGDispose of a subscription

SECTION 14. TRANSPORT INFORMATION

DOT (US)	
PROPER SHIPPING NAME:	BUTYRALDEHYDE
UN NUMBER:	1129
CLASS:	3
PACKING GROUP:	II
REPORTABLE QUANTITY	
(RQ):	
POISON INHALATION	NO
HAZARD:	
IMDG	
PROPER SHIPPING NAME:	BUTYRALDEHYDE
UN NUMBER:	1129
CLASS:	3
PACKING GROUP:	II
EMS-NO:	F-E, S-D
IATA	
PROPER SHIPPING NAME:	BUTYRALDEHYDE
UN NUMBER:	1129
CLASS:	3
CLASS:	3

SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS		ATERIAL ARE SUBJECT TO MENTS OF SARA TITLE III,
SARA 313 COMPONENTS	THE FOLLOWING COMPONENTS ARE SUBJECT TO REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313:	
	CAS-NO.	REVISION DATE
Butyraldehyde	123-72-8	7/1/2007
SARA 311/312 HAZARDS	FIRE HAZARD, ACUTE HEA	ALTH HAZARD
MASSACHUSETTS RIGHT TO KNOW COMPONENTS		
	CAS-NO. REVISION DATE	REVISION DATE
Butyraldehyde	123-72-8	3/1/2007
PENNSYLVANIA RIGHT TO KNOW COMPONENTS)	
	CAS-NO.	REVISION DATE
Butyraldehyde	123-72-8	3/1/2007
NEW JERSEY RIGHT TO KNOW COMPONENTS	CAS-NO.	REVISION DATE
Duturaldahyda	LAS-NO. 123-72-8	3/1/2007
Butyraldehyde	125-72-8	5/1/2007

SECTION 16. OTHER INFORMATION

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 A	BOVE IS BELIEVED TO BE ACCURATE AND REPRESENTS THE BEST
INFORMATION CURR	ENTLY AVAILABLE TO US. HOWEVER, WE MAKE NO WARRANTY OF
MERCHANTABILITY C	DR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT

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