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SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #:	34158
NAME:	Ethyl butyrate
SYNONYMS:	Butyric acid ethyl ester
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
EYE IRRITATION (CATEGORY 2A), H319

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

**GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS
PICTOGRAM**



SIGNAL WORD WARNING

HAZARD STATEMENT(S)

H226 FLAMMABLE LIQUID AND VAPOUR.
H319 CAUSES SERIOUS EYE IRRITATION.

PRECAUTIONARY STATEMENT(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/ 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
OTHERWISE
CLASSIFIED (HNOC)
OR NOT COVERED
BY GHS** NONE

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF: C₆H₁₂O₂

MW: 116.16

CAS-NO. 105-54-4
PURITY: $\geq 98\%$ (GC)

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
Ethyl butyrate	FLAM. LIQ. 3; EYE IRRIT. 2A; H226, H319	$\leq 100\%$

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	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

SUITABLE EXTINGUISHING MEDIA
DRY POWDER DRY SAND

UNSUITABLE EXTINGUISHING MEDIA
DO NOT USE WATER JET.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

CARBON OXIDES
COMBUSTIBLE.

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. 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).

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.

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 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.

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

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	<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>SPLASH CONTACT MATERIAL: BUTYL-RUBBER MINIMUM LAYER THICKNESS: 0.3 MM BREAK THROUGH TIME: 45 MIN MATERIAL TESTED: BUTOJECT (KCL 897, 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>
BODY PROTECTION	<p>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.</p>
RESPIRATORY PROTECTION	<p>WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A FULLFACE 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).</p>
CONTROL OF ENVIRONMENTAL EXPOSURE	<p>PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.</p>

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Colorless liquid
ODOUR	FRUITY
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	NO DATA AVAILABLE
MELTING POINT/FREEZING POINT	
BOILING POINT	
FLASH POINT	
EVAPORATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID, GAS)	NO DATA AVAILABLE
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	NO DATA AVAILABLE
VAPOUR PRESSURE	17 HPA AT 20 C
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	0.87
WATER SOLUBILITY	0.21 G/L AT 30 C
PARTITION COEFFICIENT: N- OCTANOL/WATER	LOG POW: 2.85 AT 25 C
AUTO-IGNITION TEMPERATURE	463 C
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

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	NO DATA AVAILABLE

**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 - > 2,000 MG/KG
(OECD TEST GUIDELINE 423)

INHALATION: NO DATA AVAILABLE

LD50 DERMAL - RAT - MALE AND FEMALE - > 2,000
MG/KG
(OECD TEST GUIDELINE 402)

NO DATA AVAILABLE

**SKIN
CORROSION/IRRITATION**

SKIN - RAT
RESULT: NO SKIN IRRITATION - 24 H
(PATCH TEST 24 HRS.)

**SERIOUS EYE
DAMAGE/EYE
IRRITATION**

EYES - RABBIT
RESULT: NO EYE IRRITATION
REMARKS: (ECHA)

**RESPIRATORY OR SKIN
SENSITISATION**

OPEN EPICUTANEOUS TEST - GUINEA PIG
RESULT: NEGATIVE
REMARKS: (ECHA)

**GERM CELL
MUTAGENICITY**

AMES TEST
SALMONELLA TYPHIMURIUM
RESULT: NEGATIVE

CARCINOGENICITY

IARC:

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.

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.

REPRODUCTIVE TOXICITY	NO DATA AVAILABLE
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	ACUTE ORAL TOXICITY - NAUSEA, VOMITING, RISK OF ASPIRATION UPON VOMITING. ASPIRATION MAY CAUSE PULMONARY OEDEMA AND PNEUMONITIS.
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE	NO DATA AVAILABLE
ASPIRATION HAZARD	NO DATA AVAILABLE
ADDITIONAL INFORMATION	RTECS: ET1660000 TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED. IF INHALED AFTER UPTAKE OF LARGE QUANTITIES: POSSIBLE SYMPTOMS: DIZZINESS, SOMNOLENCE, UNCONSCIOUSNESS, CNS DISORDERS OTHER DANGEROUS PROPERTIES CAN NOT BE EXCLUDED. HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICE.

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY	
TOXICITY TO FISH	LC50 - LEUCISCUS IDUS (GOLDEN ORFE) - 53 MG/L - 48 H REMARKS: (ECOTOX DATABASE)
TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES	STATIC TEST EC50 - DAPHNIA MAGNA (WATER FLEA) - 116.6 MG/L - 48 H (OECD TEST GUIDELINE 202)
TOXICITY TO ALGAE	STATIC TEST ERC50 - DESMODESMUS SUBSPICATUS (GREEN ALGAE) - > 100 MG/L - 72 H (OECD TEST GUIDELINE 201)
TOXICITY TO BACTERIA	EC50 - ACTIVATED SLUDGE - 6,070 MG/L (OECD TEST GUIDELINE 209)
PERSISTENCE AND DEGRADABILITY	
BIODEGRADABILITY	RESULT: 63 % - READILY BIODEGRADABLE. (OECD TEST GUIDELINE 301F)

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	DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

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

SECTION 14. TRANSPORT INFORMATION

DOT (US)	
PROPER SHIPPING NAME:	ETHYL BUTYRATE
UN NUMBER:	1180
CLASS:	3
PACKING GROUP:	III
REPORTABLE QUANTITY (RQ):	
POISON INHALATION HAZARD:	NO
IMDG	
PROPER SHIPPING NAME:	ETHYL BUTYRATE
UN NUMBER:	1180
CLASS:	3
PACKING GROUP:	III
EMS-NO:	F-E, S-D

IATA
PROPER SHIPPING NAME: ETHYL BUTYRATE
UN NUMBER: 1180
CLASS: 3
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 (DEMINIMIS) REPORTING LEVELS ESTABLISHED 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 KNOW COMPONENTS

	CAS #	REVISION DATE
Ethyl butyrate	105-54-4	03-01-2007

SECTION 16. OTHER INFORMATION

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

H226 FLAMMABLE LIQUID AND VAPOUR.
H319 CAUSES SERIOUS EYE IRRITATION.

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)

IMPORTANT:

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