

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product name: Eastman(TM) Butyric Acid, Food/Feed Grade, Kosher

Product No.: EAN 900060. P0015240

Additional identification

Chemical name: butanoic acid

CAS-No.: 107-92-6

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Chemical Intermediate

Uses advised against: None known.

Details of the supplier of the safety data sheet**Manufacturer / Supplier**

Eastman Chemical Company
200 South Wilcox Drive
Kingsport, TN 37660-5280 US
+14232292000

Visit our website at www.EASTMAN.com or email emnmsds@eastman.com

Emergency telephone number:

For emergency health, safety, and environmental information, call 1-423-229-4511 or 1-423-229-2000.

For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300 or call 423-229-2000.

SECTION 2: Hazards identification

Hazard Classification:**Physical Hazards**

Flammable liquids Category 4

Health Hazards

Acute toxicity (Oral) Category 4

Skin corrosion Category 1B

Serious Eye Damage/Eye Irritation Category 1

OSHA Specified Hazards: not applicable

Warning label items including precautionary statement:

Pictogram:



Signal Words: DANGER!

Hazard Statement(s): H227: Combustible liquid.
H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.

Precautionary Statement:

Prevention: P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P260: Do not breathe dust/fume/gas/mist/vapors/spray.
P270: Do not eat, drink or smoke when using this product.
P264: Wash hands thoroughly after handling.

Response: P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P361: Remove/Take off immediately all contaminated clothing.
P363: Wash contaminated clothing before reuse.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER or doctor/physician.

Storage: P405: Store locked up.

Disposal: P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC): None known.

SECTION 3: Composition/information on ingredients

Substances / Mixtures

General information:

Chemical name	Concentration	Additional identification	Notes
butyric acid	100%	CAS-No.: 107-92-6	

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

This substance has workplace exposure limit(s).

SECTION 4: First aid measures

Description of first aid measures

Inhalation:	Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.
Eye contact:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. In case of irritation from airborne exposure, move to fresh air. Get medical attention if symptoms persist.
Skin contact:	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
Ingestion:	Call a physician or poison control center immediately. Do NOT induce vomiting. If victim is fully conscious, give a cupful of water. Never give liquid to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms and effects, both acute and delayed:	May irritate and cause redness and pain.
Indication of any immediate medical attention and special treatment needed	
Hazards:	None known.
Treatment:	Treat symptomatically.

SECTION 5: Firefighting measures

General Fire Hazards:	Combustible liquid and vapor.
Extinguishing media	
Suitable extinguishing media:	Water spray. Dry chemical. Carbon Dioxide. Alcohol foam.
Unsuitable extinguishing media:	None known.
Special hazards arising from the substance or mixture:	None known.
Advice for firefighters	
Special fire fighting procedures:	Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Wear appropriate personal protective equipment.
---	---

Environmental Precautions: Avoid release to the environment.

Methods and material for containment and cleaning up:

Eliminate sources of ignition. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Large Spillages: Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.

Notification Procedures:

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

SECTION 7: Handling and storage:**Precautions for safe handling:**

Avoid breathing mist or vapor. Do not get in eyes, on skin, on clothing. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities:

Keep container tightly closed and in a well-ventilated place.

Specific end use(s):

Chemical Intermediate

SECTION 8: Exposure controls/personal protection**Control Parameters****Occupational Exposure Limits**

Country specific exposure limits have not been established or are not applicable unless listed below.

Exposure controls**Appropriate engineering controls:**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment**General information:**

Eye bath. Washing facilities. Safety shower.

Eyeface protection:

Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

Skin protection**Hand Protection:**

Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

Other:

No data available.

Respiratory Protection:	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.
Hygiene measures:	Observe good industrial hygiene practices.
Environmental Controls:	No data available.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Colorless
Odor:	Rancid
Odor Threshold:	No data available.
pH:	2 (25 °C)
Freezing Point:	-7 °C
Boiling Point:	164 °C
Flash Point:	71 °C (closed cup)
Evaporation Rate:	No data available.
Flammability (solid, gas):	not applicable
Flammability Limit - Upper (%):	13.4 %(V)
Flammability Limit - Lower (%):	2.19 %(V)
Vapor pressure:	1 hPa (20 °C)
Vapor density (air=1):	3
Specific Gravity:	0.9574 (20 °C)
Solubility(ies)	
Solubility in Water:	Miscible with water.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	log Pow: 1.1
Autoignition Temperature:	435 °C
Decomposition Temperature:	No data available.
Dynamic viscosity:	1.666 mPa.s (20 °C)
Kinematic viscosity:	1.74 mm ² /s (20 °C)
Explosive properties:	Not classified.
Oxidizing properties:	Not classified.

SECTION 10: Stability and reactivity

Reactivity:	Materials containing similar structural groups are normally stable.
Chemical Stability:	Stable
Possibility of Hazardous Reactions:	None known.
Conditions to Avoid:	Heat, sparks, flames.
Incompatible Materials:	Bases, alkalies (organic). Strong oxidizing agents.
Hazardous Decomposition Products:	Carbon Dioxide. Carbon Monoxide.

SECTION 11: Toxicological information**Information on likely routes of exposure**

Inhalation:	None known.
Ingestion:	Harmful if swallowed.
Skin contact:	Causes skin burns.
Eye contact:	Causes serious eye damage.

Information on toxicological effects**Oral**

Product:	Oral LD-50: (Rat): 1,632 mg/kg
-----------------	--------------------------------

Dermal

Product:	Dermal LD-50: (Rabbit): 6,096 mg/kg
-----------------	-------------------------------------

Inhalation

Product:	LC50 (Rat, 4 h): > 5.1 mg/l
-----------------	-----------------------------

Repeated dose toxicity

Product:	No data available.
-----------------	--------------------

Skin Corrosion/Irritation

Product:	(Rabbit, 24 h): Severe
-----------------	------------------------

Serious Eye Damage/Eye Irritation

Product:	(Rabbit, 24 h): Severe
-----------------	------------------------

Respiratory or Skin Sensitization

Product:	(Human)Not a skin sensitizer.
-----------------	-------------------------------

Carcinogenicity

Product:	No data available.
-----------------	--------------------

Specified substance(s):

butyric acid

OSHA Not Listed. IARC Not Listed. NTP Not Listed.

Toxicity to reproduction**Product:**

No data available.

Developmental toxicity**Product:**

No data available.

Germ Cell Mutagenicity**In vitro****Product:**Mutagenicity - Mammalian: negative
Chromosomal aberration: negative
Mutagenicity - Bacterial: negative**In vivo****Product:**

No data available.

Specific Target Organ Toxicity - Single Exposure**Product:**

No data available.

Specific Target Organ Toxicity - Repeated Exposure**Product:**

No data available.

Aspiration Hazard**Product:**

No data available.

Other effects:

No data available.

SECTION 12: Ecological information**Ecotoxicity:****Acute hazards to the aquatic environment:****Fish****Product:**

LC-50 (Fathead Minnow, 96 h): 66.4 mg/l

Aquatic Invertebrates**Product:**

EC-50 (Water Flea, 48 h): 51.25 mg/l

Chronic hazards to the aquatic environment:**Fish****Product:**

No data available.

Aquatic Invertebrates**Product:**

No data available.

Toxicity to Aquatic Plants

Product: EC-50 (Scenedesmus subspicatus, 72 h): 45.1 mg/l

Persistence and Degradability**Biodegradation**

Product: 81 % (5 d, Ready biodegradability: Modified OECD Screening Test) Readily biodegradable
100 % (14 d, Ready biodegradability: Modified OECD Screening Test) Readily biodegradable

BOD/COD Ratio

Product: No data available.

Bioaccumulative Potential**Bioconcentration Factor (BCF)**

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: Log Kow: 1.1 25 °C

Mobility in Soil:

No data available.

Known or predicted distribution to environmental compartments

butyric acid Log Koc: 1.66 - 1.69 (QSAR model)

Other Adverse Effects:

No data available.

SECTION 13: Disposal considerations**Waste treatment methods**

General information: No data available.

Disposal methods: Discharge, treatment, or disposal may be subject to national, state, or local laws. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied.

SECTION 14: Transport information

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

DOT

Reportable Quantity: 2,270 kg (butyric acid)
Possible Shipping Description(s):

UN 2820 Butyric acid 8 III

IMDG - International Maritime Dangerous Goods Code

Possible Shipping Description(s):

UN 2820 BUTYRIC ACID 8 III

IATA

Possible Shipping Description(s):

UN 2820 Butyric acid 8 III

TDG

Possible Shipping Description(s):

BUTYRIC ACID
8 UN 2820 III**SECTION 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture.:****This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.****WHMIS (Canada) Status:** controlled**WHMIS (Canada) Hazard Classification:** B/3, E**SARA 311-312 Hazard Classification(s):**immediate (acute) health hazard
fire hazard**US EPCRA (SARA Title III) Section 313 - Toxic Chemical List**

NONE

OSHA: hazardous

TSCA (US Toxic Substances Control Act): This product is listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act): This product is listed on the DSL or otherwise complies with CEPA new substance notification requirements.

AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): This product is listed on AICS or otherwise complies with NICNAS.

MITI (Japanese Handbook of Existing and New Chemical Substances): This product is listed in the Handbook or has been approved in Japan by new substance notification.

ECL (Korean Toxic Substances Control Act): This product is listed on the Korean inventory or otherwise complies with the Korean Toxic Substances Control Act.KE-03838

Inventory of Existing Chemical Substances in China: All components of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC).

SECTION 16: Other information

HMIS® Hazard Ratings: Health - 3, Flammability - 2, Chemical Reactivity - 0

HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

Revision Information: Not relevant.

Key literature references and sources for data: No data available.

Training information: No data available.

Issue Date: 05/21/2015

SDS No.:

Disclaimer: This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.