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SAFETY DATA SHEET**ETHYL BUTYRATE**

1. Product Identification:**Synonyms:** Butanoic acid, ethyl ester; Butyric acid, ethyl ester; Butyric ether; Ethyl butanoate; Ethyl n-butyrate.**CAS No.:** 105-54-4**Molecular Weight:** 116.16**Chemical Formula:** C₆H₁₂O₂

2. Composition/Information on Ingredients

Ingradient	CAS NO.	Percent	GHS Signal words	GHS Codes	GHS pictogram codes
Ethyl Butyrate	105-54-4	99 – 100%	Warning	H226,H315, H319, H335	None

3. Hazards Identification :**OSHA Hazards**

Highly flammable liquid and vapour.

GHS Classification

Skin irritation (category 2)

Eye irritation (category 2A)

Acute aquatic toxicity (category 3)

GHS Label elements, including precautionary statements

Pictogram Highly flammable

Signal word Danger

Hazard statement(s)

H226 Highly flammable liquid and vapour.

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces –No smoking.

HMIS Classification**Health hazard:** 2**Flammability:** 3**Physical hazards:** 0**NFPA Rating****Health hazard:** 2

Fire: 3

Reactivity Hazard: 0

Potential Health Effects

Inhalation:

Low vapor pressure indicates a low inhalation hazard unless this material is heated or misted. If heated, inhalation may cause irritation to respiratory tract. Symptoms may include coughing, chest pain and shortness of breath. Higher exposures may cause central nervous system effects.

Ingestion:

Large oral doses may cause irritation to the gastrointestinal tract.

Skin Contact:

Not expected to be a health hazard from skin exposure.

Eye Contact:

May cause irritation, redness and pain.

Chronic Exposure:

No information found.

Aggravation of Pre-existing Conditions:

No information found.

4. First Aid Measures

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion:

May be harmful if swallowed. Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

Skin Contact:

Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

5. Fire Fighting Measures

Fire:

Flash point: 26°C (78.80°F)

Auto-ignition temperature: 463°C (865.40°F)

Flammable limits in air % by volume: Not available

LEL : Not available

UEL : Not available

Explosion:

Above the flash point, explosive vapor-air mixtures may be formed.

Fire Extinguishing Media:

Water spray, dry chemical, alcohol foam, or carbon dioxide. Water or foam may cause frothing. Water spray may be used to keep fire exposed containers cool.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer!

7. Handling and Storage

Keep in a tightly closed container, keep away from heat, sparks & open flame. Stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Do not breathe vapor, avoid contact with eyes, skin and clothing. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Control parameters

Component with workplace control parameter

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type P95 or R95 filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece particulate respirator (NIOSH type P100 or R100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. Please note that N filters are not recommended for this material. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator.

WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear protective gloves and clean body-covering clothing.

Eye Protection:

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance : Colourless transparent Liquid.
Odor : Banana-Pineapple odour
Solubility : Partly miscible
Specific Gravity : 0.870 – 0.877 @ 25°C
pH : No information found.
Boiling Point : 120°C
Melting Point : -100.8°C (-149.4°F)
Auto-ignition Temp. : 463°C
Vapor Density (Air=1) : 4.0
Vapor Pressure (mm Hg) : 12.8 mm Hg @20°C.
Evaporation Rate (BuAc=1): No information found.

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Strong oxidizers. Will attack some forms of plastics, rubber and coatings.

Conditions to Avoid:

Moisture, Heat.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

LD 50 Oral – oral-rat 13000 mg/kg Food and Cosmetics Toxicology.

Oral-rabbit 5228 mg/kg Industrial Medicine and Surgery.

Remarks: Behavioral: Somnolence (general depressed activity). Lungs, Thorax, or Respiration: Other changes.

Gastrointestinal: Other changes.

Dermal Toxicity :

LD 50 Skin-rabbit > 2000 mg/kg Food and Cosmetics Toxicology.

Skin corrosion /irritation

Skin – rabbit

Result : 500 mg/24hours

Remarks : Moderate skin irritation

Serious Eye damage/eye irritation

Eyes – rabbit

Result – Moderate eye irritation – 24h

Remarks : Moderate eye irritation

Respiratory or skin sensitization**Germ cell mutagenicity**

No data available

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.

Reproductive toxicity

No data available

Specific target organ toxicity – single exposure

No data available

Specific target organ toxicity – repeated exposure

No data available

Aspiration hazard

no data available

Additional Information

Prolonged or repeated exposure may cause; narcosis, gastrointestinal disturbance, cough, chest pain, difficulty in breathing, to the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological Information**Environmental Fate:**

When released into the soil, this material may biodegrade to a moderate extent. When released into the soil, this material may evaporate to a moderate extent. When released into water, this material may biodegrade to a moderate extent. When released into water, this material is not expected to evaporate significantly. This material has an experimentally-determined bioconcentration factor (BCF) of less than 100. This material is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition. When released into the air, this material is expected to have a half-life of less than 1 day.

Environmental Toxicity:

This material may be toxic to aquatic life. The LC50/96-hour values for fish LC50 78.00 MG/L *Idus melanotus* . The LC50/96-hour values for fish are over 100 mg/l.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a approved waste facility. Processing, use or contamination of this product may change the waste management options and Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

DOT

UN-No	UN1180
Proper Shipping Name	ETHYL BUTYRATE
Hazards Class	3
Packing Group	III

TDG

UN-No	UN1180
Proper Shipping Name	ETHYL BUTYRATE
Hazards Class	3
Packing Group	III

IATA

UN-No	UN1180
Proper Shipping Name	ETHYL BUTYRATE
Hazards Class	3
Packing Group	III

IMDG/IMO

UN-No	UN1180
Proper Shipping Name	ETHYL BUTYRATE
Hazards Class	3
Packing Group	III

15. Regulatory Information

Safety, health and environmental regulation/legislation specific for the substance or mixture

No data available

Chemical safety Assessment

For this product a chemical safety assessment was not carried out

Australian Hazchem Code: None allocated.

Poison Schedule: None allocated.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: **2**, Flammability: **3**, Reactivity: **0**

Label Hazard Warning:

CAUTION! MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO EYES AND RESPIRATORY TRACT.

Label Precautions:

Avoid breathing vapor.

Avoid contact with eyes.

Keep container closed.

Use only with adequate ventilation.

Wash thoroughly after handling.

Label First Aid:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. If swallowed, induce vomiting immediately as directed by medical personnel. Never give

anything by mouth to an unconscious person. Get medical attention. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists.

Disclaimer:

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