SAFETY DATA SHEET

Eastman(TM) n-Butyl Propionate

SECTION 1. IDENTIFICATION

Product name : Eastman(TM) n-Butyl Propionate
Product code : 21065-00, E2106504, P2106501, P2106503, P2106502, P2106500, P2106504, P2106505, P210650D, N2106503, N2106504

Manufacturer or supplier's details
Company name of supplier : Eastman Chemical Company
Address : 200 South Wilcox Drive
          Kingsport TN 37660-5280
Telephone : (423) 229-2000
Emergency telephone : CHEMTREC: +1-800-424-9300, +1-703-527-3887 CCN7321

Recommended use of the chemical and restrictions on use
Recommended use : Solvent
Restrictions on use : None known.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200
Flammable liquids : Category 3

GHS label elements
Hazard pictograms : ![Flammable Liquid]

Signal Word : Warning
Hazard Statements : H226 Flammable liquid and vapor.
Precautionary Statements : Prevention:
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.
P280 Wear protective gloves/ eye protection/ face protection.  

Response:  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.  

Storage:  
P403 + P235 Store in a well-ventilated place. Keep cool.  

Disposal:  
P501 Dispose of contents/container to an approved waste disposal plant.  

Other hazards  
None known.  

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS  

Substance / Mixture : Substance  
Substance name : 21065-00  
CAS-No. : 590-01-2  

Components  

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-butyl propionate</td>
<td>590-01-2</td>
<td>100</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES  

If inhaled : Remove to fresh air.  
Treat symptomatically.  
Get medical attention if symptoms occur.  

In case of skin contact : Wash off with soap and water.  
Get medical attention if symptoms occur.  

In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
If easy to do, remove contact lens, if worn.  
Get medical attention if symptoms occur.  

If swallowed : Seek medical advice.  

Most important symptoms and effects, both acute and delayed : None known.  

Notes to physician : Treat symptomatically.
SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water spray
Dry chemical
Carbon dioxide (CO2)
Foam

Unsuitable extinguishing media: Do NOT use water jet.

Specific hazards during fire fighting: Flash back possible over considerable distance.
Prevent buildup of vapors or gases to explosive concentrations.

Hazardous combustion products: No hazardous combustion products are known

Further information: Flammable liquid and vapor.
Material will float and may ignite on surface of water.
Use a water spray to cool fully closed containers.

Special protective equipment for fire-fighters: Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Wear appropriate personal protective equipment.
Local authorities should be advised if significant spillages cannot be contained.

Environmental precautions: Avoid release to the environment.

Methods and materials for containment and cleaning up: Eliminate all ignition sources if safe to do so.
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Prevent runoff from entering drains, sewers, or streams.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling: Avoid prolonged or repeated contact with skin.
Use only with adequate ventilation.
Wash thoroughly after handling.

Conditions for safe storage: Keep container tightly closed and in a well-ventilated place.
SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters
Contains no substances with occupational exposure limit values.

**Engineering measures**: 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.

**Personal protective equipment**

**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. Wear respiratory protection when its use is identified for certain contributing scenario.

**Hand protection**

**Remarks**: Wear suitable gloves. For prolonged or repeated contact use protective gloves.

**Eye protection**: Safety glasses

**Protective measures**: Ensure that eye flushing systems and safety showers are located close to the working place.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**: liquid

**Color**: colorless

**Odor**: ester-like

**Odor Threshold**: not determined

**pH**: not determined

**Melting point/freezing point**: -103 °F / -75 °C

**Boiling point/boiling range**: 293 °F / 145 °C

**Flash point**: 97 °F / 36 °C

Method: Seta closed cup
Evaporation rate : 0.5
Upper explosion limit / Upper flammability limit : not determined
Lower explosion limit / Lower flammability limit : not determined
Vapor pressure : 4 mbar (68 °F / 20 °C)
Relative vapor density : 4.5
Relative density : 0.88 (68 °F / 20 °C)
Solubility(ies)
   Water solubility : slightly soluble
Partition coefficient: n-octanol/water
   Pow: 219
   log Pow: 2.34
Autoignition temperature : not determined
Decomposition temperature
   Method: DSC
   No exotherm to 450°C
Viscosity
   Viscosity, dynamic : not determined
   Viscosity, kinematic : 0.94 mm²/s (68 °F / 20 °C)
Explosive properties : No data available
Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : None reasonably foreseeable.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : None known.
Conditions to avoid : Heat, flames and sparks.
Incompatible materials : Strong oxidizing agents
Hazardous decomposition products
   Carbon dioxide (CO2)
   Carbon monoxide
SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity
Not classified based on available information.

Components:

n-butyl propionate:
Acute oral toxicity: LD50 Oral (Rat): > 5,000 mg/kg
Acute inhalation toxicity:
  LC50 (Rat): > 23.78 mg/l
  Exposure time: 6 h
  Test atmosphere: vapor
  Remarks: no deaths from exposure to nearly saturated vapor
  Not classified

Acute dermal toxicity: LD50 Dermal (Rabbit): > 14,008 mg/kg

Skin corrosion/irritation
Not classified based on available information.

Components:

n-butyl propionate:
Species: Rabbit
Exposure time: 24 h
Result: none

Serious eye damage/eye irritation
Not classified based on available information.

Components:

n-butyl propionate:
Species: Rabbit
Result: none

Respiratory or skin sensitization

Skin sensitization
Not classified based on available information.

Respiratory sensitization
Not classified based on available information.

Components:

n-butyl propionate:
Test Type: Skin Sensitization
Species: Guinea pig
Result: non-sensitizing
**Germ cell mutagenicity**
Not classified based on available information.

**Components:**

**n-butyl propionate:**
Genotoxicity in vitro : Test Type: Mutagenicity - Bacterial
Metabolic activation: +/- activation
Result: negative

**Carcinogenicity**
Not classified based on available information.

**IARC**
No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA**
No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP**
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity**
Not classified based on available information.

**STOT-single exposure**
Not classified based on available information.

**STOT-repeated exposure**
Not classified based on available information.

**Repeated dose toxicity**

**Components:**

**n-butyl propionate:**
Species : Rat
: 247 ppm
Application Route : Inhalation

**Aspiration toxicity**
Not classified based on available information.

**Information on likely routes of exposure**

**Product:**
Inhalation : Remarks: None known.
Skin contact : Remarks: None known.
Eye contact : Remarks: None known.
Ingestion : Remarks: None known.
SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:
n-butyl propionate:
Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 6.89 mg/l
Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 18.5 mg/l
Exposure time: 48 h
Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (algae)): 204 mg/l
Exposure time: 72 h

Persistence and degradability

Components:
n-butyl propionate:
Biodegradability : Ozone depletion
Result: Readily biodegradable.
Biodegradation: 69.4 %
Exposure time: 28 d

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues : Dispose of in accordance with local regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR
UN/ID No. : UN 1914
Proper shipping name : Butyl propionates
Class : 3
Packing group : III
Labels : Class 3 - Flammable liquids
Packing instruction (cargo) : 366
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Eastman(TM) n-Butyl Propionate

Version 2.1  Revision Date: 08/27/2019  SDS Number: 150000016865
PRD  Date of last issue: 

Packing instruction (passenger aircraft) : 355

IMDG-Code
UN number : UN 1914
Proper shipping name : BUTYL PROPIONATES

Class : 3
Packing group : III
Labels : 3
EmS Code : F-E, S-D
Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

Domestic regulation

49 CFR
UN/ID/NA number : UN 1914
Proper shipping name : Butyl propionates

Class : 3
Packing group : III
Labels : Class 3 - Flammable liquids
ERG Code : 130
Marine pollutant : no

Special precautions for user
The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity
This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Fire Hazard

SARA 313 : 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.
California Prop. 65
This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

- **DSL**: All components of this product are on the Canadian DSL
- **AICS**: On the inventory, or in compliance with the inventory
- **ENCS**: On the inventory, or in compliance with the inventory
- **ISHL**: On the inventory, or in compliance with the inventory
- **KECI**: On the inventory, or in compliance with the inventory
- **PICCS**: On the inventory, or in compliance with the inventory
- **IECSC**: On the inventory, or in compliance with the inventory
- **TCSI**: On the inventory, or in compliance with the inventory
- **TSCA**: On the inventory, or in compliance with the inventory

**TSCA list**
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.
SAFETY DATA SHEET

Eastman(TM) n-Butyl Propionate

Version 2.1
PRD
Revision Date: 08/27/2019
SDS Number: 150000016865
Date of last issue: -
SDSUS / Z8 / 0001
Date of first issue: 09/06/2016

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:

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<tr>
<th>Flammability</th>
<th>Health</th>
<th>Instability</th>
<th>Special hazard</th>
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HMIS® IV:

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<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL HAZARD</th>
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</thead>
<tbody>
<tr>
<td>/</td>
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<td>0</td>
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</table>

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG -
United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 08/27/2019

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / Z8