

Section 1. Product and Company Identification

**Product Name** Butyric Anhydride  
**CAS Number** 106-31-0

**Parchem - fine & specialty chemicals**  
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**New Rochelle, NY 10801**  
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Collect Calls Accepted

Section 2. Hazards Identification

**Classification of the substance or mixture**

**Physical Hazards**

Flammable liquids: Category 4

**Health Hazards**

Acute toxicity (Oral): Category 4

Skin Corrosion/Irritation: Category 1B

Serious Eye Damage/Eye Irritation: Category 1

Specific Target Organ Toxicity - Single Exposure: Category 3

**OSHA Specified Hazards:** Not applicable

**GHS Label Elements**

**Pictograms:**



**Signal word:** DANGER

**Hazard and precautionary statements**

**Hazard Statements**

H227: Combustible liquid.

H314: Causes severe skin burns and eye damage.

H302: Harmful if swallowed.

H335: May cause respiratory irritation.



## Precautionary Statements

### Prevention

- P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P260: Do not breathe dust/fume/gas/mist/vapors/spray.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P264: Wash hands thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product.  
P271: Use only outdoors or in a well-ventilated area.

### Response

- P370 + 378: In case of fire: Use water spray, carbon dioxide, dry chemical or foam for extinction.  
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P312: Call a POISON CENTER or doctor/physician if you feel unwell.  
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.  
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

- P403+P233: Store in a well-ventilated place. Keep container tightly closed.  
P235: Keep cool.  
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):** Reacts with water.

## Section 3. Composition / Information on Ingredients

**Common Name** Butyric Anhydride  
**Synonym(s)** Butanoic Acid, Anhydride  
**CAS Number** 106-31-0

COMPONENT	CAS NUMBER	CONCENTRATION
Butyric Anhydride	106-31-0	100%

## Section 4. First Aid Measures

### Description of first-aid measures

**Inhalation:** Move to fresh air. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen. Get medical attention.



**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 anything by mouth to an unconscious person. If vomiting occurs, keep head lower than the hips to help prevent aspiration.

**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. USE WATER WITH CAUTION. Material reacts with water.

**Extinguishing media**

**Suitable extinguishing media:** Carbon Dioxide. Dry chemical. Foam.

**Unsuitable extinguishing media:** Water.

**Special hazards arising from the substance or mixture:** Material reacts with water. Contact with moisture or water may generate sufficient heat to ignite nearby combustible materials.

**Advice for Firefighters**

**Special firefighting procedures:** Use water spray to keep fire-exposed containers cool. Do not allow water to get into container because of reaction.

**Special protective equipment for firefighters:** 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:** DO NOT USE WATER. Eliminate sources of ignition. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Large Spillages: Neutralize spilled material with crushed limestone, soda ash or lime. Cover with sand or earth. 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 dry. Contents may develop pressure if exposed to water.

#### 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.

**Eye/face 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**

**Form:** Liquid

**Color:** Colorless

**Odor:** Pungent

**Odor Threshold:** Not determined.

**pH:** No data available.

**Freezing Point:** -75°C

**Boiling Point:** 199.4°C

**Flash Point:** 83°C (Setaflash Closed Cup)

**Evaporation Rate:** No data available.

**Flammability (solid, gas):** not applicable

**Upper Flammability Limit:** No data available.

**Lower Flammability Limit:** No data available.

**Vapor pressure:** 40 Pa (20°C)

**Vapor density (air=1):** 5.5

**Specific Gravity:** 0.9666 (20°C)

**Solubility(ies)**

**Solubility in Water:** Material reacts with water.

**Solubility (other):** No data available.

**Partition coefficient (n-octanol/water):** log Pow: 1.64

**Auto-ignition Temperature:** 309°C (ASTM E659)

**Decomposition Temperature:** (DTA) No exotherm to 500°C

**Dynamic viscosity:** 1.44 mPa\*s (25°C)

**Kinematic viscosity:** 1.49 mm<sup>2</sup>/s (25°C)

**Explosive properties:** Not classified.

**Oxidizing properties:** Not classified.

Section 10. Stability and Reactivity

**Reactivity:** Reacts with water.

**Chemical Stability:** Stable

**Possibility of Hazardous Reactions:** None known.

**Conditions to Avoid:** Contact with water. Heat, sparks, flames.

**Incompatible Materials:** No data available.

**Hazardous Decomposition Products:** Carbon Dioxide. Carbon Monoxide.

Section 11. Toxicological Information

**Information on likely routes of exposure**

**Inhalation:** Irritating to respiratory system.

**Ingestion:** Harmful if swallowed.

**Skin contact:** Causes severe skin burns.

**Eye contact:** Causes severe eye burns.

**Information on toxicological effects**

**Oral:** No data available.

**Oral LD50 - Rat:** 1,632 mg/kg (Read-across from a similar material)

**Dermal LD50 - Rat:** > 2,000 mg/kg (Read-across from a similar material)

**Inhalation:** No data available.

**Repeated dose toxicity:** No data available.

**Skin Corrosion/Irritation - Rabbit (4h):** Severe Read-across from a similar material

**Serious Eye Damage/Eye Irritation - Rabbit:** Severe Read-across from a similar material

**Respiratory or Skin Sensitization:** No data available.

**Carcinogenicity:** This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**Toxicity to reproduction:** No data available.

**Developmental toxicity:** No data available.

**Germ Cell Mutagenicity**

**In vitro:** Mutagenicity - Bacterial: negative Read-across from a similar material

**In vivo:** 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.

**Other effects:** No data available.

Section 12. Ecological Information

**Ecotoxicity**

**Acute hazards to the aquatic environment**

**Fish**

**LC-50 (Fish, 96 h):** 66.4 mg/l Read-across from a similar material

**Aquatic Invertebrates**

**EC-50 (daphnid, 48 h):** 51.25 mg/l Read-across from a similar material



**Chronic hazards to the aquatic environment**

**Fish:** No data available.

**Aquatic Invertebrates:** No data available.

**Toxicity to Aquatic Plants**

**EC-50 (Alga, 72 h):** 45.1 mg/l Read-across from a similar material

**NOEC:** (Alga, 72 h): 29.4 mg/l Read-across from a similar material

**Persistence and Degradability**

**Biodegradation**

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:** No data available.

**Bioaccumulative Potential**

**Bioconcentration Factor (BCF):** No data available.

**Partition Coefficient (n-Octanol/Water):** Log Kow: 1.64 (25°C)

**Mobility in Soil:** Log Koc: 1.374

**Other Adverse Effects:** No data available.

Section 13. Disposal Considerations

**Waste Treatment Methods:** Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

**DOT**

**UN Number:** UN 2739

**Proper Shipping Name:** Butyric anhydride

**Hazard Class:** 8

**Packing Group:** III

**IMDG - International Maritime Dangerous Goods Code**

**UN Number:** UN 2739

**Proper Shipping Name:** Butyric anhydride

**Hazard Class:** 8

**Packing Group:** III

**IATA**

**UN Number:** UN 2739

**Proper Shipping Name:** Butyric anhydride

**Hazard Class:** 8



**Packing Group: 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. Any impurities present in this product are exempt from listing.

**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.

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

**HMIS Rating**

**Health:** 3

**Flammability:** 2

**Reactivity:** 1

Section 16. Other Information

**Disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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