

Safety Data Sheet

1. IDENTIFICATION

Product Identifier: Butyl Acetate (n-)

Product Code(s): B1047

Synonyms: Acetic acid, butyl ester; 1-Butyl acetate

Recommended Use: For manufacturing, industrial, and laboratory use only. Use a solvent or a laboratory reagent.

Uses Advised Against: Not for food, drug, or household use.

Supplier: Rocky Mountain Reagents, Inc.
4621 Technology Drive, Golden, CO 80403
Phone: (303) 762-0800 Fax: (303) 762-1240

Emergency Phone Number: (800) 255-3924 (VelocityEHS)

2. HAZARDS IDENTIFICATION

Hazard Classifications: Flammable Liquids: Category 3
Specific Target Organ Toxicity (Single Exposure): Category 3

Signal Word: WARNING

Hazard Statements: May cause drowsiness or dizziness.
Flammable liquid and vapor.

Pictograms:



Precautionary Statements:

Prevention: Avoid breathing fume, mist, vapor, or spray.
Use only outdoors or in a well-ventilated area.
Keep away from heat, sparks, open flames, and hot surfaces. – No smoking.
Keep container tightly closed.
Ground or bond container and receiving equipment.
Use explosion-proof electrical, ventilating, lighting, and transportation equipment.

Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves, protective clothing, eye protection, and face protection.
Store in a well-ventilated place.

Response: If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
In case of fire: Use water spray, dry powder, alcohol resistant foam, or carbon dioxide to extinguish.

Storage: Store locked up.
Keep container tightly closed.
Store in a well-ventilated place.
Keep cool.

Disposal: Dispose of contents and container in accordance with local, regional, national, and international regulations.

Hazards Not Otherwise Classified: Repeated exposure may cause skin dryness or cracking.

Toxicity Statement: Not applicable.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

| Component | Common Name / Synonyms | CAS# | Chemical Formula | % by Weight |
|---------------|------------------------|----------|---|-------------|
| Butyl Acetate | n-Butyl Acetate | 123-86-4 | C ₆ H ₁₂ O ₂ | ≥ 99.5 |

Trade Secret Statement: Not applicable.

4. FIRST AID MEASURES

First Aid Procedures:

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious, or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a poison center or doctor if symptoms occur.

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head low so that vomit does not enter lungs. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

Skin Contact: Remove contaminated clothing and shoes. Wash skin with plenty of water for at least 15 minutes. Wash clothing before reuse. Get medical attention if symptoms occur.

Eye Contact: Check for and remove contact lenses if present and easy to do. Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention if symptoms occur.

General Advice: Poison information centers in each state can provide additional assistance for scheduled poisons. Ensure that medical personnel and those providing first aid are aware of the material(s) involved and take precautions to protect themselves.

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| Symptoms and Effects: | Difficulty breathing, headache, dizziness, tiredness, nausea, and vomiting. |
| Immediate Medical Care/ Special Treatment: | Immediate medical attention is required. Call a physician or poison control center immediately. Treat symptomatically. |

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media: Water spray, dry powder, alcohol resistant foam, carbon dioxide.

Unsuitable Extinguishing Media: Do not use a solid (straight) water stream, as it may scatter and spread fire.

Hazardous Combustion Products: Carbon oxides.

Specific Hazards: Flammable. Vapors may cause flash fire or ignite explosively. Can be ignited easily by heat, sparks, or flames and burns vigorously. Material may burn with an invisible flame. Sealed containers may explode when heated or involved in fire. Material is sensitive to static discharge. Vapors may travel considerable distance to source of ignition and flash back. Vapor from the solvent may accumulate in container headspace, resulting in flammability hazard. High vapor concentration in air may cause an explosion hazard. Combustion may yield corrosive and/or toxic fumes.

**Special Protective Equipment/
Precautions for Firefighters:** As in any fire, wear MSHA/NIOSH approved (or equivalent) self-contained, positive-pressure or pressure-demand breathing apparatus and full protective gear. Use water spray to cool unopened containers. Move containers from fire area, if you can do so without risk. Product may evaporate and leave a flammable residue. In the event of fire and/or explosion, do not breathe fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions and Protective Equipment: Ventilate area of leak or spill. Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the leak or spill. Keep upwind. Keep out of low areas. Wear appropriate personal protective equipment (see Section 8). Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. Avoid contact with eyes, skin, and clothing.

Emergency Procedures: Evacuate surrounding personnel as needed. In case of chemical emergency, or if unsure how to address an accidental release, consult a professional (see Section 1).

Methods for Containment: Eliminate all sources of ignition. Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements, or confined areas. Dike the spilled material, where this is possible. Product should not be released to the environment. Contain and recover waste when possible.

Methods for Cleanup: Absorb spill with an inert material (e.g. vermiculite, dry sand, earth, cloth, or fleece) and place in a non-combustible container for reclamation or disposal. Do not flush to sewer. Clean contaminated surface thoroughly. Residues from spills can be diluted with water. Never return spills in original containers for reuse. Clean up in accordance with all applicable regulations.

7. HANDLING AND STORAGE

Handling: Do not handle, store, or open near an open flame, sources of heat, or sources of ignition. Wear personal protective equipment (see Section 8). Use only in well-ventilated areas. Provide sufficient air exchange and/or exhaust in work areas. Avoid contact with skin, eyes, and clothing. Do not breathe vapors or spray mist. Do not ingest. When using, do not eat, drink, or smoke. Take precautionary measures against static discharge. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials (see Section 10). Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Containers of this material may be hazardous when empty, as they retain product residues. Observe all warnings and precautions listed for this product.

Storage: Store in a cool, dry, ventilated area above. Store in a segregated and approved area away from heat and incompatible materials (see Section 10). Store in original container. Keep containers tightly closed and upright. Keep away from food, drink, and animal foodstuffs. Keep out of the reach of children. Ground container and transfer equipment. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of this product.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

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|-------------------------|--------|-----------------------|-----------------------|
| Exposure Limits: | ACGIH: | TWA: | 50 ppm |
| | | STEL: | 150 ppm |
| | OSHA: | TWA: | 150 ppm |
| | | TWA: | 710 mg/m ³ |
| | NIOSH: | IDLH: | 1700 ppm |
| | | TWA: | 150 ppm |
| TWA: | | 710 mg/m ³ | |
| STEL: | | 200 ppm | |
| | STEL: | 950 mg/m ³ | |

Engineering Controls: Ensure adequate ventilation. 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 Measures:

Eye/Face Protection: Wear safety glasses with side shields or safety goggles. Wear a face shield. Maintain approved eye wash station and accessible rinse facilities in work area.

Skin Protection: Wear appropriate chemical resistant clothing (with long sleeves) and appropriate chemical resistant gloves.

Respiratory Protection: An air-purifying, NIOSH-approved respirator with appropriate cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Use a full-face, positive-pressure, air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are unknown, or if any other circumstances exist where air-purifying respirators may not provide adequate protection.

Specific Requirements for Personal Protective Equipment: Ensure that glove material is compatible with this product. This information is available from glove manufacturers.

9. PHYSICAL AND CHEMICAL PROPERTIES

Unless otherwise indicated, all properties are given at 25 °C and standard pressure.

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| Appearance: | Colorless, liquid. |
| Odor: | Sweet. |
| Odor Threshold: | 7 – 20 ppm |
| Formula Weight: | 116.16 |
| pH: | 6.2 @ 20 °C |
| Melting/Freezing Point: | -90 °C |
| Boiling Point/Range: | 126 °C |
| Decomposition Temperature: | No information found. |
| Flash Point: | 27 °C |
| Auto-ignition Temperature: | 415 °C |
| Flammability: | Liquid and vapors are flammable. |
| Flammability/Explosive Limits: | No information found. |
| Solubility: | Insoluble. |
| Vapor Pressure: | No information found. |
| Vapor Density: | 4 (Air = 1) |
| Specific Gravity: | 0.881 @ 20 °C (Water = 1) |
| Evaporation Rate: | 1.0 (Ether = 1) |
| Viscosity: | No information found. |
| Partition Coefficient (n-octanol/water): | No information found. |

10. STABILITY AND REACTIVITY

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| Reactivity Data: | Flammable. See Section 9. |
| Chemical Stability: | Stable under normal conditions. |
| Conditions to Avoid: | Heat, flames, sparks, sources of ignition, incompatible materials. |
| Incompatible Materials: | Strong oxidizing agents, strong acids, strong bases. |
| Hazardous Decomposition Products: | Carbon oxides. |
| Possibility of Hazardous Reactions: | May react vigorously, violently, or explosively if exposed to excess thermal conditions or in contact with the incompatible materials listed above. |
| Hazardous Polymerization: | Will not occur. |

11. TOXICOLOGICAL INFORMATION

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| Routes of Exposure: | Inhalation, ingestion, skin contact, eye contact. |
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Acute Effects: May cause irritation if swallowed, inhaled, or exposed to the skin or eyes. May affect the central nervous system.

Chronic Effects: Repeated exposure may cause skin dryness or cracking.

Toxicological Data:

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| LD ₅₀ Oral, Rat: | 10768 mg/kg |
| LC ₅₀ Inhalation, Rat: | 390 ppm 4 h |
| LD ₅₀ Dermal, Rabbit: | > 17600 mg/kg |

Symptoms of Exposure: Difficulty breathing, headache, dizziness, tiredness, nausea, and vomiting.

Carcinogenic Effects: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

12. ECOLOGICAL INFORMATION

Ecotoxicological Data:

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|---|-------------------|
| EC ₅₀ Freshwater Algae (<i>Desmodesmus subspicatus</i>): | 674.7 mg/L 72 h |
| LC ₅₀ Bluegill (<i>Lepomis macrochirus</i>): | 100 mg/L 96 h |
| LC ₅₀ Fathead Minnow (<i>Pimephales promelas</i>): | 17 – 19 mg/L 96 h |
| EC ₅₀ Water Flea (<i>Daphnia magna</i>): | 72.8 mg/L 24 h |

Persistence and Degradability: Expected to be readily biodegradable. Not expected to bioaccumulate.

Environmental Effects: May be harmful to aquatic life. Avoid release to the environment.

Partition Coefficient (n-octanol/water): No information found.

13. DISPOSAL INFORMATION

Disposal Instructions: All wastes must be handled in accordance with local, state, and federal regulations. Minimize exposure to product waste (see Section 8). Do not dispose unused waste down drains or into sewers.

Contaminated Packaging: Because emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near product container. Offer rinsed packaging material to local recycling facilities.

Waste Codes: No information found.

14. TRANSPORT INFORMATION

DOT:

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|------------------------------|----------------|
| UN Number: | UN1123 |
| Proper Shipping Name: | Butyl acetates |
| Hazard Class: | 3 |
| Packing Group: | III |
| ERG Number: | 129 |

Environmental Hazard Regulations: Not listed.

Other Transport Precautions: No information found.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

OSHA: This product is considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Inventory: All components of this product are on the U.S. TSCA Inventory.

U.S. EPCRA (SARA Title III):

Section 302: No information found.

Sections 311/312:

| Hazard Category | List (Yes/No) |
|----------------------------------|---------------|
| Section 311 – Hazardous Chemical | Yes |
| Immediate Hazard | Yes |
| Delayed Hazard | Yes |
| Fire Hazard | Yes |
| Pressure Hazard | No |
| Reactivity Hazard | No |

Section 313: No information found.

CERCLA Reportable Quantities: n-Butyl acetate: 5000 lb

International Inventories:

| Country or Region | Inventory Name | On Inventory (Yes/No)* |
|-------------------|--|------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |

*A "Yes" indicates that the listed components of this product comply with the inventory requirements administered by the governing country or region.

16. OTHER INFORMATION

Disclaimer: Rocky Mountain Reagents, Inc. provides the information in this Safety Data Sheet in the belief that it is reliable but assumes no responsibility for its completeness or accuracy. The physical properties reported in this SDS are obtained from literature and do not constitute product specifications. Rocky Mountain Reagents, Inc. makes and gives no representations or warranties with respect to the information contained herein or the product to which it refers, whether express, implied, or statutory, including without limitation, warranties of accuracy, completeness, merchantability, non-infringement, performance, safety, suitability, stability, and fitness for a particular purpose. No warranty against infringement of any patent, copyright or trademark is made or implied. This SDS is intended only as a guide to the appropriate handling of the material by a properly trained person. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. Accordingly, Rocky Mountain Reagents, Inc. assumes no liability whatsoever for the use of or reliance upon this information including results obtained, incidental or consequential damages, or lost profits.

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Reason for Revision: Not applicable.