PURITAN PRODUCTS

Effective Date: 07/01/13
Replaces Revision: 10/28/04

NON-EMERGENCY TELEPHONE
610-866-4225

24-HOUR CHEMTREC EMERGENCY TELEPHONE
800-424-9300

SDS – SAFETY DATA SHEET

1. Identification

Product Identifier: N-BUTYL ACETATE
Synonyms: 1-Butyl Acetate, Butyl Ethanoate, Acetic Acid, n-Butyl Ester
Chemical Formula: C6H12O2
Recommended Use of the Chemical and Restrictions On Use: Laboratory Reagent
Manufacturer / Supplier: Puritan Products; 2290 Avenue A, Bethlehem, PA 18017 **Phone:** 610-866-4225
Emergency Phone Number: 24-Hour Chemtrec Emergency Telephone 800-424-9300

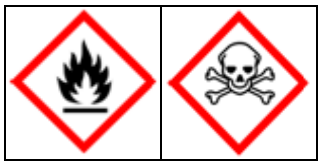
2. Hazard(s) Identification

Classification of the Substance or Mixture:
Flammable liquids (Category 3)
Acute toxicity, Inhalation (Category 3)
Skin irritation (Category 2)
Eye irritation (Category 2A)
Specific target organ toxicity - single exposure (Category 3)
Acute aquatic toxicity (Category 3)

Risk Phrases:
R10: Flammable.
R66: Repeated exposure may cause skin dryness or cracking.
R67: Vapors may cause drowsiness and dizziness.

Label Elements:

Trade Name: N-BUTYL ACETATE
Signal Word: Danger



Hazard Statements:
H226: Flammable liquid and vapor.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H331: Toxic if inhaled.
H336: May cause drowsiness or dizziness.
H402: Harmful to aquatic life.

Precautionary Statements:
P261: Avoid breathing dust / fume / gas / mist / vapors / spray.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P311: Call a POISON CENTER or doctor/ physician.

3. Composition / Information on Ingredients

CAS Number: 123-86-4
EC Number: 204-658-1
Index Number: 607-025-00-1
Molecular Weight: 116.16 g/mol

Ingredient	CAS Number	EC Number	Percent	Hazardous	Chemical Characterization
n-Butyl Acetate	123-86-4	204-658-1	90 - 100%	Yes	Substance

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: Do not induce vomiting, unless directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire-fighting Measures

Fire: Flammable in the presence of a source of ignition when the temperature is above the flash point.

Explosion: Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.

Fire Extinguishing Media: Dry chemical, Alcohol foam or Carbon Dioxide. Water may be ineffective. 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

Personal Precautions, Protective Equipment and Emergency Procedures: Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Environmental Precautions and Methods and Materials for Containment and Cleaning Up: Contain and recover liquid when possible. Use non-sparking tools and equipment. 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! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

7. Handling and Storage

Precautions for Safe Handling and Conditions for Safe Storage, Including Any Incompatibilities: Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, sparks, flame, static electricity or other sources of ignition: they may explode and cause injury or death. 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

Airborne Exposure Limits:
OSHA Permissible Exposure Limit (PEL): 150 ppm (TWA)
ACGIH Threshold Limit Value (TLV): 150 ppm (TWA), 200 ppm (STEL)

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. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details. Use explosion-proof equipment.

Personal Respirators (NIOSH Approved): If the exposure limit is exceeded, a half face organic vapor respirator may be worn for up to 10 times (10X) the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full face piece organic vapor respirator may be worn up to 50 times (50X) the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. 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 impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and / or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance: Clear, colorless liquid
Odor: Mild, fruity odor
Odor Threshold: Not determined
pH: Not available
% Volatiles by volume @ 21C (70F): 100
Melting Point: -77C (-107F)
Boiling Point / Boiling Range: 126C (259F)
Flash Point: 26C (79F) CC
Evaporation Rate (BuAC=1): 1
Flammability: Flammable
Upper / Lower Flammability or Explosive Limits: Upper – 7.6 / Lower – 1.7 in air, % by volume
Vapor Pressure (mm Hg): 15 @ 25C (77F)
Vapor Density (Air=1): 4
Relative Density: 0.88 g/cm3 at 25C (77F)
Solubility: Slightly soluble in water (ca. 0.7% @ 20C)
Partition Coefficient: n-octanol / water: log Pow: 1.82
Auto-ignition Temperature: 425C (797F)
Decomposition Temperature: Not determined
Viscosity: Not determined

10. Stability and Reactivity

Reactivity and / or Chemical Stability: Stable under ordinary conditions of use and storage.

Possibility of Hazardous Reactions and Conditions to Avoid: Heat, flame, ignition sources, incompatibles.

Incompatible Materials: Dangerous when exposed to heat or flame; can react with oxidizing materials, strong alkalis, acids, nitrates and Potassium-Tert-Butoxide.

Hazardous Decomposition Products: Carbon Dioxide and Carbon Monoxide may form when heated to decomposition.

11. Toxicological Information

Emergency Overview: WARNING! FLAMMABLE LIQUID AND VAPOR. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO EYES AND RESPIRATORY TRACT. AFFECTS CENTRAL NERVOUS SYSTEM.

Potential Health Effects:

Inhalation: Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. High concentrations have a narcotic effect.

Ingestion: Irritant to tissues. Sore throat, abdominal pain, nausea, vomiting, diarrhea are the symptoms. Expected to have a narcotic effect. One ounce may produce severe poisoning.

Skin Contact: This material degreases the skin. Irritation and discoloration of the skin are symptoms. Skin allergy occasionally develops. Persons who have become allergic can develop rash upon future exposure to low levels.

Eye Contact: Vapors cause eye irritation. Splashes cause severe irritation, possible corneal burns and eye damage.

Chronic Exposure: Repeated or prolonged skin contact may defat the skin and produce irritation and dermatitis. Kidney and liver damage are reported in animals.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance.

Specific Target Organ Toxicity - Single Exposure (Globally Harmonized System:) May cause drowsiness or dizziness.

Specific Target Organ Toxicity - Repeated Exposure (Globally Harmonized System:) No data available.

Numerical Measures of Toxicity: Cancer Lists: NTP Carcinogen

Ingredient	Known	Anticipated	IARC Category
n-Butyl Acetate (123-86-4)	No	No	None

Acute Toxicity:
Oral rat LD50: 10.8 g/kg
Inhalation rat LC50: 390 ppm / 4h
Skin rabbit LD50: > 17,600 mg/kg
Irritant, skin rabbit (Std. Draize): 500 mg / 24 h, moderate.
Irritant, eye rabbit: 100 mg moderate.
Investigated as a reproductive effecter.

12. Ecological Information

Ecotoxicity:
96 h LC50 fathead minnow: 18 mg/L (flow-through)
96 h LC50 bluegill: 100 mg/L (Static)
96 h EC50 freshwater algae (Scenedesmus subspicatus): 320 mg/L
48 h EC50 water flea: 44 mg/L

Persistence and Degradability: When released into the soil, this material is expected to readily biodegrade. When released into water, this material is expected to readily biodegrade. When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals.

Bioaccumulative Potential: When released into the soil, this material is expected to have a half-life of less than 1 day. When released into the water, this material is expected to have a half-life between 1 and 10 days. This material has an estimated bioconcentration factor (BCF) of less than 100.

Mobility in Soil: When released into the soil, this material may leach into groundwater.

Other adverse effects: No additional information.

13. Disposal Considerations

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

14. Transport Information

UN Number: UN1123
UN Proper Shipping Name: BUTYL ACETATES
Packing Group: III

DOT **IMDG** **IATA**

Land Transport ADR/RID and GGVS/GGVE (Cross Border / Domestic)
Transport Hazard Class(es): 3

Maritime Transport IMDG/GGVSea
Transport Hazard Class(es): 3
Marine Pollutant: No

Air Transport ICAO-TI and IATA-DGR
Transport Hazard Class(es): 3

Transport in Bulk according to Annex II of MARPOL 73/78 and the IBC Code

Special Precautions for User: No additional information

15. Regulatory Information

Chemical Inventory Status – Part 1

Ingredient	TSCA	EC	Japan	Australia
n-Butyl Acetate (123-86-4)	Yes	Yes	Yes	Yes

Chemical Inventory Status – Part 2

Ingredient	Korea	Canada		Phil.
		DSL	NDSL	
n-Butyl Acetate (123-86-4)	Yes	Yes	No	Yes

Federal, State & International Regulations - Part 1

	SARA 302		SARA 313	
Ingredient	RQ	TPQ	List Chemical	Catg.
n-Butyl Acetate (123-86-4)	No	No	No	No

Federal, State & International Regulations - Part 2

	RCRA		TSCA
Ingredient	CERCLA	261.33	8(d)
n-Butyl Acetate (123-86-4)	5000	No	No

Chemical Weapons Convention: No		**TSCA 12(b):** No		**CDTA:** No
SARA 311/312:	**Acute:** Yes	**Chronic:** Yes	**Fire:** Yes	**Pressure**: No
Reactivity: No		Pure / Liquid		

Australian Hazchem Code: 3[Y]E

Poison Schedule: None allocated

16. Other Information

THE INFORMATION CONTAINED IN THIS DATA SHEET IS BASED ON THE DATA AVAILABLE TO PURITAN PRODUCTS AT THIS TIME. WHILE BELIEVED TO BE ACCURATE, PURITAN PRODUCTS DOES NOT CLAIM IT TO BE ALL INCLUSIVE. IT IS PROVIDED INDEPENDENT OF ANY SALE OF THE PRODUCT, FOR THE PURPOSE OF HAZARD COMMUNICATION, AND AS A GUIDE FOR THE APPROPRIATE PRECAUTIONARY HANDLING OF THE PRODUCT BY PROPERLY TRAINED INDIVIDUALS. IT IS NOT INTENDED TO PROVIDE PRODUCT PERFORMANCE OR APPLICABILITY INFORMATION, AND NO EXPRESS OR IMPLIED WARRANTY OF ANY KIND IS MADE WITH RESPECT TO THE PRODUCT, THE UNDERLYING PRODUCT DATA, OR THE INFORMATION CONTAINED HEREIN.

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