

1. PRODUCT IDENTIFICATION

Name:	n-Butyl Acetate
Synonyms:	1-butyl acetate; acetic acid, n-butyl ester, 1-acetoxybutane
CAS#	123-86-4
Product Uses:	solvent in automotive & furniture coatings, inks, thinners, adhesives; perfume & flavouring Ingredient; food preservative
Supplier Identifier:	Megaloid Laboratories Limited 5515 North Service Road, Ste 306 Burlington, Ontario, Canada L7L 6G4 Phone: 905-337-7411 / Fax: 905-337-1686

EMERGENCY Call CHEMTREC - (800) 424-9300 **INFORMATION**

2. HAZARDS

GHS Class	Flammable	STOT	
Signal Words	WARNING	(3)	
Hazard Statements	Flammable liquid & vapour	May cause dizziness or drowsiness	
	(H226)	(H336)	Label Pictograms

* NOTE: n-Butyl Acetate is on the borderline between Category 2 & 3. See also Section 14.

GHS Precautionary Statements for Labelling			
Prevention			
P210	Keep away from heat, sparks, open flames and hot surfaces. No smoking.		
P233	Keep container tightly closed.		
P240	Ground or bond container and receiving equipment.		
P241	Use explosion-proof electrical, ventilating and lighting equipment.		
P242	Use only non-sparking tools.		
P243	Take precautionary measures against static discharge.		
P261	Avoid breathing vapours.		

P271	Use only outdoors or in a well-ventilated area.
P280	Wear eye protection, protective gloves and clothing of butyl rubber
Response	
P303, P361, P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304, P340	IF INHALED: remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTRE or doctor if you feel unwell
P370, P370	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Storage	
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
Disposal	
P501	Dispose of contents and container in accordance with local, regional, national and international regulations.

3. COMPOSITION

Chemical Name:	CAS No.	%	Other Identifiers
n-Butyl Acetate	123-86-4	100	EC # 204-658-1

4. FIRST AID

Inhalation

Remove from contaminated area promptly. CAUTION: Rescuer must not endanger himself! If breathing stops, administer artificial respiration and seek medical aid promptly.

Skin Contact

Wash with plenty of water. Remove contaminated clothing and do not reuse until thoroughly laundered.

Eye Contact

Wash eyes with plenty of water, holding eyelids open. Seek medical assistance if there is any *irritation*.

Ingestion

Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

First-aid Comments

Inadvertent inhalation of vomited material may seriously damage the lungs. The danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity substance. The stomach should only be emptied under medical supervision, and after the installation of an airway to protect the lungs.

5. FIRE FIGHTING & FLAMMABILITY

Extinguishing Media

Suitable Extinguishing Media

Foam, dry chemical, water fog, water spray only to cool & dilute, product floats on water - water jet spreads flames

Unsuitable Extinguishing Media

None known.

Combustion Products

Carbon monoxide, nitrogen oxides, acrid smoke, part oxidised hydrocarbon fragments.

Special Protective Equipment and Precautions for Fire-fighters

Firefighters must wear SCBA. Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

Static Charge Accumulation

cannot accumulate a static charge on agitation or pumping

6. ACCIDENTAL RELEASE MEASURES

Serious Fire Potential:

blanket spill with foam as a precaution against accidental ignition. Take extreme care to avoid sparks – do not operate (turn on OR off) electrical appliances near spill, unless explosion proof.

Personal Precautions, Protective Equipment, and Emergency Procedures

Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Increase ventilation to area or move leaking container to a well-ventilated and secure area.

Environmental Precautions

It is good practice to prevent releases into the environment. Do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas.

Methods and Materials for Containment and Cleaning Up

Leak Precaution: dyke to control spillage and prevent environmental contamination Handling Spill: Ventilate contaminated area; recover free liquid with suitable pumps; absorb residue on an inert sorbent, sweep & pick up using plastic or aluminium shovel, & store in closed containers for recycling or disposal.

Other Information

Report spills to local health, safety and environmental authorities, as required.

7. HANDLING & STORAGE

Precautions for Safe Handling

Take care to avoid sparks – use non-sparking bronze or aluminum hand tools. All electrical & mechanical equipment (lighting, switchgear, forklift trucks, etc) used with or around this product must be explosion-proof.

Always ground or electrically bond the source container, receiving container & pump before transferring contents. Avoid splashing by ensuring that the product nozzle is below the surface in the receiving container. Empty containers may contain a flammable / explosive vapour. Always ensure that containers, whether empty or full, or part full, are tightly sealed unless in use. Avoid breathing product vapour. Avoid contact with skin and wash work clothes frequently.

Never cut, drill, weld or grind on or near this container. Avoid contact with skin & wash work clothes frequently. An eye bath must be available near the workplace.

Conditions for Safe Storage

Store & use in a cool, dry environment, away from sources of ignition & oxidising agents.

8. EXPOSURE CONTROL & PERSONAL PROTECTION

Ontario TWA	50ppm / 237mg/m ³
AGGIH TLV	50ppm / 237mg/m ³
OSHA PEL	150ppm / 710mg/m ³

Ontario STEL 150ppm / 711.66mg/m³ ACGIH STEL 200ppm / 710mg/m³ OSHA STEL not listed

Ventilation	mechanical ventilation may be required to control airborne titre to regulated limits
Hands	"Barrier", "Silver Shield" gloves – other types may also protect; confirm suitability with supplier WARNING: Do NOT use rubber, nitrile, neoprene, or "Viton"!
Eyes	Safety glasses with side shields – always protect the eyes
Clothing	No special protective clothing required

Appropriate Engineering Controls

Do not allow product to accumulate in the air in work or storage areas, or in confined spaces, ensure adequate ventilation. Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored. Control static electricity discharges which includes bonding of equipment to ground. Provide eyewash and safety shower if contact or splash hazard exists.

9. PHYSICAL PROPERTIES

Appearance	Clear colourless liquid.	
Odour	banana-like odour	
Odour threshold	0.3ppm – geometric mean; variable; also 7ppm & 20ppm reported	
рН	6.2	
Melting Point/Freezing Point	-73.5°C / -100.3°F; melting point: -78°C / -108°F	
Initial Boiling Point/Range	126°C / 259°F	
Flash Point	27°C / 81°F (closed cup) Dow & Eastman, also 30°C/86°F (closed cup), 22°C / 72°F (closed cup)	
Evaporation Rate	1 (Butyl Acetate =1)	
Flammability (Solid, Gas)	Not Available	
Upper/Lower Flammability or Explosive Limit	1.3% - 7.6%	
Vapour Pressure	10mmHg / 1.33kPa (20°C / 68°F); 11.5mmHg / 1.53kPa (25°C / 77°F)	
Vapour Density (air = 1)	4	
Specific Gravity	0.881 g/cm³ (20/20°C); 0.876 g/cm³ (25/25°C)	
Solubility	5.3 & 8.4 grams/litre (25°C / 77°F)	
Partition Coefficient, n-Octanol/Water (Log Kow)	1.78	

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Auto-ignition Temperature	415°C / 779°F, 425°C / 797°F	
Conversion Factor	1 ppm = 4.74 mg/m ³	
Viscosity	0.7centipoise (20°C / 68°F); 0.65centipoise (25°C / 77°F)	
Physical State	Liquid	
Molecular Weight	116 grams per mole	
Molecular Formula	C6-H12-O2	

10. REACTIVITY

Dangerously Reactive with strong oxidising agents; strong acids or strong alkalis may cause rapid decomposition releasing heat, risking fire and explosion. **Also Reactive** with attacks many plastics – PVC, polystyrene, polyurethane & others also elastomers – nitrile, "Viton", neoprene & others.

Chemical Stability

stable; will not polymerize

Possibility of Hazardous Reactions

butyl alcohol & acetic acid.

Conditions to Avoid

Decomposes in presence of moisture – hydrolyses gradually.

Mechanical Impact not sensitive

11. TOXICITY

Acute Toxicity			
LD ₅₀ (oral)	10,700, 12,700, 14,130 & 15140mg/kg (rat), 7100mg/kg (mouse), 4700mg/kg (guinea pig) 3200 & 7400mg/kg (rabbit)		
LD50 (skin)	>5000 & >17,600mg/kg (rabbit)		
LC50 (inhalation)	1265ppm (mouse), 1100, 4430, 4940, 6300, 6870 & 9310ppm (rat)		

Skin Corrosion/Irritation

not an irritant; prolonged exposure may cause irritation Serious Eye Damage/Irritation slightly irritating to eyes; vapour severely irritating above 3000ppm – well above toxic limit

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation 200-300 ppm irritating; nausea, dizziness, drowsiness, intoxication may occur Skin Absorption slight; no toxic effects likely by this route Ingestion low toxicity; large amounts as for inhalation – not a route of industrial exposure

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Prolonged exposure may cause drying & dermatitis

Respiratory and/or Skin Sensitization Not known to be a respiratory sensitizer Carcinogenicity Not considered a carcinogen in humans or animals. IARC: Not specifically listed. ACGIH®: Not specifically designated. NTP: Not specifically listed. OSHA: Not specifically listed.

Reproductive Toxicity

Development of Offspring

Mutagen - no known effect on humans or animals Sexual Function and Fertility No known effect in humans or animals Germ Cell Mutagenicity Not known to be a mutagen.

12. ECOLOGICAL INFORMATION

Bioaccumulation	Not a bioaccumulator.
Persistence and Degradability	Biodegradation - biodegrades readily & rapidly in the presence of oxygen; >60% in 20- days, 80% in 5 days also 83% & 98% in 28 days
	Ablotic Degradation - reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 1.5 to 4 days
Mobility in soil, water	somewhat water soluble; moves moderately readily in soil & water
Aquatic Toxicity	
LC50 (Fish, 96hr)	18mg/litre (Pimephales promelas), 100mg/litre (Lepomis macrochirus), 62mg/litre (Leuciscus idus), 185mg/litre (Menidia beryllina)
EC50 (Crustacea, 24hr)	150mg/litre (Artemia salina), 73 & 205mg/litre (Daphnia magna)
EC50 (Algae, 72hrs)	648mg.litre (Scenedesmus subspicatus)
EC50 (Bacteria, 18hr)	959mg/litre (Pseudomonas putida)

13. DISPOSAL

Water Disposal

Do not flush to sewer, recycle solvent if possible, local regulations may permit disposal in sanitary landfill, may be incinerated in approved facility after mixing with a suitable flammable waste

Containers

Drums should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use.

Pails must be vented and thoroughly dried prior to crushing and recycling. **IBCs** (intermediate bulk containers): polyethylene bottle must be pressure tested & recertified at 30 months. Replace at 60 months (5yrs).

Steel containers must be inspected, pressure tested & recertified every 5 years.

Never cut, drill, weld or grind on or near this container, even if empty

14. TRANSPORT CLASSIFICATION

ERGNo.

Canada TDG AND	PIN Shipping Name	UN1123 Butyl Acetate	3	
U.S.A. 49 CFR	Class & Packing Group	3, PG III*	~	
Marine Pollutant	Not a Marine Pollutant			
ERAP Required	NO			
Reportable Quantity	5000lbs / 2270kg			

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

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* NOTE: n-Butyl Acetate is on the borderline between Packing Group II and Packing Group III. Accordingly, some ship it as Packing Group III while others use Packing Group II. See also Section 2 and Flash Point in Section 9.

15. REGULATIONS

Canada DSL	On Inventory
U.S.A. TSCA	On Inventory
Europe EINECS	On Inventory

Canadian Regulations

CEPA - National Pollutant Release Inventory (NPRI) Part 5.

U.S.A. Regulations

SARA 302/304: This product contains no known chemicals regulated under SARA 302/304.
SARA 311/312: Based upon available information, this material is classified as the following health and/or physical hazards according to Section 311 & 312: Fire Hazard Acute Health Hazard
SARA 313: This product contains no known chemicals regulated under SARA 313.

US State Regulations

Chemicals associated with the product which are subject to the state right-to-know regulations are listed along with the applicable state(s):

Massachusetts - Listed Pennsylvania - Listed New Jersey – Listed New York – listed Rhode Island – Listed

International Regulations

International Inventories listed on the chemical inventories of the following countries or qualifies for an exemption:

Australia (AICS) China (IECSC) Japan (ENCS) Korea (KECI) New Zealand (NZIoC) Philippines (PICCS) Taiwan (TCSI)

16. OTHER INFORMATION

NFPA RATING	Health	2	Flammability	3	Instability	0	
Prepared for	Megaloid	pratories Limited by		Rob Cangiano			
Preparation Date:	March 200	4					
Revision Dates:	April 2007, 2020	Apri	l 2010, April 2013, Oct 201	5, S	ept 2018, Feb 2019, July		

Key to Abbreviations	ACGIH® = American Conference of Governmental Industrial Hygienists AIHA® = AIHA® Guideline Foundation HSDB® = Hazardous Substances Data Bank IARC = International Agency for Research on Cancer NFPA = National Fire Protection Association NIOSH = National Institute for Occupational Safety and Health NIOSH = National Institute for Occupational Safety and Health NTP = National Institute for Occupational Safety and Health NTP = National Toxicology Program OSHA = US Occupational Safety and Health Administration RTECS® = Registry of Toxic Effects of Chemical Substances
References	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and Safety (CCOHS).
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