

SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: n-Butyl acetate
Product Description: -
Chemical Formula: C₆H₁₂O₂
Recommended Use: Solvent

COMPANY IDENTIFICATION

Supplier: UNION PETROCHEMICAL PUBLIC COMPANY LIMITED
728 Union House Building, Baromratchonnani Rd.,
Bangbumru, Bangplad, Bangkok 10700
Supplier General Contact: +662 881 8288

This (M)SDS is a generic document with no country specific information included.

SECTION 2 HAZARDS IDENTIFICATION

This material is hazardous according to UN GHS Criteria. Classification includes all GHS hazard classes. For hazard categories with two cut-off/concentration limits, classification was based on the higher limit.

GHS CLASSIFICATION:

Flammable liquid: Category 3.

GHS LABEL ELEMENTS:

Pictogram:



Signal Word: Dangerous

Hazard Statements:

Physical: H225: Highly flammable liquid and vapor.
Health: H336: May cause drowsiness or dizziness.

Precautionary Statements:

Prevention: P210: Keep away from heat sources, sparks, flames, and oxidizer. No smoking. P240: Ground / 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 mist / vapours. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response: P301 + P378: IN CASE OF FIRE: Use alcohol resistant foam or normal protein foam for extinction. P312: Call a POISON CENTER/doctor/physician/first aider/if you feel unwell. P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Storage: P403 + P235: Store in a well-ventilated place. Keep cool. P405: Store locked up. P403 + P233: Store in a well-ventilated place. Keep container tightly closed

Disposal: P501: Incineration according to the local regulation.



Contains: N-BUTYL ACETATE

Other hazard information:

PHYSICAL / CHEMICAL HAZARDS

Flammable liquid and vapor.

HEALTH HAZARDS

Irritating to Upper respiratory tract mucosa and eyes. Inhalation would cause sick, pharyngalgia, choking, chest congestion, tears, symptoms of drunkenness, even conjunctivitis, keratitis

ENVIRONMENTALHAZARDS

Harmful to the environment. Special attention to water pollution.

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

This material is defined as a substance.

Hazardous Substance(s) or Complex Substance(s) required for disclosure

Name	CAS#	Concentration*	GHS Hazard Codes
n-Butyl Acetate	123-86-4	≥99.5 %	Class 3

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 4 FIRST AID MEASURES

INHALATION

Remove to place with fresh air. Keep airways clear. Give artificial respiration if breathing is difficult or not breathing.

SKIN CONTACT

Take off the contaminated clothes and wash skin with soap and clean water.

EYE CONTACT

Flush eyes with plenty of water or normal saline. Then get immediate medical attention.

INGESTION

Rinse the mouth; Drink plenty of water; Do not induce vomiting; Get medical attention.

NOTE TO PHYSICIAN

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Extinguishing media including foam, dry chemical, carbon dioxide, sand.

Inappropriate Extinguishing Media: Water is invalid, but it can cool the containers.

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personal attempting to stop a leak. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: Flammable, explosion risk if contacted with spark, flame, static discharge, heat or oxidizer. Vapor is heavier than air and may travel to far places and flashback from ignition sources; The sealed container may rupture when heated ; Risk of static accumulation in pipeline.

Hazardous Combustion Products: Flammable, risk for explosion when contacted with fire, heat or oxidizer.

FLAMMABILITY PROPERTIES

Flash Point : 27°C

Flammable Limits (Approximate volume % in air): LEL: 1.4 UEL: 8.0

Autoignition Temperature: 370°C

SECTION 6

ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

PERSONAL PRECAUTIONS

Evacuate personnel from the contaminated zone rapidly to safe area; Isolation and restrictions on access; Wear self-contained breathing apparatus pressure-demand, and full protective; Gear and anti-static overalls. Electric power cut.

CONTROL AND CLEANUP

Small leakage: Soak up with sand, dry lime or soda ash; Scrubbed with non-flammable emulsion of dispersant, diluted into the wastewater.

Large leakage: Construct a barrier pit. Cover with foam to reduce the steam for personnel protection. Remove the waste by explosion proof pumps to exclusive collector for recycle or waste disposal.

ENVIRONMENTAL PRECAUTIONS

Cut off the source of leakage. Prevent the leakage to the drains.

SECTION 7

HANDLING AND STORAGE

HANDLING

Operation must be in a well-ventilated place; Keep adequate ventilation. Professional training and working procedure is needed for staff. The staff should wear respirator, protective glass, anti-static cloths and rubber gloves. Keep away from fire and heat resource. No Smoking. Explosion-proof ventilation system and equipment should be used. Be caution of the leakage of steam in the working place; Avoid the contact with oxidizer, acid and alkali. The flow velocity in pipeline should be controlled for the danger of static. Be caution of transfer; Transfer with firefighting equipment; Handling with safety watcher.

Loading/Unloading Temperature: [Ambient]

Transport Temperature: [Ambient]

Transport Pressure: [Ambient]

Static Accumulator: This material is a static accumulator.

STORAGE

Stored in cool and well-ventilated areas. Keep away from fire and heat sources. Temperature in storage area should be lower than 30 °C. The containers should be sealed and separated from air, oxidizer, acid and alkali. Explosion-proof lights and ventilation equipment's should be applied and the tools that can easily cause sparks should be prohibited. The containers for leakage are needed. The packing plate and sealer of containers should be made by PTFE ; Filling speed <3 m/s (pipeline)

Storage Temperature: [Lower than 30 °C]

Storage Pressure: [Ambient]

Unsuitable Materials and Coatings: Oxidizer, acid, alkali, edible chemicals, sun exposure, rain , high temperature, fire and heat sources.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters/Exposure limits:

Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Form	Limit/Standard			Note	Source
n-Butyl Acetate		TWA	150 ppm			ACGHI TLV
n-Butyl Acetate		STEL	200 ppm			ACGHI TLV
n-Butyl Acetate		TWA	200 ppm			OEL (CN)
n-Butyl Acetate		STEL	300 ppm			OEL (CN)

ENGINEERING CONTROLS

The Strictly sealed and ventilated during the production. Safe shower and eye cleaning equipment should be applied.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: Respirator should be worn to deal with high concentrations; Use an air-supplied or self-contained breathing apparatus, if necessary.

Hand Protection: Hand protection: Chemical resistant protective gloves.

Eye Protection: Goggles

Skin and Body Protection: Body protection: Anti static overall.

Specific Hygiene Measures: No Smoking. Personal hygiene should be attended. Take shower after work.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

GENERAL INFORMATION

Physical State: Transparent liquid at 20 °C

Color: Colorless

Odour: Fruity odor

Odour Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 20°C):	0.88 [With respect to water]	[Calculated]
Density :	882 kg/m ³	
Flammability (Solid, Gas):	N/D	
Flash Point:	27°C	
Flammable Limits (Approximate volume % in air):	LEL: 1.4	UEL: 8.0
Autoignition Temperature:	370°C	
Boiling Point / Range:	126.1°C	
Decomposition Temperature:	N/D	
Vapour Density (Air = 1):	N/D	
Vapour Pressure:	2.0 kPa (15 mm Hg) at 25°C	
Evaporation Rate (n-butyl acetate = 1):	N/D	
pH:	N/D	
Log Pow (n-Octanol/Water Partition Coefficient):	N/D	
Solubility in Water:	Slightly soluble in water 7 g/L), soluble in ethanol , ketone, and chloroform	
Viscosity:	[N/D at 40°C] 0.83 mm ² /sec at 20°C	

OTHER INFORMATION

Freezing Point:	N/D
Melting Point:	-78°C
Molecular Weight:	116.16 G/MOLE
Hygroscopic:	N/D
Coefficient of Thermal Expansion:	N/D

SECTION 10 STABILITY AND REACTIVITY**STABILITY:** Stable**CONDITIONS TO AVOID:** Avoid heat, flame, spark, static**MATERIALS TO AVOID:** Oxidizers, acids, alkali**HAZARDOUS DECOMPOSITION PRODUCTS:** Oxides of carbon**POSSIBILITY OF HAZARDOUS REACTIONS:** Flammable, risk for explosion when contacted with fire, heat or oxidizer**SECTION 11 TOXICOLOGICAL INFORMATION****INFORMATION ON TOXICOLOGICAL EFFECTS**

<u>Route of Exposure</u>	<u>Conclusion/Remarks</u>
Inhalation	
Toxicity (Rat): 344 ppm, 4 h	Minimally Toxic.
Ingestion	
Toxicity (Rat): LD50 > 10768 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Skin	
Toxicity (Rabbit): LD50 > 17600 mg/kg	Minimally Toxic. Based on test data for the material.
Eye	
Irritation: Data available.	Irritating and will injure eye tissue. Based on test data for the material.

IARC Classification:

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = IARC 1

2 = IARC 2A

3 = IARC 2B

SECTION 12

ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material – Not expected to be harmful to aquatic organisms.

Material – Not expected to demonstrate chronic toxicity to aquatic organisms.

MOBILITY

Material -- Tendency to volatility and diffused in the air. Float on the water and hardly to dissolve. Hardly being absorbed or precipitated by earth.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Material -- Ease of degradation in saline water and fresh water, degradable even in the anaerobic environment.

ECOLOGICAL DATA

Nontoxic to organisms under certain amount.

BOD: 0.15 - 0.5 LB/LB (5 day)

SECTION 13

DISPOSAL CONSIDERATIONS

DISPOSAL METHODS

Incineration; Dispose of in accordance with local regulations.

DISPOSAL PROPERTIES

Hazardous waste.

OTHER ISSUES

No waste to the drains

SECTION 14

TRANSPORT INFORMATION

LAND – Precautionary Transportation Measures & Conditions:

NOTE: Comply with applicable laws and regulations.

SEA (IMDG):

Proper Shipping Name: n-Butyl Acetate

Hazard Class & Division: 3

EMS Number: F-E, S-D

UN Number: 1123

Packing Group: III

Marine Pollutant: No

Label(s): 3

Transport Document Name: n-Butyl Acetate



SEA (MARPOL 73/78 Convention – Annex II)

Product Name: n-Butyl Acetate
Ship type: 3
Pollution category: Y

AIR (IATA)

Proper Shipping Name: UN1123, n-Butyl Acetate, 3, PG III
Hazard Class & Division: 3
UN Number: 1123
Packing Group: III
Label(s) / Mark(s): 3
Transport Document Name: UN1123, n-Butyl Acetate, 3, PG III

SECTION 15

REGULATORY INFORMATION

This material is considered hazardous according to the Classification of Chemicals based on Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

National Laws and Regulations:

Workplace Safety and Health Act & Workplace Safety and Health Regulations

SECTION 16

OTHER INFORMATION

N/D = Not determined, N/A = Not applicable

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):

H225: Highly flammable liquid and vapor.

H336: May cause drowsiness or dizziness.

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