

SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: n-Butyl acrylate
Product Description: -
Chemical Formula: C₇H₁₂O₂
Recommended Use: Used as precursor in organic synthesis, adhesion agent, and emulsifier.

COMPANY IDENTIFICATION

Supplier: UNION PETROCHEMICAL PUBLIC COMPANY LIMITED
728 Union House Building, Baromratchonnani Rd.,
Bangbunru, 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: Warning

Preventive Instructions:

Preventive Measures: Keep away from heat sources, spark, flame, and oxidizer. No smoking.
Incident Response: Evacuate personnel from the contaminated zone rapidly to safe area; Isolation and restrictions on access; Cut off the sources of fire and leaking in case of the leakage to the drain.
Waste Disposal: Incineration according to the relative law.

Other hazard information:

PHYSICAL / CHEMICAL HAZARDS

Flammable liquid and vapor.

HEALTH HAZARDS

Irritation to respiratory tract, skin, eyes; Central nervous system depression.

ENVIRONMENTAL HAZARDS

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 No.	GHS Classification	Concentration*	Polymerization inhibitor
n-Butyl Acrylate	141-32-2	Class 3	≥99.5	4-Methoxyphenol

* 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. Get immediate medical attention.

INGESTION

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

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

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

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

FIRE FIGHTING

Fire fighters must be equipped with fire- and toxicity-proof cloths and extinguish the fire in the upwind place. The fire fighters must be covered by the shelter when the fire is severe.

SPECIAL HAZZARD

Flammable, explosion risk if contacted with fire, heat, or oxidizer. Risk of violet self-polymerization if overheated; Polymerized reaction was accelerated by heating.

SECTION 6 ACCIDENTAL RELEASE MEASURES

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.

ENVIRONMENTAL PRECAUTIONS

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

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. Covered with foam to reduce the steam for personnel protection. Remove the waste by explosion-proof pumps to exclusive collector for recycle or waste disposal.

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 velocitys in pipeline should be controlled for the danger of static. Be caution of transfer; Transfer with fire-fighting equipment; Handling with safety watcher.

STORAGE

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

SECTION 8

EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters/Exposure limits:

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

(EU) TWA: 2 ppm

(EU) STEL: 10 ppm

Test Method: Solvent analysis and gas chromatography

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

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

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.

Eye Protection: Chemical goggles are recommended.

Skin and Body Protection: Anti-static overall.

Hand Protection: Chemical resistant protective gloves.

Other Protection: No Smoking. Personal hygiene should be attended. Take shower after work.

SECTION 9	PHYSICAL AND CHEMICAL PROPERTIES
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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 (20 °C)
Odour: Strongly irritating odor

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (H₂O=1): 0.89
Boiling Point / Range: 145.7 °C
Flash Point: 37 °C
Upper Explosive Limit: 7.8 %Vol
Lower Explosive Limit: 1.5 %Vol
Saturated Vapor Pressure: 13.33 kPa (35.5 °C)
Solubility: Insoluble in water (1.4 g/L), soluble in ethanol and ether.
Ignition Temperature: 267 °C

OTHER INFORMATION

Melting Point: -64.6 °C

SECTION 10	STABILITY AND REACTIVITY
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STABILITY: Light sensitive

HAZARDOUS REACTIONS: Flammable, risk for explosion when contacted with fire, heat or oxidizer. Risk of self-polymerization. Polymerization could be accelerated by heating. The exothermic reaction may lead to the explosion accident.

CONDITIONS TO AVOID: Heat, light, flame, spark, static

MATERIALS TO AVOID: Oxidizers, acids, alkali

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon

SECTION 11	TOXICOLOGICAL INFORMATION
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INFORMATION ON TOXICOLOGICAL EFFECTS

LD50: 900 mg/kg (oral-rat); 2000 mg/kg (skin-rabbit)
LC50: 2730 ppm/4 h (inhalation-rat)

<u>Exposure route</u>	<u>Conclusion / Note</u>
Respiratory or Skin Sensitization	No data
Skin corrosion and irritation	Skin-rabbit 10 mg/24 hours, moderate irritation.
Germ Cell Mutation:	No data
Serious eye damage and eye irritation	Skin-rabbit, 50 mg, moderate irritation.
Carcinogenicity:	IARC-3.
Genotoxicity:	Rat Minimum Concentration for inhalation (TCL0): 135 ppm (6 hours, pregnant 6~15days).

SECTION 12	ECOLOGICAL INFORMATION
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The information given is based on data available for the material, the components of the material, and similar materials.

MOBILITY

It may penetrate to the ground water or volatilize to the air when discharged to the earth. It may be hydrolyzed by the alkaline.

PERSISTENCE AND DEGRADABILITY

The n-Butyl acrylate would not be absorbed by precipitate or concentrated by the microorganism. n-Butyl acrylate would be photo-degraded as exposure to the light of 729 nm.

Biodegradability (h): 24~168

Anaerobic biodegradation (h): 96~672

Non-biodegradable: Half-life of photo-oxidation (h): 2.3~23

SECTION 13	DISPOSAL CONSIDERATIONS
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DISPOSAL PROPERTIES

Hazardous waste

DISPOSAL METHODS

Incineration; Dispose of in accordance with local regulations.

OTHER ISSUES

No waste to the drains

SECTION 14	TRANSPORT INFORMATION
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Dangerous Good No.: 33601

UN Number: 2348

Packing Identification: 7

Packing Group: III

Transportation Matters: Fire-fighting and leakage-prevention should be equipped in the transportation. The grounding chain should go with the tank wagon in case of the accumulation of static. Keep away from oxidizer, acid, alkali, edible chemicals, sun exposure, rain, high temperature, fire and heat sources during the transportation. The fire-proof equipment should go with the exhaust pipe of vehicle; all the tools may occur spark should be avoided. The vehicle should travel according to the stipulation and avoid stopping in the residential area. Do not be shipped by wooden or cement ships.

SECTION 15	REGULATORY INFORMATION
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(Published by Congress on 26, January 2002) has made provisions on the safe production, application, storage, transportation and other aspects of chemical dangerous goods.

(GB13690-2009) has classified n-butyl acrylate as Class 3, flammable liquid.

SECTION 16	OTHER INFORMATION
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