

1. identification

A. Product name

- BUTYL ACRYLATE BULK [BAB]

B. Recommended use and restriction on use

- General use : synthetic textiles, leather, paint, coating, adhesive, felt, emulsifier
Intermediate

- Restriction on use : Not available

C. Manufacturer / Supplier / Distributor information

○ Supplier information

- Supplier : GODO CHEMICAL Corporation
- Address : #1017, 10F Suseo Hyundai Ventureville 10 Bamgogae-ro 1-gil Gangnam-gu Seoul
06349 Korea
- Telephone : (82)2 417 2555~6
- Email : godochem@godochem.com

2. hazard identification

A. GHS Classification

- Flammable liquids : Category3
- Acute toxicity (oral) : Category4
- Acute toxicity (dermal) : Category4
- Acute toxicity (inhalation: vapor) : Category4
- Skin corrosion/irritation : Category2
- Serious eye damage/irritation : Category2A
- Skin sensitization : Category1
- Reproductive toxicity : Category2
- Specific target organ toxicity(Single exposure) : Category3(Respiratory tract irritation)
- Acute aquatic toxicity : Category2

B. GHS label elements

○ Hazard symbols



○ Signal words

- Warning

○ Hazard statements

- H226 Flammable liquid and vapour
- H302 Harmful if swallowed
- H312 Harmful in contact with skin
- H315 Causes skin irritation
- H317 May cause an allergic skin reaction
- H319 Causes serious eye irritation

Butyl Acrylate



GODO CHEMICAL

- H332 Harmful if inhaled
- H335 May cause respiratory irritation.
- H361 Suspected of damaging fertility or the unborn child
- H401 Toxic to aquatic organisms.

○ Precautionary statements

1) Prevention

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P242 Use only non-sparking tools. Flammable liquids (chapter 2.6) 1, 2, 3
- P243 Take precautionary measures against static discharge.
- P261 Avoid breathing gas/mist/vapours/spray.
- P264 Wash hands thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P281 Use personal protective equipment as required.

2) Response

- P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- 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.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

- P308+P313 If exposed or concerned: Get medical advice/attention
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P321 Specific treatment
- P330 Rinse mouth.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P362 Take off contaminated clothing and wash before reuse.
- P363 Wash contaminated clothing before reuse.
- P370+P378 In case of fire: Use Suitable extinguishing media for extinction(Refer Section MSDS 5).

Butyl Acrylate



GODO CHEMICAL

3) 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.

4) Disposal

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

C. Other hazards which do not result in classification : (NFPA Classification)

○ NFPA grade (0 ~ 4 level)

- Health : 3 , Flammability : 2, Reactivity : 2

3. composition/information on ingredients

Chemical Name	Trade names and Synonyms	CAS No.	Content(%)
n-Butyl Acrylate	Butyl acrylate	141-32-2	99.5

4. first aid measures

A. Eye contact

- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms(flare, irritate) occur.
- Remove contact lenses if worn.

B. Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms(flare, irritate) occur.
- Prevent the spread of the skin.
- Wash thoroughly after handling.

C. Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.
- Get medical attention immediately.
- If breathing is stopped or irregular, give artificial respiration and supply oxygen.

D. Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not
- Rinse your mouth with water immediately.
- Get medical attention immediately.

E. Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.
- If exposed or concerned, get medical attention/advice.

Butyl Acrylate



GODO CHEMICAL

5. fire fighting measures

- A. Suitable (Unsuitable) extinguishing media
- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
 - Avoid use of water jet for extinguishing
- B. Specific hazards arising from the chemical
- Not available
- C. Special protective actions for firefighters
- Cool containers with water until well after fire is out.
 - Keep unauthorized personnel out.
 - Notify your local firestation and inform the location of the fire and characteristics hazard.
 - Using a unattended and water devices in case of large fire and leave alone to burn if you do not imperative.
 - Keep containers cool with water spray.
 - Vapor or gas is burned at distant ignition sources can be spread quickly.
 - Due to the extremely low flash point, irrigating fire extinguishing may be less effective when put out a fire.

6. additional release measures

- A. Personal precautions, protective equipment and emergency procedures
- Wear proper personal protective apparatus as indicated in Section 8 and avoid skin contact and inhalation.
 - Must work against the wind, let the upwind people to evacuate.
 - Remove all sources of ignition.
 - Handling the damaged containers or spilled material after wearing protective equipment
 - Do not direct water at spill or source of leak.
 - Avoid skin contact and inhalation.
 - Keep unauthorized people away, isolate hazard area and deny entry.
- B. Environmental precautions
- Prevent runoff and contact with waterways, drains or sewers.
 - If large amounts have been spilled, inform the relevant authorities.
- C. Methods and materials for containment and cleaning up
- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
 - Notification to central government, local government. When emissions at least of the standard amount
 - Dispose of waste in accordance with local regulation.
 - Appropriate container for disposal of spilled material collected.
 - Small leak: sand or other non-combustible material, please let use absorption.
 - Wipe off the solvent.
 - Dike for later disposal.
 - Do not use plastic containers

Butyl Acrylate



GODO CHEMICAL

7. handling and storage

A. Precautions for safe handling

- Since emptied containers retain product residue(vapor, liquid, solid) follow all MSDS and label warnings even after container is emptied.
- Avoid contact with incompatible materials.
- Operators should wear antistatic footwear and clothing.
- Do not inhale the steam prolonged or repeated.
- Avoid contact with heat, sparks, flame or other ignition sources.
- Contaminated work clothing should not be allowed out of the workplace.

B. Conditions for safe storage, including any incompatibilities

- Check regularly for leaks.
- Do not apply direct heat.
- Save applicable laws and regulations.
- Keep in the original container.
- Collected them in sealed containers.
- Do not eat, drink or smoke when using this product.

8. exposure controls/personal protection

A. Exposure limits

- ACGIH TLV
 - [n-Butyl Acrylate] : TWA, 2 ppm (11 mg/m³) Dermal Sensitizer(DSEN)
- OSHA PEL
 - Not available

B. Engineering controls

- A system of local and/or general exhaust is recommended to keep employee exposures above the 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. The use of local exhaust ventilation is recommended to control emissions near the source.

C. Individual protection measures, such as personal protective equipment

- Respiratory protection
 - Under conditions of frequent use or heavy exposure, Respiratory protection may be needed
 - Respiratory protection is ranked in order from minimum to maximum.
 - Consider warning properties before use.
 - Any chemical cartridge respirator with organic vapor cartridge(s).
 - Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).
 - Any air-purifying respirator with a full facepiece and an organic vapor canister.
 - For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.

Butyl Acrylate



GODO CHEMICAL

- Eye protection
 - Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
 - Provide an emergency eye wash station and quick drench shower in the immediate work area.
- Hand protection
 - Wear appropriate chemical resistant glove.
- Skin protection
 - Wear appropriate chemical resistant protective clothing.
- Others
 - Not available

9. physical and chemical properties

A. Appearance	
– Appearance	Liquid
– Color	Colorless
B. Odor	Pungent odor
C. Odor threshold	0.1ppb
D. pH	Not available
E. Melting point/Freezing point	–64°C
F. Initial Boiling Point/Boiling Ranges	147°C
G. Flash point	36°C
H. Evaporation rate	0.42 (butyl acetate=1)
I. Flammability(solid, gas)	Flammable liquid
J. Upper/Lower Flammability or explosive limits	9.9 / 1.3 %
K. Vapour pressure	3.375 mmHg (20°C)
L. Solubility	0.2 g/100ml (23°C)
M. Vapour density	4.42
N. Specific gravity(Relative density)	0.9
O. Partition coefficient of n-octanol/water	2.38
P. Autoignition temperature	267°C
Q. Decomposition temperature	Not available
R. Viscosity	0.81cp (25°C)
S. Molecular weight	128.17g/mol

10. stability and reactivity

- A. Chemical Stability
 - This material is stable under recommended storage and handling conditions.
- B. Possibility of hazardous reactions
 - Cylinders exposed to fire may vent and release flammable gas.
- C. Conditions to avoid
 - Avoid contact with incompatible materials and condition.
 - Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces
 - Avoid contact with heat, sparks, flame or other ignition sources.

Butyl Acrylate



GODO CHEMICAL

D. Incompatible materials

- Not available

E. Hazardous decomposition products

- May emit flammable vapour if involved in fire.

11. toxicological information

A. Information on the likely routes of exposure

- (Respiratory tracts)
 - May cause respiratory irritation.
- (Oral)
 - Harmful if swallowed
- (Eye·Skin)
 - Causes serious eye irritation
 - Causes skin irritation
 - May cause an allergic skin reaction

B. Delayed and immediate effects and also chronic effects from short and long term exposure

- Acute toxicity
 - * Oral
 - [n-Butyl Acrylate] : LD50 = 900 mg/kg Rat (HSDB)
 - * Dermal
 - [n-Butyl Acrylate] : LD50 = 2000 mg/kg Rabbit (NLM: ChemIDPlus)
 - * Inhalation
 - [n-Butyl Acrylate] : LC50 = 10.3 mg/L/4 hr Rat (HSDB)
- Skin corrosion/irritation
 - Causes skin irritation
- Serious eye damage/irritation
 - Causes serious eye irritation
- Respiratory sensitization
 - Not available
- Skin sensitization
 - May cause an allergic skin reaction
- Carcinogenicity
 - * IARC
 - [n-Butyl Acrylate] : Group 3
 - * OSHA
 - Not available
 - * ACGIH
 - [n-Butyl Acrylate] : A4
 - * NTP
 - Not available

Butyl Acrylate



GODO CHEMICAL

- * EU CLP
 - Not available
- Germ cell mutagenicity
 - Not available
- Reproductive toxicity
 - Suspected of damaging fertility or the unborn child
- STOT-single exposure
 - May cause respiratory irritation.
- STOT-repeated exposure
 - Not available
- Aspiration hazard
 - Not available

12. ecological information

- A. Ecotoxicity
 - Fish
 - Not available
 - Crustaceans
 - Not available
 - Algae
 - [n-Butyl Acrylate] : EC50 = 1.7 mg/L 72 hr (NITE)
- B. Persistence and degradability
 - Persistence
 - [n-Butyl Acrylate] : log Kow 2.36 (NITE)
 - Degradability
 - [n-Butyl Acrylate] : BOD5/COD = 0.37
- C. Bioaccumulative potential
 - Bioaccumulative potential
 - Not available
 - Biodegradation
 - [n-Butyl Acrylate] : Biodegradability = 61.3 (%) (NITE)
- D. Mobility in soil
 - Not available
- E. Other adverse effects
 - Not available

13. disposal considerations

- A. Disposal methods
 - Since more than two kinds of designaed waste is mixed, it is difficult to treat seperatly, then can be reduction or stabilization by incineration or similar process.
 - If water separation is possible, pre-process with Water separation process.
 - Dispose by incineration.

Butyl Acrylate



GODO CHEMICAL

- Incinerate the oil by separating the oil and water
 - The remainder of the water after separation will be processed in a water pollution prevention facilities.
 - Do incineration or stabilization of the residue after disposal as the method of evaporation and concentration.
 - Do incineration of the residue after disposal as the method of agglomeration and precipitation.
 - Take care of incinerate or stabilization after treatment, purified by means of Separation•distillation•extractio•filtration•pyrolysis
- B. Special precautions for disposal
- The user of this product must disposal by oneself or entrust to waste disposer or person who other's waste recycle and dispose, person who establish and operate waste disposal facilities.
 - Dispose of waste in accordance with all applicable laws and regulations.

14. transport information

- A. UN No. (IMDG)
- 2348
- B. Proper shipping name
- Butyl acrylates, stabilized
- C. Hazard Class
- 3
- D. IMDG Packing group
- III
- E. Marine pollutant
- Not available
- F. Special precautions for user related to transport or transportation measures
- Local transport follows in accordance with Dangerous goods Safety Management Law.
 - Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
 - Air transport(IATA): Not subject to LATA regulations.
 - EmS FIRE SCHEDULE : F-E (Non-water-reactive flammable liquids)
 - EmS SPILLAGE SCHEDULE : S-D (Flammable liquids)
 - Self Accelerating Polymerization Temperature (SAPT) : 60°C

15. regulatory information

- A. National and/or international regulatory information
- POPs Management Law
 - Not applicable
 - Information of EU Classification
 - * Classification
 - [n-Butyl Acrylate] : R10 Xi; R36/37/38 R43

Butyl Acrylate



GODO CHEMICAL

- * Risk Phrases
 - [n-Butyl Acrylate] : R10, R36/37/38, R43
- * Safety Phrase
 - [n-Butyl Acrylate] : S2, S9
- U.S. Federal regulations
- * OSHA PROCESS SAFETY (29CFR1910.119)
 - Not applicable
- * CERCLA Section 103 (40CFR302.4)
 - Not applicable
- * EPCRA Section 302 (40CFR355.30)
 - Not applicable
- * EPCRA Section 304 (40CFR355.40)
 - Not applicable
- * EPCRA Section 313 (40CFR372.65)
 - [n-Butyl Acrylate] : Applicable
- Rotterdam Convention listed ingredients
 - Not applicable
- Stockholm Convention listed ingredients
 - Not applicable
- Montreal Protocol listed ingredients
 - Not applicable

16. other information

A. Reference

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.
- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

B. Issue date

- 2016-01-21

C. Revision number and Last date revised

- 2 times, 2017-11-22

D. Other

- This SDS is prepared according to the Globally Harmonized System (GHS).