Butyl Acrylate

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Trade name Butyl Acrylate
Synonyms 2-Propenoic acid butyl ester, Acrylic acid n-butyl ester, Butyl 2-propenoate
Use Industrial use, Intermediate, Paint and Coatings, Paper Chemical, Raw material for chemical processes, Raw material for industry
Company Sasol Chemicals (USA) LLC
(an affiliate of Sasol Chemicals North America LLC)
Address 12120 Wickchester Lane   Houston TX 77079
Telephone CHEMTREC North America Transportation Emergency (24-hr) (800) 424-9300
CHEMTREC World Wide (703) 527-3887
Other Emergencies (24-hr) (337) 494-5142
MSDS and Product Information (8:00am-4:30pm CST) (281) 588-3491
Health and Safety Information (7:30am-4:00pm CST) (281) 588-3492
E-mail address SasolElectronicSDS@us.sasol.com

SECTION 2 HAZARDS IDENTIFICATION

GHS Hazards
- Flammable liquids Category 3
- Acute toxicity (Inhalation) Category 4
- Eye irritation Category 2A
- Skin irritation Category 2
- Skin sensitisation Category 1
- Specific target organ toxicity - single exposure Category 3 (Resp. irritation)
- Chronic aquatic toxicity Category 3

LABEL ELEMENTS

Hazard symbols

Signal word Warning

Hazard statements
H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
SAFETY DATA SHEET

Butyl Acrylate

H412  Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention
- 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.
- P243  Take precautionary measures against static discharge.
- P261  Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264  Wash skin thoroughly after handling.
- P271  Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264  Wash skin thoroughly after handling.
- P271  Avoid release to the environment.

Response
- 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.
- P243  Take precautionary measures against static discharge.
- P261  Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264  Wash skin thoroughly after handling.
- P271  Avoid release to the environment.

Storage
- P403 + P405 + P235  Store locked up in a well-ventilated place. Keep cool.

Disposal
- P501  Dispose of contents/container to an approved waste disposal plant.

SECTION 3  COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Butyl acrylate</td>
<td>141-32-2</td>
<td>100</td>
</tr>
</tbody>
</table>

See Section 8 for Exposure Guidelines and Section 15 for Regulatory Classifications.

SECTION 4  FIRST AID MEASURES

Eye contact  Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Butyl Acrylate

**Skin contact**  Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention immediately.

**Inhalation**  Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.

**Ingestion**  Do not induce vomiting without medical advice. Get medical attention immediately. Never give anything by mouth to an unconscious person.

### SECTION 5  FIREFIGHTING MEASURES

#### FLAMMABLE PROPERTIES

**Fire/explosion**  Flash back possible over considerable distance. NFPA Class II combustible liquid.

**Suitable extinguishing media**  Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Protective equipment and precautions for firefighters**  Wear self-contained breathing apparatus and protective suit.

**Further information**  Keep containers and surroundings cool with water spray.

### SECTION 6  ACCIDENTAL RELEASE MEASURES

**Methods and materials for containment and cleaning up**  Wear personal protective equipment. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Do not flush into surface water or sanitary sewer system.

### SECTION 7  HANDLING AND STORAGE

**Safe handling advice**  Ensure all equipment is electrically grounded before beginning transfer operations. Keep away from heat and sources of ignition.

**Storage/Transport pressure**  Ambient

**Load/Unload temperature**  Ambient

### SECTION 8  EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING MEASURES**  Air contaminant levels should be controlled below the PEL or TLV for this product (see Exposure Guidelines). Ensure adequate ventilation, especially in confined areas.
SAFETY DATA SHEET

Butyl Acrylate

PERSONAL PROTECTIVE EQUIPMENT

Eyes Chemical resistant goggles must be worn, Face-shield

Skin Full protective clothing, chemical boots, and chemical gloves.

Inhalation Use NIOSH approved respiratory protection.

EXPOSURE GUIDELINES

<table>
<thead>
<tr>
<th>Components</th>
<th>Exposure limit(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Butyl acrylate</td>
<td>ACGIH TLV (8-hour) 2 ppm</td>
</tr>
</tbody>
</table>

PEL= Permissible Exposure Limits
TLV= Threshold Limit Value
EL= Excursion Limit
TWA= Time Weighted Average (8 hr.)
STEL= Short Term Exposure Limit (15 min.)
WEEL= Workplace Environmental Exposure Level

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance liquid;

Colour Clear, colorless

Form liquid

Odour stinging

Odour Threshold no data available

Flash point 41 °C, 105.8 °F;

Flammability Upper explosion limit: 9.9 %(V)

Lower explosion limit: 1.5 %(V)

Boiling point/boiling range 147 °C, 297 °F;

Melting point/range -64 °C, -83 °F;

Auto-ignition temperature 292 °C, 558 °F;

Decomposition temperature no data available

Flammability (solid, gas) no data available

Vapour pressure 5 hPa @ 20 °C, 68 °F;

Vapour density 4.42
Butyl Acrylate

Density 0.9 g/cm³ @ 20 °C, 68 °F;
Specific gravity no data available
Water solubility insoluble
Viscosity 0.74 mm²/s @ 40 °C, 104 °F;
Viscosity, dynamic 0.88 mPa.s @ 20 °C, 68 °F;
PH no data available
Evaporation rate no data available
Partition coefficient: n-octanol/water log Pow: 2.36; @ 20 °C, 68 °F;

SECTION 10  STABILITY AND REACTIVITY

Reactivity The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is noticeably exceeded, the product may polymerise with heat evolution.
Chemical stability Ensure good distribution of the inhibitor and dissolved oxygen. Please take note of the product's maximum storage period.
Conditions to avoid Avoid temperatures above 35°C, direct sunlight and contact with sources of heat. Avoid radical-forming starting agents, peroxides and reactive metals. Protect from contamination.
Hazardous decomposition products No decomposition if stored normally. Prolonged storage of the product can cause the stabiliser to lose its effectiveness.
Materials to avoid Oxidizing agents
Heavy metal salts
Acids and bases
Acid anhydrides
polymerisation initiators
Hazardous polymerisation Hazardous polymerization may occur upon depletion of inhibitor - may cause heat and pressure build-up in closed containers.

SECTION 11  TOXICOLOGICAL INFORMATION

Acute dermal toxicity LD50 rabbit: > 2,000 mg/kg(literature value)
Acute inhalation toxicity LC50 male and female rat (4 hours): > 10 - 20 mg/l (literature value)
Acute oral toxicity LD50 rat: > 2,000 mg/kg
Butyl Acrylate

(literature value)

Skin corrosion/irritation (rabbit): 78 hours irritating, (literature value)

Eye damage/irritation (rabbit): 71 hours Irritating., (literature value)

Respiratory or skin sensitization guinea pig: Causes sensitisation; Maximisation Test

Germ cell mutagenicity Genotoxicity in vitro:
Type: Ames test
System: Salmonella typhimurium; with and without metabolic activation
Result: In vitro tests did not show mutagenic effects.
(literature value)

Genotoxicity in vivo:
no data available

Assessment Mutagenicity:
Based on available data, the classification criteria are not met.

Reproductive toxicity Reproductive toxicity:
no data available

Assessment Reproductive toxicity:
no data available

Teratogenicity:
no data available

Assessment teratogenicity:
no data available

STOT - single exposure The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT - repeated exposure no data available

Aspiration toxicity no data available

Carcinogenicity Assessment carcinogenicity:
Contains no ingredient listed as a carcinogen

ECOLOGICAL INFORMATION

Aquatic toxicity Harmful to aquatic life with long lasting effects.

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)) 96 hours: > 1 - 10 mg/l; static test (literature value)
Butyl Acrylate

Toxicity to aquatic invertebrates  EC50 (Daphnia magna (Water flea)) 48 hours: > 1 - 10 mg/l; static test (literature value)

Toxicity to algae  EC50 (Selenastrum capricornutum (green algae)) 96 hours: > 1 - 10 mg/l; static test (literature value)

Chronic toxicity to fish  no data available

Chronic toxicity to aquatic invertebrates  NOEC (Daphnia magna (Water flea)) 21 d: > 0.1 - 1 mg/l; semi-static test (literature value)

Biodegradation  Readily biodegradable.

OECD Test Guideline 310 (28 d): > 60 % (literature value)

Bioaccumulation  No bioaccumulation is to be expected (log Pow <= 4).

Mobility in soil  The product evaporates slowly.

Other adverse effects  This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

SECTION 13  DISPOSAL CONSIDERATIONS

Waste Code  D001 - Ignitability (RQ 100 LB). This product has the RCRA characteristic of ignitability. Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, mixtures, contamination, and spillage may change the classification.

Disposal methods  Dispose of only in accordance with local, state, and federal regulations.

Empty containers.  Empty containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, triple-rinsed, properly bunged and promptly returned to a drum reconditioner, or properly disposed.

SECTION 14  TRANSPORT INFORMATION

DOT  UN 2348, Butyl Acrylates, Stabilized, 3, III

IATA  UN 2348, Butyl Acrylates, Stabilized, 3, III

IMDG  UN 2348, Butyl Acrylates, Stabilized, 3, III
Butyl Acrylate

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

Remarks  no data available

SECTION 15  REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

OSHA Hazards (HCS 1994)
Flammable liquid, Eye irritation, Skin irritation, Sensitiser, Unstable Reactive

TSCA Inventory Listing

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propenoic acid, butyl ester</td>
<td>141-32-2</td>
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</tbody>
</table>

SARA 302 Status

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SARA 311/312 Classification
"Fire hazard", "Immediate (acute) health hazard", “Reactive”

SARA 313 Chemical

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight percent</th>
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</thead>
<tbody>
<tr>
<td>2-Propenoic acid, butyl ester</td>
<td>141-32-2</td>
<td>100 %</td>
</tr>
</tbody>
</table>

US. EPA CERCLA Hazardous Substances (40 CFR 302)

<table>
<thead>
<tr>
<th>Components</th>
<th>Reportable Quantity</th>
<th>Weight percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>none</td>
<td></td>
<td>none</td>
</tr>
</tbody>
</table>

INTERNATIONAL REGULATIONS

WHMIS Classification
Class B, Division 3: Combustible liquid.
Class D, Division 2, Subdivision B: Toxic material.
Dangerously Reactive Material

European Union
Classification according to Regulation (EU) 1272/2008.

<table>
<thead>
<tr>
<th>Flammable liquids, Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (Inhalation), Category 4</td>
</tr>
<tr>
<td>Eye irritation, Category 2</td>
</tr>
<tr>
<td>Skin irritation, Category 2</td>
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<tr>
<td>Skin sensitisation, Category 1</td>
</tr>
<tr>
<td>Specific target organ toxicity - single exposure, Category 3 (Resp. irritation)</td>
</tr>
<tr>
<td>Chronic aquatic toxicity, Category 3</td>
</tr>
</tbody>
</table>

Australia. Inventory of Chemical Substances (AICS)  Listed
Butyl Acrylate

Japan. Inventory of Existing and New Chemical Substances (ENCS) Listed
Japan. Industrial Safety & Health Law (ISHL) Inventory Listed
Canada. Domestic Substances List (DSL) Inventory Listed
Canadian Non-Domestic Substance Listing (NDSL) Not listed
European Inventory of Existing Commercial Chemical Substances (EINECS) Listing Listed
Philippines. Inventory of Chemicals / Chemical Substances (PICCS) Listed
Korea. Existing Chemicals Inventory (KECI) Listed
China. Inventory of Existing Chemical Substances (IECSC) Listed
Mexico. National Inventory of Chemical Substances (INSQ) Listed
New Zealand. Inventory of Chemicals (NZIoC) Listed
Switzerland. Inventory of Notified New Substances (CHINV) Listed
Taiwan. National Existing Chemical Inventory (NECI) Listed

Please note: The names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in Section 3.

STATE REGULATIONS

California Prop. 65
Components none CAS-No.

SECTION 16 OTHER INFORMATION

HAZARD RATINGS

<table>
<thead>
<tr>
<th>HMIS®</th>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard/ Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA</td>
<td>2</td>
<td>2</td>
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</tbody>
</table>

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SAFETY DATA SHEET

Butyl Acrylate

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