

ALFAAL03476

## n-Butyl acrylate

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

**产品说明:**  
**Product Description:** 丙烯酸正丁酯,98+%, 50ppm 4-甲氧基苯酚作为稳定剂  
 n-Butyl acrylate

**Cat No. :** L03476  
**Synonyms** 2-Propenoic acid butyl ester  
**CAS No** 141-32-2  
**Molecular Formula** C7 H12 O2

**Supplier** Avocado Research Chemicals Ltd.  
 (Part of Thermo Fisher Scientific)  
 Shore Road, Heysham  
 Lancashire, LA3 2XY,  
 United Kingdom  
 Office Tel: +44 (0) 1524 850506  
 Office Fax: +44 (0) 1524 850608

**Emergency Telephone Number** For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
 Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

**E-mail address** begel.sdsdesk@thermofisher.com

**Recommended Use** Laboratory chemicals.  
**Uses advised against** No Information available

### SECTION 2. HAZARD IDENTIFICATION

**Physical State**  
Liquid

**Appearance**  
Colorless

**Odor**  
Stench

#### Emergency Overview

Flammable liquid and vapor. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. Toxic to aquatic life. Harmful to aquatic life with long lasting effects. Harmful if inhaled. Sensitivity to light. Lachrymator (substance which increases the flow of tears). Stench.

#### Classification of the substance or mixture

Flammable liquids.	Category 3
Acute Inhalation Toxicity - Vapors	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Skin Sensitization	Category 1
Specific target organ toxicity - (single exposure)	Category 3
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 3

#### Label Elements

**Signal Word****Warning****Hazard Statements**

H226 - Flammable liquid and vapor  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H319 - Causes serious eye irritation  
H335 - May cause respiratory irritation  
H401 - Toxic to aquatic life  
H412 - Harmful to aquatic life with long lasting effects  
H332 - Harmful if inhaled

**Precautionary Statements****Prevention**

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P240 - Ground and bond container and receiving equipment  
P241 - Use explosion-proof electrical/ ventilating/ lighting equipment  
P242 - Use non-sparking tools  
P243 - Take action to prevent static discharges  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
P264 - Wash face, hands and any exposed skin thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P272 - Contaminated work clothing should not be allowed out of the workplace  
P280 - Wear protective gloves/protective clothing/eye protection/face protection

**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  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P312 - Call a POISON CENTER or doctor if you feel unwell  
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish  
P362 + P364 - Take off contaminated clothing and wash it before reuse

**Storage**

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

**Disposal**

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

**Physical and Chemical Hazards**

Vapors may cause flash fire or explosion. Flammable liquid.

**Health Hazards**

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. Harmful if inhaled. Lachrymator (substance which increases the flow of tears).

**Environmental hazards**

Toxic to aquatic life. Harmful to aquatic life with long lasting effects. . Will likely be mobile in the environment due to its water solubility. The product is water soluble, and may spread in water systems.

**Other Hazards**

Lachrymator (substance which increases the flow of tears)

Stench. Toxic to terrestrial vertebrates. This product does not contain any known or suspected endocrine disruptors.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS No	Weight %
Butyl acrylate	141-32-2	> 99

4-Methoxyphenol	150-76-5	0.001-0.002
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**SECTION 4. FIRST AID MEASURES****Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**Skin Contact**

Get medical attention. Wash off immediately with plenty of water for at least 15 minutes.

**Inhalation**

Remove to fresh air. Get medical attention. If not breathing, give artificial respiration.

**Ingestion**

Do NOT induce vomiting. Get medical attention.

**Most important symptoms and effects**

Difficulty in breathing. May cause allergic skin reaction. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

**Self-Protection of the First Aider**

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

**Notes to Physician**

Treat symptomatically. Symptoms may be delayed.

**SECTION 5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.

**Extinguishing media which must not be used for safety reasons**

No information available.

**Specific Hazards Arising from the Chemical**

Flammable. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition. Vapors may form explosive mixtures with air.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**SECTION 6. ACCIDENTAL RELEASE MEASURES****Personal Precautions**

Ensure adequate ventilation. Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges. Do not get in eyes, on skin, or on clothing.

**Environmental Precautions**

Avoid release to the environment. See Section 12 for additional Ecological Information. Collect spillage. Do not flush into surface water or sanitary sewer system.

**Methods for Containment and Clean Up**

Remove all sources of ignition. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Use spark-proof tools and explosion-proof equipment.

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7. HANDLING AND STORAGE

### Handling

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Use spark-proof tools and explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Do not get in eyes, on skin, or on clothing. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Use only non-sparking tools.

### Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Flammables area.

### Specific Use(s)

Use in laboratories

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

Component	China	Taiwan	Thailand	Hong Kong
Butyl acrylate	TWA: 25 mg/m <sup>3</sup>	-	TWA: 2 ppm	TWA: 2 ppm TWA: 10 mg/m <sup>3</sup>
4-Methoxyphenol	-	TWA: 5 mg/m <sup>3</sup>		-

Component	ACGIH TLV	OSHA PEL	NIOSH	The United Kingdom	European Union
Butyl acrylate	TWA: 2 ppm	(Vacated) TWA: 10 ppm (Vacated) TWA: 55 mg/m <sup>3</sup>	IDLH: 113 ppm TWA: 10 ppm TWA: 55 mg/m <sup>3</sup>	STEL: 5 ppm 15 min STEL: 26 mg/m <sup>3</sup> 15 min TWA: 1 ppm 8 hr TWA: 5 mg/m <sup>3</sup> 8 hr	TWA: 2 ppm (8h) TWA: 11 mg/m <sup>3</sup> (8h) STEL: 10 ppm (15min) STEL: 53 mg/m <sup>3</sup> (15min)
4-Methoxyphenol	TWA: 5 mg/m <sup>3</sup>	(Vacated) TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	-	

### Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

### Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. MDHS70 General methods for sampling airborne gases and vapours MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

### Exposure Controls

### Engineering Measures

Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

### Personal protective equipment

#### Eye Protection

Goggles (European standard - EN 166)

## n-Butyl acrylate

## Hand Protection

Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Viton (R)	See manufacturers recommendations	-	EN 374	(minimum requirement)

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.

(Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

## Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

## Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

## Large scale/emergency use

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

**Recommended Filter type:** Organic gases and vapours filter Type A Brown conforming to EN14387

## Small scale/Laboratory use

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Recommended half mask:-** Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141

When RPE is used a face piece Fit Test should be conducted

## Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

## Environmental exposure controls

Prevent product from entering drains. Do not allow material to contaminate ground water system.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance  
Physical State

Colorless  
Liquid

## Odor

Stench

## Odor Threshold

No data available

## pH

No information available

## Melting Point/Range

-64 °C / -83.2 °F

## Softening Point

No data available

## Boiling Point/Range

145 °C / 293 °F

## Flash Point

39 °C / 102.2 °F

## Evaporation Rate

No data available

## Flammability (solid,gas)

Not applicable

## Explosion Limits

**Lower** 1.5 Vol%

**Upper** 7.8 Vol%

5 mbar @ 20 °C

## Vapor Pressure

5 mbar @ 20 °C

## Vapor Density

4.4

@ 760 mmHg

**Method -** No information available

## Specific Gravity / Density

0.890

(Air = 1.0)

## Bulk Density

Not applicable

Liquid

## Water Solubility

1.4 g/l (20°C)

## Solubility in other solvents

No information available

## Partition Coefficient (n-octanol/water)

## Component

**log Pow**

Butyl acrylate

2.38

## n-Butyl acrylate

4-Methoxyphenol	1.3	
Autoignition Temperature	297 °C / 566.6 °F	
Decomposition Temperature	No data available	
Viscosity	0.869 mPa.s at 20 °C	
Explosive Properties		explosive air/vapour mixtures possible
Oxidizing Properties	No information available	
Molecular Formula	C7 H12 O2	
Molecular Weight	128.17	

## SECTION 10. STABILITY AND REACTIVITY

Stability	Light sensitive.
Hazardous Reactions	No information available.
Hazardous Polymerization	Hazardous polymerization may occur upon depletion of inhibitor.
Conditions to Avoid	Temperatures above 30°C. Keep away from open flames, hot surfaces and sources of ignition. Excess heat. Exposure to light. Incompatible products.
Materials to avoid	Strong oxidizing agents. Strong acids. Strong bases. Peroxides.
Hazardous Decomposition Products	Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ).

## SECTION 11. TOXICOLOGICAL INFORMATION

## Product Information

## (a) acute toxicity;

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Butyl acrylate	LD50 = 3150 mg/kg ( Rat )	LD50 > 2 mg/kg ( Rabbit )	LC50 = 10.3 mg/L ( Rat ) 4 h
4-Methoxyphenol	1600 mg/kg (Rat)	LD50 > 2000 mg/kg ( Rabbit )	

(b) skin corrosion/irritation; Category 2

(c) serious eye damage/irritation; Category 2

## (d) respiratory or skin sensitization;

Respiratory  
SkinBased on available data, the classification criteria are not met  
Category 1

May cause sensitization by skin contact

## (e) germ cell mutagenicity;

Based on available data, the classification criteria are not met

## (f) carcinogenicity;

Based on available data, the classification criteria are not met  
There are no known carcinogenic chemicals in this product

## (g) reproductive toxicity;

Based on available data, the classification criteria are not met

## (h) STOT-single exposure;

Category 3

<b>Results / Target organs</b>	Respiratory system
<b>(i) STOT-repeated exposure;</b>	Based on available data, the classification criteria are not met
<b>Target Organs</b>	None known.
<b>(j) aspiration hazard;</b>	Based on available data, the classification criteria are not met
<b>Symptoms / effects, both acute and delayed</b>	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity effects** Toxic to aquatic organisms. Do not empty into drains. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. The product contains following substances which are hazardous for the environment.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Butyl acrylate	LC50: = 5.2 mg/L, 96h flow-through (Oncorhynchus mykiss)	EC50: = 8.2 mg/L, 48h (Daphnia magna)	EC50: = 5.5 mg/L, 96h (Pseudokirchneriella subcapitata)	EC50 = 31.0 mg/L 30 min EC50 = 35.0 mg/L 15 min EC50 = 37.0 mg/L 5 min
4-Methoxyphenol	LC50: = 28.5 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: = 84.3 mg/L, 96h flow-through (Pimephales promelas)			EC50 = 3.66 mg/L 5 min EC50 = 4.30 mg/L 15 min EC50 = 4.61 mg/L 30 min

**Persistence and Degradability**  
**Persistence** Expected to be biodegradable  
**Degradation in sewage treatment plant** Soluble in water, Persistence is unlikely, based on information available.  
 Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

**Bioaccumulative Potential** Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Butyl acrylate	2.38	No data available
4-Methoxyphenol	1.3	No data available

**Mobility in soil** The product is water soluble, and may spread in water systems Will likely be mobile in the environment due to its water solubility Highly mobile in soils

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors  
**Persistent Organic Pollutant** This product does not contain any known or suspected substance  
**Ozone Depletion Potential** This product does not contain any known or suspected substance

## SECTION 13. DISPOSAL CONSIDERATIONS

**Waste from Residues/Unused Products** Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

**Contaminated Packaging** Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

**Other Information**

Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be landfilled or incinerated, when in compliance with local regulations. Do not let this chemical enter the environment. Do not empty into drains.

**SECTION 14. TRANSPORT INFORMATION****Road and Rail Transport**

**UN-No** UN2348  
**Proper Shipping Name** BUTYL ACRYLATES, STABILIZED  
**Hazard Class** 3  
**Packing Group** III

**IMDG/IMO**

**UN-No** UN2348  
**Proper Shipping Name** BUTYL ACRYLATES, STABILIZED  
**Hazard Class** 3  
**Packing Group** III

**IATA**

**UN-No** UN2348  
**Proper Shipping Name** BUTYL ACRYLATES, STABILIZED  
**Hazard Class** 3  
**Packing Group** III

**Special Precautions for User**

Inhibitors have been added to stabilize this product Inhibitor levels should be maintained  
Hazardous polymerization may occur upon depletion of inhibitor

**SECTION 15. REGULATORY INFORMATION****International Inventories**

X = listed, China (IECSC), Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), Korea (KECL).

Component	The Inventory of Hazardous Chemicals (2015 Edition)	List of dangerous goods GB 12268 - 2012	TCSI	IECSC	EINECS	TSCA	DSL	PICCS	ENCS	ISHL	AICS	KECL
Butyl acrylate	X	X	X	X	205-480-7	X	X	X	X	X	X	KE-29450
4-Methoxyphenol	-	-	X	X	205-769-8	X	X	X	X	X	X	KE-23353

**National Regulations**

Component	Toxic Chemical Substances Control Act
Butyl acrylate 141-32-2 ( > 99 )	Class IV (1 wt%)

**SECTION 16. OTHER INFORMATION**



## n-Butyl acrylate

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<b>Prepared By</b>	Health, Safety and Environmental Department
<b>Creation Date</b>	29-Jan-2015
<b>Revision Date</b>	22-Apr-2024
<b>Revision Summary</b>	New emergency telephone response service provider.

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**Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Chemical incident response training.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

**Legend**

**CAS** - Chemical Abstracts Service

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japanese Existing and New Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**TWA** - Time Weighted Average

**ACGIH** - American Conference of Governmental Industrial Hygienists

**IARC** - International Agency for Research on Cancer

**DNEL** - Derived No Effect Level

**PNEC** - Predicted No Effect Concentration

**RPE** - Respiratory Protective Equipment

**LD50** - Lethal Dose 50%

**LC50** - Lethal Concentration 50%

**EC50** - Effective Concentration 50%

**NOEC** - No Observed Effect Concentration

**POW** - Partition coefficient Octanol:Water

**PBT** - Persistent, Bioaccumulative, Toxic

**vPvB** - very Persistent, very Bioaccumulative

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**OECD** - Organisation for Economic Co-operation and Development

**ATE** - Acute Toxicity Estimate

**BCF** - Bioconcentration factor

**VOC** - (Volatile Organic Compound)

**Key literature references and sources for data**

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**