

n-Butyl acrylate, min. 99%

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form	: Substance
Trade name	: n-Butyl acrylate, min. 99%
Chemical name	: n-butyl acrylate
CAS-No.	: 141-32-2
Product code	: 02037
Formula	: C ₇ H ₁₂ O ₂

1.2. Recommended use and restrictions on use

Recommended use	: Use as laboratory reagent, Manufacture of substances
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1.3. Supplier

Supplier

Polysciences
400 Valley Road
Warrington, PA 18976 - United States
T +1 215 343 6484 - F +1 215 343 0214
info@polysciences.com - www.polysciences.com

1.4. Emergency telephone number

Emergency number	: 24-hour emergency phone number ChemTel 1-800-255-3924
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SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Explosive Category 1.4	Fire or projection hazard
Flammable liquids Category 3	Flammable liquid and vapor
Skin corrosion/irritation Category 2	Causes skin irritation
Serious eye damage/eye irritation Category 1	Causes serious eye damage
Skin sensitization, category 1B	May cause an allergic skin reaction

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US)



Signal word (GHS US)

: Danger

Hazard statements (GHS US)

: Fire or projection hazard
Flammable liquid and vapor
Causes skin irritation
May cause an allergic skin reaction
Causes serious eye damage

Precautionary statements (GHS US)

: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Keep container tightly closed.
Ground/Bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

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SECTION 3: Composition/Information on ingredients

3.1. Substances

Name : n-Butyl acrylate, min. 99%
CAS-No. : 141-32-2

Name	Product identifier	%	GHS US classification
n-Butyl methacrylate	(CAS-No.) 97-88-1	95 – 100	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Acute 2, H401
4-Methoxyphenol (MEHQ)	(CAS-No.) 150-76-5	0 – 5	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Skin Sens. 1, H317

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center/doctor/physician if you feel unwell.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact : Eye irritation.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

Fire hazard : Flammable liquid and vapor.
Explosion hazard : Explosion risk in case of fire.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Evacuate area. Do not fight fire when fire reaches explosives. Fight fire with normal precautions from a reasonable distance.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Collect spillage.
- Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.
- Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Ground/bond container and receiving equipment.
- Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store at 4 deg. C.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

n-Butyl acrylate, min. 99% (141-32-2)	
USA - ACGIH - Occupational Exposure Limits	
Local name	n-Butyl acrylate
ACGIH TWA (ppm)	2 ppm
Remark (ACGIH)	TLV® Basis: Irr. Notations: DSEN; A4 (Not classifiable as a Human Carcinogen)
ACGIH chemical category	dermal sensitizer, Not Classifiable as a Human Carcinogen
Regulatory reference	ACGIH 2020
USA - IDLH - Occupational Exposure Limits	
US IDLH (ppm)	113 ppm
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA) (mg/m³)	55 mg/m³
NIOSH REL TWA [ppm]	10 ppm
4-Methoxyphenol (MEHQ) (150-76-5)	
No additional information available	
n-Butyl methacrylate (97-88-1)	
No additional information available	

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

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Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Colorless liquid.
Color	: Colorless
Odor	: strong Fruity rancid plastic
Odor threshold	: 0.00096 – 0.10 ppm
pH	: No data available
Melting point	: -64 °C
Freezing point	: No data available
Boiling point	: 145 °C
Flash point	: 29 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: 4.3 hPa (at 20 °C)
Relative vapor density at 20°C	: 4.4
Relative density	: No data available
Density	: 0.898 g/cm ³ (at 20 °C)
Molecular mass	: 128.2
Solubility	: Water: 1.4 g/l (at 20 °C)
Partition coefficient n-octanol/water (Log Pow)	: 2.38 (at 25 °C)
Auto-ignition temperature	: 292 °C
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapor.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

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10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

n-Butyl acrylate, min. 99% (141-32-2)	
LD50 oral rat	9050 mg/kg
LD50 dermal rabbit	3024 mg/kg
LC50 Inhalation - Rat	10.3 mg/l/4h

n-Butyl methacrylate (97-88-1)	
LD50 oral rat	16 g/kg
LD50 dermal rabbit	10181 mg/kg

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

n-Butyl acrylate, min. 99% (141-32-2)	
IARC group	3 - Not classifiable

Reproductive toxicity	: Not classified
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STOT-single exposure	: Not classified
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n-Butyl methacrylate (97-88-1)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure	: Not classified
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n-Butyl methacrylate (97-88-1)	
LOAEC (inhalation, rat, gas, 90 days)	952 ppm Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)
NOAEL (oral, rat, 90 days)	120 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.
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n-Butyl acrylate, min. 99% (141-32-2)	
LC50 fish 1	2.42 mg/l
EC50 Daphnia 1	8.2 mg/l (Exposure time: 48 h - Species: Daphnia magna)

n-Butyl methacrylate (97-88-1)	
LC50 fish 1	5.57 mg/l
EC50 Daphnia 1	32 mg/l (Exposure time: 48 h - Species: Daphnia magna)

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n-Butyl methacrylate (97-88-1)

LC50 fish 2	5.57 mg/l Test organisms (species): Oryzias latipes
NOEC chronic crustacea	1.1 mg/l

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

n-Butyl acrylate, min. 99% (141-32-2)

Partition coefficient n-octanol/water (Log Pow)	2.38 (at 25 °C)
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n-Butyl methacrylate (97-88-1)

Partition coefficient n-octanol/water (Log Pow)	2.26
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information	: Flammable vapors may accumulate in the container.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description	: UN2348 Butyl acrylates, stabilized, 3, III
UN-No.(DOT)	: UN2348
Proper Shipping Name (DOT)	: Butyl acrylates, stabilized
Class (DOT)	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Packing group (DOT)	: III - Minor Danger
Hazard labels (DOT)	: 3 - Flammable liquid



DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
DOT Special Provisions (49 CFR 172.102)	: B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable. IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 60 L

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DOT Quantity Limitations Cargo aircraft only (49 : 220 L
CFR 175.75)

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

Emergency Response Guide (ERG) Number : 129P

Other information : No supplementary information available.

Transportation of Dangerous Goods

Not applicable

Transport by sea

Transport document description (IMDG) : UN 2348 BUTYL ACRYLATES, STABILIZED, 3, III (36°C c.c.)

UN-No. (IMDG) : 2348

Proper Shipping Name (IMDG) : BUTYL ACRYLATES, STABILIZED

Class (IMDG) : 3 - Flammable liquids

Packing group (IMDG) : III - substances presenting low danger

Air transport

Transport document description (IATA) : UN 2348 Butyl acrylates, stabilized, 3, III

UN-No. (IATA) : 2348

Proper Shipping Name (IATA) : Butyl acrylates, stabilized

Class (IATA) : 3 - Flammable Liquids

Packing group (IATA) : III - Low danger

SECTION 15: Regulatory information

15.1. US Federal regulations

n-Butyl acrylate, min. 99% (141-32-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313

4-Methoxyphenol (MEHQ) (150-76-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

n-Butyl methacrylate (97-88-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

n-Butyl acrylate, min. 99% (141-32-2)

Listed on the Canadian DSL (Domestic Substances List)

4-Methoxyphenol (MEHQ) (150-76-5)

Listed on the Canadian DSL (Domestic Substances List)

n-Butyl methacrylate (97-88-1)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

n-Butyl acrylate, min. 99% (141-32-2)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

n-Butyl methacrylate (97-88-1)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

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n-Butyl acrylate, min. 99% (141-32-2)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on CICR (Turkish Inventory and Control of Chemicals)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

n-Butyl methacrylate (97-88-1)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on CICR (Turkish Inventory and Control of Chemicals)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations

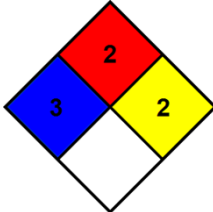
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State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List
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Component	State or local regulations
4-Methoxyphenol (MEHQ)(150-76-5)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
n-Butyl methacrylate(97-88-1)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

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NFPA health hazard	: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.	
NFPA fire hazard	: 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.	
NFPA reactivity	: 2 - Materials that readily undergo violent chemical change at elevated temperatures and pressures.	
Hazard Rating		
Health	: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given	
Flammability	: 2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II IIIA)	
Physical	: 2 Moderate Hazard - Materials that are unstable and may undergo violent chemical changes at normal temperature and pressure with low risk for explosion. Materials may react violently with water or form peroxides upon exposure to air.	

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