

# N-BUTYL METHACRYLATE FOR SYNTHESIS MSDS

CAS-No.: 97-88-1 MSDS



## MATERIAL SAFETY DATA SHEET (MSDS)

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance

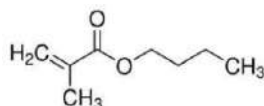
EC Index-No. : 607-033-00-5

EC-No. : 202-615-1

CAS-No. : 97-88-1

Product code : B-00579

Chemical structure :



#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Bio-Chem Chemicals

5455, Nicholson Road Science Market,

Ambala Cantt. 133001 Haryana (India)

+91-82952 41953

[info@biofinechemical.com](mailto:info@biofinechemical.com) - [www.biofinechemical.com](http://www.biofinechemical.com)

#### 1.4. Emergency telephone number

Emergency number : +91 99921 51495 (10.00am - 06.30pm) (Office Hours)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, H226

Category 3

Serious eye damage/eye H319

irritation, Category 2

Skin corrosion/irritation, H315

Category 2

Specific target organ H335

toxicity — Single

exposure, Category 3,

Respiratory tract irritation

Skin sensitisation, H317

Category 1

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Full text of H statements : see section 16

### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xi; R36/37/38

R43

R10

Full text of R-phrases: see section 16

### Adverse physicochemical, human health and environmental effects

No additional information available

## 2.2. Label elements

### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H226 - Flammable liquid and vapour.  
H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
H335 - May cause respiratory irritation.

Precautionary statements (CLP) :

P261 - Avoid breathing vapours, dust, fume, gas.  
P280 - Wear protective gloves, protective clothing, eye protection, face protection.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

## 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

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CAS-No. : 97-88-1

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Full text of R- and H-statements: see section 16

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### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
- First-aid measures after skin contact : Wash with plenty of water/... Wash contaminated clothing before reuse. 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. Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth. Do not induce vomiting.

### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/effects after inhalation : May cause an allergic skin reaction. May cause respiratory irritation.
- Symptoms/effects after skin contact : Causes skin irritation.
- Symptoms/effects after eye contact : Causes serious eye irritation.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Carbon dioxide. Dry powder. Foam. Water spray.
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Flammable liquid and vapour.
- Explosion hazard : May form flammable/explosive vapour-air mixture.

### 5.3. Advice for firefighters

- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

#### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Use personal protective equipment as required.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers.

### 6.4. Reference to other sections

No additional information available

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
- Precautions for safe handling : Do not breathe vapours. Take precautionary measures against static discharge. Use only non-sparking tools. Keep away from sources of ignition - No smoking. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.
- Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment.
- Storage conditions : Keep container tightly closed. Store in a well-ventilated place. Keep container tightly closed.
- Incompatible materials : Heat sources.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

- Hand protection : Protective gloves
- Eye protection : Chemical goggles or safety glasses
- Skin and body protection : Wear suitable protective clothing
- Respiratory protection : [In case of inadequate ventilation] wear respiratory protection.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Molecular mass : 142.2 g/mol
- Colour : Clear Colorless.
- Odour : characteristic odor of esters.
- Odour threshold : No data available
- pH : No data available
- Relative evaporation rate (butylacetate=1) : No data available
- Melting point : -75 °C
- Freezing point : No data available
- Boiling point : 162 - 165 °C

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Flash point	: 52.2 °C
Auto-ignition temperature	: 562 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable Flammable liquid and vapour.
Vapour pressure	: 0.7 kPa (at 20°C)
Relative vapour density at 20 °C	: 4.8
Relative density	: 0.8936
Density	: 0.8936 g/cm <sup>3</sup>
Solubility	: Water: 0.2 g/l
Log Pow	: 3.01
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 0.02 - 0.08 vol %

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Open flame. Heat. Sparks.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

May release flammable gases.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

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Respiratory or skin sensitisation : May cause an allergic skin reaction.  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified

Reproductive toxicity : Not classified  
STOT-single exposure : May cause respiratory irritation.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

### SECTION 12: Ecological information

#### 12.1. Toxicity

No additional information available

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

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Log Pow	3.01

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.  
Additional information : Handle empty containers with care because residual vapours are flammable.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

UN-No. (ADR) : 2227

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UN-No. (IMDG) : 2227  
UN-No. (IATA) : 2227  
UN-No. (ADN) : 2227  
UN-No. (RID) : 2227

### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : N-BUTYL METHACRYLATE, STABILIZED  
Proper Shipping Name (IMDG) : n-BUTYL METHACRYLATE, STABILIZED  
Proper Shipping Name (IATA) : n-Butyl methacrylate, stabilized  
Proper Shipping Name (ADN) : N-BUTYL METHACRYLATE, STABILIZED  
Proper Shipping Name (RID) : n-BUTYL METHACRYLATE, STABILIZED  
Transport document description (ADR) : UN 2227 N-BUTYL METHACRYLATE, STABILIZED, 3, III, (D/E)  
Transport document description (IMDG) : UN 2227 n-BUTYL METHACRYLATE, STABILIZED, 3, III (41°C c.c.)  
Transport document description (IATA) : UN 2227 n-Butyl methacrylate, stabilized, 3, III  
Transport document description (ADN) : UN 2227 N-BUTYL METHACRYLATE, STABILIZED, 3, III  
Transport document description (RID) : UN 2227 n-BUTYL METHACRYLATE, STABILIZED, 3, III

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR) : 3  
Danger labels (ADR) : 3



#### IMDG

Transport hazard class(es) (IMDG) : 3  
Danger labels (IMDG) : 3



#### IATA

Transport hazard class(es) (IATA) : 3  
Hazard labels (IATA) : 3



#### ADN

Transport hazard class(es) (ADN) : 3  
Danger labels (ADN) : 3



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### RID

Transport hazard class(es) (RID) : 3  
Danger labels (RID) : 3



### 14.4. Packing group

Packing group (ADR) : III  
Packing group (IMDG) : III  
Packing group (IATA) : III  
Packing group (ADN) : III  
Packing group (RID) : III

### 14.5. Environmental hazards

Dangerous for the environment : No  
Marine pollutant : No  
Other information : No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR) : F1  
Special provisions (ADR) : 386  
Limited quantities (ADR) : 5I  
Excepted quantities (ADR) : E1  
Packing instructions (ADR) : P001, IBC03, LP01, R001  
Mixed packing provisions (ADR) : MP19  
Portable tank and bulk container instructions (ADR) : T2  
Portable tank and bulk container special provisions (ADR) : TP1  
Tank code (ADR) : LGBF  
Vehicle for tank carriage : FL  
Transport category (ADR) : 3  
Special provisions for carriage - Packages (ADR) : V8, V12  
Special provisions for carriage - Operation (ADR) : S2, S4  
Hazard identification number (Kemler No.) : 39  
Orange plates :



Tunnel restriction code (ADR) : D/E  
EAC code : 3W  
APP code : A(fl)

#### - Transport by sea

Special provisions (IMDG) : 386  
Packing instructions (IMDG) : P001, LP01  
IBC packing instructions (IMDG) : IBC03



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Tank instructions (IMDG)	: T2
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-D
Stowage category (IMDG)	: C
Stowage and handling (IMDG)	: SW1
Flash point (IMDG)	: 41°C c.c.
Properties and observations (IMDG)	: Colourless liquid. Flashpoint: 41°C c.c. Explosive limits: 2% to 8% Immiscible with water. Irritating to skin, eyes and mucous membranes.
MFAG-No	: 130P

### - Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y344
PCA limited quantity max net quantity (IATA)	: 10L
PCA packing instructions (IATA)	: 355
PCA max net quantity (IATA)	: 60L
CAO packing instructions (IATA)	: 366
CAO max net quantity (IATA)	: 220L
ERG code (IATA)	: 3L

### - Inland waterway transport

Classification code (ADN)	: F1
Special provisions (ADN)	: 386
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 0

### - Rail transport

Classification code (RID)	: F1
Special provisions (RID)	: 386
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T2
Portable tank and bulk container special provisions (RID)	: TP1
Tank codes for RID tanks (RID)	: LGBF
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Colis express (express parcels) (RID)	: CE4
Hazard identification number (RID)	: 39

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

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

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No REACH Annex XVII restrictions

n-BUTYL METHACRYLATE FOR SYNTHESIS is not on the REACH Candidate List

n-BUTYL METHACRYLATE FOR SYNTHESIS is not on the REACH Annex XIV List

### 15.1.2. National regulations

#### Germany

Reference to AwSV : Water hazard class (WGK) 1, low hazard to water (Classification according to AwSV; ID No. 1254)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

#### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

#### Denmark

Class for fire hazard : Class II-1

Store unit : 5 liter

Classification remarks : R10 <H226;H315;H317;H319;H335>; Emergency management guidelines for the storage of flammable liquids must be followed

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

### 15.2. Chemical safety assessment

No additional information available

### SECTION 16: Other information

Full text of R-, H- and EUH-statements:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H226	Flammable liquid and vapour.

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H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
R10	Flammable
R36/37/38	Irritating to eyes, respiratory system and skin
R43	May cause sensitisation by skin contact
Xi	Irritant

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*