

Material Safety Data Sheet

Butyl methacrylate

SDS Record Number: CSSS-TCO-010-113904

Version 1.3

Revision date: 18/03/2015

Printing date: 18/03/2015

1 Identification of the substance and of the company/undertaking

1.1 Product identifier:

Identification on the label/Trade name: Butyl methacrylate
Additional identification: 2-Propenoic acid, 2-methyl-, butyl ester
Identification of the product: CAS# 97-88-1 ; EC# 202-615-1

1.2 Relevant identified uses of the substance and uses advised against:

1.2.1 Identified uses:

Use as a monomer of polymer.

1.2.2 Uses advised against:

Not available.

1.3 Details of the supplier of the safety data sheet:

Supplier(Manufacturer): FuShun AnXin Chemical CO.,LTD
Address: Science & Technology Town, FuShun Economy Development Region, LiaoNing, China
Contact person(E-mail): admin@anxinchem.com.cn
Telephone: +86-24-56706868
Fax: +86-24-56706808

1.4 Emergency telephone Number:

+86-24-56706860

Available outside office hours?

YES



NO



2 Hazards Identification

2.1 Classification of the mixture

The mixture is classified as following according to GHS:

GHS	
Hazard Class	Category
Flammable liquids	Category 3
Serious eye damage/eye irritation	Category 2
Specific target organ toxicity after single exposure	Category 3
Skin corrosion/irritation	Category 2
Skin sensitization	Category 1

2.2 label elements

Hazard Pictograms:



Signal Word(S):

Warning

Hazard Statement:

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

Precautionary Statement Prevention:

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Precautionary Response:	Statement	P243: Take precautionary measures against static discharge. P261: Avoid breathing dust/fume/gas/mist/vapours/spray. P264: Wash hands 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. 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. 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. P312: Call a POISON CENTER or doctor/physician if you feel unwell. P333 + P313: If skin irritation or rash occurs: Get medical advice/attention. P337 + P313: If eye irritation persists: Get medical advice/attention. P362+P364: Take off contaminated clothing and wash before reuse. P370 + P378: In case of fire: Use foam, dry chemical, carbon dioxide for extinction.
Precautionary Storage:	Statement	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.
Precautionary Disposal:	Statement	P501: Dispose of contents/container in according with local regulation.

3 Composition/information on ingredients

Substance/Mixture: Substance

Ingredient(s):

Chemical Name	CAS No.	EC No.	Concentration
Butyl methacrylate	97-88-1	202-615-1	≥99.50 % (w/w)

4 First aid measures

4.1 Description of first aid measures:

Remove soiled, soaked clothing immediately. Medical treatment is necessary if symptoms occur which are obviously caused by skin or eye contact with the product or by inhalation of its vapours.

4.1.1 In case of inhalation:

Move subject to fresh air and keep him calm. See a physician.

4.1.2 In case of skin contact:

Wash off immediately with soap and water. If skin irritation occurs consult a physician.

4.1.3 In case of eyes contact:

Flush eyes thoroughly with a large amount of water and consult a physician.

4.1.4 In case of ingestion:

Do not induce vomiting. Contact a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Causes serious eye irritation. May cause respiratory irritation. Causes skin irritation. May cause an allergic skin reaction.

4.3 Indication of any immediate medical attention and special treatment needed

If skin irritation or rash occurs, get medical advice/attention.

Section 5 Fire-Fighting measures

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5.1 Extinguishing media:

Suitable extinguishing media: Foam, dry chemical, carbon dioxide.

Unsuitable extinguishing media: Water.

5.2 Special hazards arising from the substance or mixture

Flammable liquid and vapour. In case of fire may be liberated: Carbon monoxide and carbon dioxide.

5.3 Advice for fire-fighters:

Wear self-contained breathing apparatus. To avoid contact with skin, keep safety distance and wear suitable protective clothing. Do not allow water used to extinguish fire to enter drains, ground or waterways. Treat runoff as hazardous. Cool exposed containers with water spray, but avoid contact of the substance with water.

Section6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Take care for adequate ventilation. Use personal protective clothing. Keep away sources of ignition. Use breathing apparatus if exposed to vapours/dust/mist/aerosol.

6.2 Environmental Precautions:

Prevent product from getting into drains/surface water/groundwater.

6.3 Methods for Containment and Cleaning up:

Larger quantities: Remove mechanically (by pumping). Use explosion-proof equipment! Smaller quantities and/or residues: Contain with absorbent material (e.g. sand, diatomaceous earth, acid absorbent, universal absorbent or sawdust). Dispose of in accordance with regulations.

6.4 Additional information:

Use only spark proof tools.

Section7 Handling and storage

7.1 Protective for safe handling:

Technical measures: No specific recommendations.

Local and general ventilation: Provide adequate ventilation.

Precautions: Practice good housekeeping. Avoid breathing excessive vapors. Avoid contact with skin and eyes. Wash thoroughly after handling.

Safe handling advice: Do not get this material in contact with eyes. Use personal protection recommended in Section 8 of the SDS.

7.2 Storage:

Technical measures: No specific recommendations.

Suitable storage conditions: Keep only in the original container at a temperature not exceeding 30 °C. Protect from light. Fill the container by approximately 90 % only as oxygen (air) is required for stabilisation. With large storage containers make sure the oxygen (air) supply is sufficient to ensure stability. Can polymerize with intense heat release.

Incompatible materials: Not available.

Safe packaging materials: Not available.

Section8 Exposure control/personal protection

8.1 Control parameters:

8.1.1 Occupational exposure limits:

Not available.

8.1.2 Appropriate engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

8.2 Personal protection :

Eye/face protection Tightly fitting goggles.

Hand protection Wear suitable gloves. Gloves should be replaced regularly, especially after extended contact

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Body protection	with the product. For each work-place a suitable glove type has to be selected.
Respiratory protection	On handling of larger quantities: face mask, chemical-resistant boots and apron. Breathing apparatus in case of high concentrations, short term: filter appliance, filter A.

Section9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Clear Liquid
Colour:	Colourless
Odour:	Ester-like
Odour threshold:	Not available
pH:	Not available
Melting point/range (°C):	-75 °C
Boiling point/range (°C) :	163.5 °C
Flash point (°C) :	46 °C
Evaporation rate:	Not available
Flammability (solid, gas);	Flammable
Ignition temperature (°C) :	Not available
Upper/lower flammability/explosive limits:	Not available Not available
Vapour pressure:	2.7 mbar at 20°C
Vapour density:	Not available
Relative Density(25°C) :	0.896 g/cm ³ at 20°C
Bulk density (kg/m ³) :	Not available
Water solubility (g/l) at 20°C:	0.58% at 25°C
n-Octanol/Water (log Po/w) :	2.83
Auto-ignition temperature:	290 °C at 1013 hPa
Decomposition temperature:	Not available
Viscosity:	1.09 mPa/sec at 20 °C
Explosive properties:	Non explosive
Oxidising properties:	Non oxidising

9.2. Other information:

Fat solubility(solvent– oil to be specified) etc:	Not available
Surface tension:	Not available
Dissociation constant in water(pKa):	Not available
Oxidation-reduction Potential:	Not available
Molecular Formula:	C ₈ H ₁₄ O ₂
Molecular Weight:	141.19

Section10 Stability and reactivity

10.1 Reactivity:

The substance is stable under normal storage and handling conditions.

10.2 Possibility of hazardous reactions:

Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances, and/or heavy metal ions.

10.3 Conditions to avoid:

In compatible materials. The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is exceeded, the product may polymerize with heat evolution.

10.4 Incompatible materials:

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Strong oxidizing agents

10.5 Hazardous decomposition products:

Carbon monoxide, carbon dioxide.

Section 11 Toxicological information

11.1 Toxicokinetics, metabolism and distribution

Non-human toxicological data: For n-BMA the half-life was 7.8 minutes and 99.7 % was removed by first-pass metabolism in the liver.

11.2 Information on toxicological effects

Acute toxicity:

LD50(Oral, Rat): >2000 mg/kg

LD50(Dermal, Rabbit): >2000 mg/kg

LC50(Inhalation, Rat): 29 mg/L

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/irritation: Causes serious eye irritation.

Respiratory or skin sensitization: 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

Toxicity:

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	5.57 mg/L	96h	Fish	OECD 203	N/A	N/A
LC50	32 mg/L	48h	Daphnia	OECD 202	N/A	N/A
EC50	31.2 mg/L	72h	Algae	OECD 201	N/A	N/A

Persistence and degradability: Butyl methacrylate is considered readily biodegradable..

Bioaccumulative potential: A low potential for bioaccumulation.

Mobility in soil: Koc=1480.

Section 13 Disposal considerations

13.1 Waste treatment methods

Waste is hazardous. It must be disposed of in accordance with the regulations after consultation of the competent local authorities and the disposal company in a suitable and licensed facility.

13.2 Product / Packaging disposal:

Contaminated packaging should be emptied optimally and after appropriate professional cleansing may be taken for reuse. Packaging that cannot be cleaned should be disposed of professionally. Uncontaminated packaging may be taken for recycling.

Section 14 Transport information

Land transport (ADR/RID)

Sea transport (IMDG)

Air transport (ICAO/IATA)

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UN-Number:	2227	2227	2227
UN Proper shipping name:	n-BUTYL METHACRYLATE, STABILIZED	n-BUTYL METHACRYLATE, STABILIZED	n-BUTYL METHACRYLATE, STABILIZED
Transport hazard Class:	3	3	3
Packaging group:	III	III	III
Environmental hazards:	No	No	No
Special precautions for user:	See section 2.2	See section 2.2	See section 2.2

Section 15 Regulation information

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

Whether be recorded by other nations chemicals directory :

EINECS: Listed

DSL/NDSL: Listed

TSCA: Listed

KECI: Listed

IECSC: Listed

ENCS: Listed

PICCS: Listed

AICS: Listed

15.2 Downstream users precautions:

Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

16 Other information

16.1 Indication of changes

Version 1.3 Amended by GHS rev 4

16.2 Training instructions:

Not applicable.

16.3 Further information:

This information is based upon the present state of our knowledge. This MSDS has been compiled and is solely intended for this product.

16.4 Notice to reader:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees.

This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.