

**JUNSEI**

Material safety data sheet

1. Product and company identification

Product name : Butyl methacrylate
Name of manufacturer : Junsei Chemical Co., Ltd.
Address : 4-16, 4-Chome, Nihonbashi-Honcho, Chuo-ku Tokyo, 103-0023, JAPAN
Name of section : Quality Assurance Department
Telephone number : +81-48-986-6161
Facsimile number : +81-48-989-2787
Mail address : shiyaku-t@junsei.co.jp

2. Summary of danger and Hazard

GHS classification

Physical and chemical hazard

Flammable liquids : Category 3
Pyrophoric liquids : Out of category

Human health hazard

Acute toxicity(oral) : Out of category
Acute toxicity(dermal)

: Out of category

Acute toxicity(inhalation:dust, mists)

: Out of category

Skin corrosion - Irritation

: Category 2

Serious eye damage - Eye irritation

: Out of category

Skin sensitization : Category 1

Germ cell mutagenicity

: Out of category

Reproductive toxicity

: Out of category

Specific target organ systemic toxicity(single exposure)

: Category 3 (respiratory tract irritation)

Specific target organ systemic toxicity(repeated exposure)

: Category 2

Environmental hazard

Hazardous to the aquatic environment-acute hazard

: Category 2

Hazardous to the aquatic environment-chronic hazard

: Out of category

Pictogram or symbol



Signal word : Warning

Hazard statement : Flammable liquid and vapor
Causes skin irritation
May cause an allergic skin reaction
May cause respiratory irritation
May cause damage to organs (spleen) through prolonged or repeated exposure
Toxic to aquatic life

Cautions

Safety measurements : Keep away from ignition sources such as heat, sparks, or open flame.
Keep containers tightly closed.
Ground container and receiving equipment in case of transport and stirring.
Use explosion-proof apparatus.
Use only non-sparking tools.
Do not breathe dust, mist, and vapor.
Use only in a well-ventilated area.
Avoid release to the environment.
Contaminated work clothing should not be allowed out of the workplace.

Wear appropriate protective gloves, glasses, clothing, face shield, or mask.
Wash protective equipment thoroughly after use.

First-aid measures : If inhaled : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical treatment if you feel unwell.

If on skin : Remove contaminated clothing and the substance. Get medical treatment, if you feel unwell.
Get medical treatment, if you feel unwell.

Storage : Tightly container closed and store in a well-ventilated area.
Store locked up.

Disposal : Dispose of contents and containers appropriately in accordance with related regulations.

3. Composition/Information on ingredients

Substance/Mixture : Substance

Chemical name or commercial name

: n-Butyl methacrylate

Ingredients and composition

: n-Butyl methacrylate min. 98.0%, add 2,4-dimethyl-6-tert-butylphenol as an inhibitor

Chemical formula

: n-Butyl methacrylate $\text{CH}_2=\text{C}(\text{CH}_3)\text{COOCH}_2(\text{CH}_2)_2\text{CH}_3$
2,4-Dimethyl-6-tert-butylphenol $\text{C}_6\text{H}_2\text{OH}(\text{CH}_3)_2\text{C}(\text{CH}_3)_3$

CAS No. : n-Butyl methacrylate 97-88-1
2,4-Dimethyl-6-tert-butylphenol 1879-09-0
TSCA Inventory : Registered
EINECS No. : 2026151
Dangerous and hazardous ingredients
: n-Butyl methacrylate

4. First aid measures

Inhalation : Remove the victim to fresh air, and make him blow his nose and gargle.
Skin contact : Wash the affected areas under running water.
Eye contact : Wash the affected areas under running water for at least 15 minutes.
If necessary, get medical treatment.
Ingestion : Give the victim water or salt water and make him vomit. Get medical attention.
Protection for first aid person : Savers wear proper protective equipment like rubber gloves, goggles.

5. Fire fighting measures

Extinguishing media : Dry chemical powder, carbon dioxide, dry sand, foam
Prohibited extinguishing media : Water spray
Particular fire fighting : Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.
Dry chemical powder, carbon dioxide or dry sand should be used for small fires. Foam extinguisher is effective for a large scale fire.
Protection for firefighters : Wear breathing apparatus.

6. Accidental release measures

Cautions for personnel : Wear proper equipment and avoid contact with skin and inhalation of vapor. Keep personnel removed from and upwind of fire. Shut off all sources of ignition. Keep away personnel except for authorized ones from spillage area by stretching ropes.
Cautions for environment : Attention should be given not to cause damage to the environment by flowing of spillage to rivers. In case of the dilution of copious water, do not cause damage to the environment by untreated wastewater.
Removal measure : Absorb spill with inert material (e.g., diatomaceous earth, sand) and flush residual area with copious amounts of water.
Prevention of second accident : Remove nearby sources of ignition and prepare extinguishing media.

7. Cautions of handling and storage

Handling
Engineering measures : Wear proper equipment not to contact with skin or inhale the vapor.
Fire is strictly prohibited.
Ventilate well at working places.
Cautions for safety handling

Cautions : Use with an enclosed system or a local exhaust ventilation.
: Do not contact with oxidizing substances.

Storage

Adequate storage condition

: Store in a dark, cool place and tightly closed.

Safety adequate container materials

: Glass, fluorine resin, stainless steel

Do not use vinyl chloride resin, acrylic resin, polystyrene etc.

8. Exposure control/Personal protection

Engineering measures : Use only with adequate ventilation and in closed systems.

Control parameters

ACGIH(2009) : Not established

Protective equipment

Respiration protective equipment

: Chemical cartridge respirator with an organic vapor cartage or airline respirator

Hands protective equipment

: Impervious protective gloves

Eyes protective equipment

: Safety goggles

Skin and body protective equipment

: Protective clothing, protective boots

9. Physical and chemical properties

Appearance : Liquid

Color : Colorless

Odor : Aromatic odor

Boiling point : 163.5°C

Melting point : -60°C

Flash point : 51°C

Auto-ignition point : 290°C

Explosion characteristics

Explosion limit : upper : 8.0vol% lower : 2.0vol%

Vapor pressure : 2.7hPa (20°C)

Vapor density : 4.9

Specific gravity : 0.896g/ml (20°C)

Solubility

Solubility in solvents : Water : 0.04% (20°C)

Soluble in many kinds of organic solvents

log Pow : (void)

10. Stability and reactivity

Stability : Cause polymerization by peroxides or oxidizing substances.

Reactivity : May react with oxidizing substances.

Incompatible conditions : Light, heat

Incompatible materials : Oxidizing substances

Hazardous decomposition products

: Carbon monoxide

11. Toxicological information

Acute toxicity : Oral : Out of category

Dermal : Out of category

Inhalation(vapor) : Not possible to classify because of insufficient data.

Inhalation(dust, mist) : Out of category

rat oral LD50=16g/kg

mouse oral LD50=12900mg/kg

rat inhalation LC50=4910ppm/4H

rat skin LD50=(void)

Skin corrosiveness : Causes skin irritation(category 2)

Based on evidence of irritation observed in rabbit skin irritation tests.

Irritation to skin, eyes : Out of category

-(Empty)-

Respiratory sensitization or Skin sensitization

: Respiratory sensitization : Not possible to classify because of insufficient data.

May cause an allergic skin reaction(category 1)

(void)

Mutagenicity : Out of category

Negative at body cell in vivo mutagenicity test (small nuclei test)

Carcinogenic effects : Not possible to classify because of insufficient data

Effects on the reproductive system

: Out of category

(void)

Specific target organ systemic toxicity single exposure

: May cause respiratory irritation(category 3)

(void)

Specific target organ systemic toxicity repeated exposure

: May cause damage to organs (spleen) through prolonged or repeated exposure(category 2)

(void)

Aspiration hazard

: Not possible to classify because of insufficient data.

12. Ecological information

Ecotoxicity

Fish toxicity

: Toxic to aquatic life(category 2)

Chronic aquatic toxicity : Out of category

LC0/96H:1000-100mg/l

Redidualbility and degradability

: High biodegradability
(void) by BOD

Ecoredidualbility : Low or no residualibility in fish or shells

13. Disposal consideration

Residual disposal : Burn in a chemical incinerator equipped with an afterburner and a scrubber. Or entrust approved waste disposal companies with the disposal.

Containers : In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

UN class : Class 3(Flammable liquids) P. G. III

UN number : 2227

Marine regulation information

UN No. : 2227

Proper shipping name : BUTYL METHACRYLATE, STABILIZED

Class : 3

Sub risk : -

Packing group : III

Marine pollutant : Not applicable

Aviation regulation information

UN No. : 2227

Proper shipping name : n-Butyl methacrylate, stabilized

Class : 3

Sub risk : -

Packing group : III

15. Regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other information

References

Dictionary of Organic Compounds, The society of Synthetic Organic Chemistry, Kodansha Ltd.(1985)

Dangerous Properties of Industrial Materials, 6th ed. N. I. Sax Van Nostrand Reinhold Company(1984)

Handbook of Dangerous Substances Springer-Verlag Tokyo(1991)

Handbook of 15710 Chemical Products, The Chemical Daily Co. (2010)

The information contained herein is based on several references and the present state of our knowledge. However the MSDS does not always cover all information about the product, handle the product carefully. The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements. The information herein is only provision of information, and it does not represent a guarantee the properties of the product.