# Chemical Safety Data Sheet MSDS / SDS

# tert-Butyl acrylate

Revision Date: 2025-09-27 Revision Number: 1

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

### **Product identifier**

Product name : tert-Butyl acrylate
CBnumber : CB9766596
CAS : 1663-39-4
EINECS Number : 216-768-7

Synonyms : TBA,tert-butyl acrylate

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.

Uses advised against : none

### **Company Identification**

Company : Chemicalbook

Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing

Telephone : 010-86108875

# SECTION 2: Hazards identification

# Classification of the substance or mixture

Flammable liquids, Category 2

Acute toxicity - Category 4, Oral

Acute toxicity - Category 4, Dermal

Skin irritation, Category 2

Skin sensitization, Category 1

Acute toxicity - Category 4, Inhalation

Specific target organ toxicity - single exposure, Category 3

Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 2

# Label elements

### Pictogram(s)

Signal word Danger

# Hazard statement(s)

H225 Highly Flammable liquid and vapour

. .

H302 Harmful if swallowed

H312 Harmful in contact with skin

H315 Causes skin irritation

H317 May cause an allergic skin reaction

H319 Causes serious eye irritation

H331 Toxic if inhaled

H332 Harmful if inhaled

H335 May cause respiratory irritation

H411 Toxic to aquatic life with long lasting effects

H412 Harmful to aquatic life with long lasting effects

### Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

P264 Wash skin thouroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P311 Call a POISON CENTER or doctor/physician.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

P370+P378 In case of fire: Use ... for extinction.

P405 Store locked up.

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

P501 Dispose of contents/container to.....

### Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

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.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

P264 Wash ... thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P272 Contaminated work clothing should not be allowed out of the workplace.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

### Response

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].

P370+P378 In case of fire: Use ... to extinguish.

P301+P317 IF SWALLOWED: Get medical help.

P330 Rinse mouth.

P302+P352 IF ON SKIN: Wash with plenty of water/...

P317 Get medical help.

P321 Specific treatment (see ... on this label).

P362+P364 Take off contaminated clothing and wash it before reuse.

P332+P317 If skin irritation occurs: Get medical help.

P333+P317 If skin irritation or rash occurs: Get medical help.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P319 Get medical help if you feel unwell.

P391 Collect spillage.

### Storage

P403+P235 Store in a well-ventilated place. Keep cool.

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

P405 Store locked up.

### **Disposal**

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

### Other hazards

no data available

# SECTION 3: Composition/information on ingredients

### **Substance**

Product name : tert-Butyl acrylate

Synonyms : TBA,tert-butyl acrylate

CAS : 1663-39-4
EC number : 216-768-7
MF : C7H12O2
MW : 128.17

# SECTION 4: First aid measures

### **Description of first aid measures**

### If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately.

Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

### Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

### Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

#### Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

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

no data available

# Indication of any immediate medical attention and special treatment needed

no data available

# **SECTION 5: Firefighting measures**

### **Extinguishing media**

Use dry chemical, carbon dioxide or alcohol-resistant foam.

### **Specific Hazards Arising from the Chemical**

no data available

### Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

# **NFPA 704**

3 0

Short exposure could cause serious temporary or moderate residual injury (e.g. liquid hydrogen, sulfuric acid, calcium hypochlorite, hexafluorosilicic acid)

Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature

FIRE 3 conditions . Liquids having a flash point below 22.8 °C (73 °F) and having a boiling point at or above 37.8 °C (100 °F) or having a flash point between 22.8 and 37.8 °C (73 and 100 °F). (e.g. gasoline, acetone)

REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, N2)

SPEC.
HAZ.

# SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### **Environmental precautions**

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

### Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

# SECTION 7: Handling and storage

### Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### Conditions for safe storage, including any incompatibilities

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

# SECTION 8: Exposure controls/personal protection

### **Control parameters**

### Occupational Exposure limit values

Component	tert-butyl acryla	tert-butyl acrylate				
CAS No.	1663-39-4	1663-39-4				
	Limit value - E	Eight hours	Limit value - S	Limit value - Short term		
	ррт	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>		
Finland	2	11	10 (1)	53 (1)		
	Remarks	Remarks				
Finland	(1) 15 minutes	(1) 15 minutes average value				

### **Biological limit values**

no data available

### **Exposure controls**

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the riskelimination area.

### Individual protection measures

### Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

### Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

#### Thermal hazards

no data available

# SECTION 9: Physical and chemical properties

# Information on basic physicochemical properties

Physical state	Liquid		
Colour	Clear		
Odour	no data available		
Melting point/freezing point	-69 °C.		
Boiling point or initial boiling point and	119.2 °C. Atm. press.:1 013.25 hPa.		
boiling range			
Flammability	no data available		
Lower and upper explosion	no data available		
limit/flammability limit			
Flash point	14 °C. Atm. press.:1 013.25 hPa.		
Auto-ignition temperature	400 °C. Atm. press.:1 013.25 hPa.		
Decomposition temperature	no data available		
рН	no data available		
Kinematic viscosity	dynamic viscosity (in mPa s) = > 0.5 - < 1. Temperature:20°C.		
Solubility	Insoluble in water		
Partition coefficient n-octanol/water	log Pow = 2.32. Temperature:25 °C. Remarks:Study was performed without adjustment of pH value.		
Vapour pressure	20 hPa. Temperature:23.4 °C.		
Density and/or relative density	0.87 g/cm3. Temperature:30 °C.;0.89 g/cm3. Temperature:10 °C.		
Relative vapour density	no data available		
Particle characteristics	no data available		

# SECTION 10: Stability and reactivity

# Reactivity

no data available

# **Chemical stability**

no data available

# Possibility of hazardous reactions

no data available

# **Conditions to avoid**

no data available

### Incompatible materials

no data available

# Hazardous decomposition products

no data available

# **SECTION 11: Toxicological information**

### **Acute toxicity**

- Oral: LD50 rat (male/female) ca. 1 047 mg/kg bw. Remarks:Original data: ca 1200 µL/kg bw.
- Inhalation: LC50 rat (male/female) 7.01 mg/L air (analytical).
- Dermal: LD50 rabbit (male/female) ca. 2 000 mg/kg bw.

### Skin corrosion/irritation

no data available

# Serious eye damage/irritation

no data available

# Respiratory or skin sensitization

no data available

# Germ cell mutagenicity

no data available

# Carcinogenicity

no data available

### Reproductive toxicity

no data available

# STOT-single exposure

no data available

# STOT-repeated exposure

no data available

# **Aspiration hazard**

no data available

# SECTION 12: Ecological information

### **Toxicity**

Toxicity to fish: LC50 - Leuciscus idus - 2.37 mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna - 8.74 mg/L - 48 h.

Toxicity to algae: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - 14.6 mg/L - 72 h.

Toxicity to microorganisms: EC20 - activated sludge, domestic - ca. 950 mg/L - 30 min. Remarks: Respiration rate.

### Persistence and degradability

no data available

### Bioaccumulative potential

no data available

### Mobility in soil

no data available

### Other adverse effects

no data available

# **SECTION 13: Disposal considerations**

### **Disposal methods**

### **Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

# **SECTION 14: Transport information**

# **UN Number**

ADR/RID: UN3272 (For reference only, please check.)

IMDG: UN3272 (For reference only, please check.)

IATA: UN3272 (For reference only, please check.)

### **UN Proper Shipping Name**

ADR/RID: ESTERS, N.O.S. (For reference only, please check.)

IMDG: ESTERS, N.O.S. (For reference only, please check.)

### Transport hazard class(es)

ADR/RID: 3 (For reference only, please check.)

IMDG: 3 (For reference only, please check.)

IATA: 3 (For reference only, please check.)

# Packing group, if applicable

ADR/RID: II (For reference only, please check.)

IMDG: II (For reference only, please check.)

IATA: II (For reference only, please check.)

### **Environmental hazards**

ADR/RID: Yes

IMDG: Yes

### Special precautions for user

no data available

### Transport in bulk according to IMO instruments

no data available

# **SECTION 15: Regulatory information**

# Safety, health and environmental regulations specific for the product in question

**European Inventory of Existing Commercial Chemical Substances (EINECS)** 

Listed.

**EC Inventory** 

Listed.

United States Toxic Substances Control Act (TSCA) Inventory

Listed.

China Catalog of Hazardous chemicals 2015

Listed.

New Zealand Inventory of Chemicals (NZIoC)

Listed.

**PICCS** 

Listed.

**Vietnam National Chemical Inventory** 

Listed.

**IECSC** 

Listed.

Korea Existing Chemicals List (KECL)

Listed.

# SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### References

IPCS - The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home

HSDB - Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm

IARC - International Agency for Research on Cancer, website: http://www.iarc.fr/

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request\_locale=en

CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple

ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg

Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp

ECHA - European Chemicals Agency, website: https://echa.europa.eu/

### Disclaimer:

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