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Material Safety Data Sheet

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tert-Butyl acrylate

Section 1: Chemical Product and Company Identification

Product Name: tert-Butyl acrylate

CAS#: 1663-39-4

Synonym: 2-Propenoic acid, 1,1-dimethylethyl ester;2-Propenoicacid,1,1-dimethylethylester;tert-butylpropenoate;ACRYLIC ACID TERT-BUTYL ESTER;TERTIARY-BUTYL ACRYLATE;TERT-BUTYL ACRYLATE;TBA;T-BUTYL ACRYLATE

Chemical Formula: C7H12O2

Contact Information:

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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
tert-Butyl acrylate	1663-39-4	100

Formula : C7H12O2

Molecular Weight : 128,17 g/mol

Section 3: Hazards Identification

Pictogram 

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.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing.

Supplemental Hazard none
Statements

According to European Directive 67/548/EEC as amended.

Hazard symbol(s) 

R-phrase(s)
R11 Highly flammable.
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R37/38 Irritating to respiratory system and skin.
R43 May cause sensitization by skin contact.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s)
S16 Keep away from sources of ignition - No smoking.
S25 Avoid contact with eyes.
S37 Wear suitable gloves.
S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

Section 4: First Aid Measures

Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

Cough, Shortness of breath, Headache, Nausea, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Indication of any immediate medical attention and special treatment needed

no data available

Section 5: Fire and Explosion Data

Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

Special hazards arising from the substance or mixture

Carbon oxides

Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary

Further information

Use water spray to cool unopened containers.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

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

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations

Section 7: Handling and Storage

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic Charge.

Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Store under inert gas.

Section 8: Exposure Controls/Personal Protection

Control parameters

Components with workplace control parameters

Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. 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.

Immersion protection

Material: butyl-rubber

Minimum layer thickness: 0,3 mm

Break through time: > 480 min

Material tested:Butoject® (Aldrich Z677647, Size M)

Splash protection

Material: butyl-rubber

Minimum layer thickness: 0,3 mm

Break through time: > 30 min

Material tested:Butoject® (Aldrich Z677647, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 873000, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must

be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
Body Protection
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Section 9: Physical and Chemical Properties

Information on basic physical and chemical properties
a) Appearance Form: clear, liquid Colour: colourless
b) Odour no data available
c) Odour Threshold no data available
d) pH no data available
e) Melting point/freezing point Melting point/range: -69 ° C
f) Initial boiling point and boiling range 61 - 63 ° C at 80 hPa - lit.
g) Flash point 17 ° C - closed cup
h) Evaporation rate no data available
i) Flammability (solid, gas) no data available
j) Upper/lower flammability or explosive limits
Upper explosion limit: 7 %(V)
Lower explosion limit: 0,7 %(V)
k) Vapour pressure no data available
l) Vapour density no data available
m) Relative density 0,875 g/mL at 25 ° C
n) Water solubility ca.2 g/l
o) Partition coefficient: noctanol/water log Pow: 2,32
p) Autoignition temperature no data available
q) Decomposition temperature no data available
r) Viscosity no data available
s) Explosive properties no data available
t) Oxidizing properties no data available

Section 10: Stability and Reactivity Data

Reactivity no data available
Chemical stability no data available
Contains the following stabiliser(s):
Mequinol (0,01 %)

Possibility of hazardous reactions no data available

Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Other decomposition products - no data available

Section 11: Toxicological Information

Information on toxicological effects

Acute toxicity

LD50 Oral - rat - 1.056 mg/kg

LD50 Dermal - rabbit - 2.000 mg/kg

Skin corrosion/irritation

Skin - rabbit - Skin irritation

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

May cause allergic skin reaction.

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation Toxic if inhaled. Causes respiratory tract irritation.

Ingestion Harmful if swallowed.

Skin Harmful if absorbed through skin. Causes skin irritation.

Signs and Symptoms of Exposure

Cough, Shortness of breath, Headache, Nausea, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information

RTECS: Not available

Section 12: Ecological Information

Toxicity

Toxicity to fish

LC50 - Leuciscus idus (Golden orfe) - 46 - 68 mg/l - 96,0 h

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 57 mg/l - 48 h

Toxicity to algae

EC50 - Desmodesmus subspicatus (green algae) - 280 mg/l - 72 h

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Results of PBT and vPvB assessment

no data available

Other adverse effects

Toxic to aquatic life with long lasting effects

Section 13: Disposal Considerations

Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

Section 14: Transport Information

UN number

ADR/RID: 1993 IMDG: 1993 IATA: 1993

UN proper shipping name

ADR/RID: FLAMMABLE LIQUID, N.O.S. (tert-Butyl acrylate)

IMDG: FLAMMABLE LIQUID, N.O.S. (tert-Butyl acrylate)

IATA: Flammable liquid, n.o.s. (tert-Butyl acrylate)

Transport hazard class(es)

ADR/RID: 3 IMDG: 3 IATA: 3

Packaging group

ADR/RID: II IMDG: II IATA: II

Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

Section 15: Other Regulatory Information

REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

no data available

Chemical Safety Assessment

no data available

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2012 08:41 PM

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