

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

### 1.1 Product identifier

<b>Trade name</b>	<b><i>tert-Butyl acrylate</i></b>
<b>Stock number:</b>	L17169
<b>CAS Number:</b>	1663-39-4
<b>EC number:</b>	216-768-7
<b>Index number:</b>	607-245-00-8
<b>1.2 Relevant identified uses of the substance or mixture and uses advised against.</b>	
<b>Identified use:</b>	SU24 Scientific research and development

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

<b>Manufacturer/Supplier:</b>	Alfa Aesar GmbH & Co.KG A Johnson Matthey Company Zeppelinstr. 7b 76185 Karlsruhe / Germany Tel: +49 (0) 721 84007 280 Fax: +49 (0) 721 84007 300 Email: tech@alfa.com www.alfa.com
<b>Informing department:</b>	Product safety Tel + +049 (0) 7275 988687-0
<b>1.4 Emergency telephone number:</b>	Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number) Poison Information Center Mainz www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240


## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

 GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.


 GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.


 GHS07

Acute Tox. 4	H302 Harmful if swallowed.
Acute Tox. 4	H312 Harmful in contact with skin.
Acute Tox. 4	H332 Harmful if inhaled.
Skin Irrit. 2	H315 Causes skin irritation.
Skin Sens. 1	H317 May cause an allergic skin reaction.
STOT SE 3	H335 May cause respiratory irritation.

### Classification according to Directive 67/548/EEC or Directive 1999/45/EC

 Xn; Harmful

R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.

 Xi; Irritant


R37/38: Irritating to respiratory system and skin.

 Xi; Sensitising

R43: May cause sensitisation by skin contact.

 F; Highly flammable

R11: Highly flammable.

 N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### Information concerning particular hazards for human and environment:

Not applicable

### Other hazards that do not result in classification

No information known.

### 2.2 Label elements

#### Labelling according to Regulation (EC) No 1272/2008

##### Hazard pictograms

The substance is classified and labelled according to the CLP regulation.



GHS02 GHS07 GHS09

##### Signal word

##### Hazard statements

Danger  
H225 Highly flammable liquid and vapour.  
H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H332 Harmful if inhaled.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H335 May cause respiratory irritation.  
H411 Toxic to aquatic life with long lasting effects.

##### Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

### 2.3 Other hazards

#### Results of PBT and vPvB assessment

PBT: Not applicable.

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vPvB: Not applicable.

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**SECTION 3: Composition/information on ingredients**

3.1 Substances  
CAS# Designation: 1663-39-4 tert-Butyl acrylate  
Identification number(s):  
EC number: 216-768-7  
Index number: 607-245-00-8

**SECTION 4: First aid measures**

4.1 Description of first aid measures  
After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.  
After skin contact Seek immediate medical advice. Instantly wash with water and soap and rinse thoroughly.  
After eye contact Seek immediate medical advice.  
After swallowing Rinse opened eye for several minutes under running water. Then consult doctor.  
4.2 Most important symptoms and effects, both acute and delayed Seek medical treatment.  
4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

**SECTION 5: Firefighting measures**

5.1 Extinguishing media  
Suitable extinguishing agents CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.  
5.2 Special hazards arising from the substance or mixture  
If this product is involved in a fire, the following can be released:  
Carbon monoxide and carbon dioxide  
5.3 Advice for firefighters  
Protective equipment: Wear self-contained breathing apparatus.  
Wear full protective suit.

**SECTION 6: Accidental release measures**

6.1 Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation  
Keep away from ignition sources  
6.2 Environmental precautions: Do not allow product to reach sewage system or water bodies.  
Do not allow to enter the ground/soil.  
6.3 Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose of contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Keep away from ignition sources.  
Prevention of secondary hazards: See Section 7 for information on safe handling  
6.4 Reference to other sections See section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

**SECTION 7: Handling and storage**

7.1 Precautions for safe handling Keep containers tightly sealed.  
Store in cool, dry place in tightly closed containers.  
Ensure good ventilation/exhaustion at the workplace.  
Information about protection against explosions and fires: Protect against electrostatic charges.  
Fumes can combine with air to form an explosive mixture.  
Keep ignition sources away - Do not smoke.  
7.2 Conditions for safe storage, including any incompatibilities  
Storage  
Requirements to be met by storerooms and containers: Store in cool location.  
Information about storage in one common storage facility: Store away from oxidising agents.  
Further information about storage conditions: Keep container tightly sealed.  
Store in cool, dry conditions in well sealed containers.  
7.3 Specific end use(s) No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

8.1 Control parameters

**Components with critical values that require monitoring at the workplace:**

1663-39-4 tert-Butyl acrylate (100,0%)

MAK (Germany) |vgl.Abschn.IV

Additional information: No data

8.2 Exposure controls

Personal protective equipment  
General protective and hygienic measures The usual precautionary measures should be adhered to in handling the chemicals.  
Keep away from foodstuffs, beverages and food.  
Instantly remove any soiled and impregnated garments.  
Wash hands during breaks and at the end of the work.  
Avoid contact with the eyes and skin.  
Maintain an ergonomically appropriate working environment.  
Breathing equipment: Use breathing protection with high concentrations.  
Protection of hands: Check protective gloves prior to each use for their proper condition.  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.  
Material of gloves Impervious gloves  
Penetration time of glove material Not determined  
Eye protection: Safety glasses  
Face protection

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Body protection: Protective work clothing.

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**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

**General Information**

**Appearance:**

Form: Liquid  
Colour: Colourless  
Smell: Not determined  
Odour threshold: Not determined.

pH-value: Not determined.

**Change in condition**

Melting point/Melting range: ca -69 °C  
Boiling point/Boiling range: 121 °C  
Sublimation temperature / start: Not determined

Flash point: 11 °C  
Inflammability (solid, gaseous): Not determined.  
Ignition temperature: Not determined  
Decomposition temperature: Not determined  
Self-inflammability: Not determined.

**Danger of explosion:** Product is not explosive. However, formation of explosive air/steam mixtures is possible.

**Critical values for explosion:**

Lower: Not determined  
Upper: Not determined

Steam pressure: Not determined

Density at 20 °C: 0,883 g/cm<sup>3</sup>

Relative density: Not determined.

Vapour density: Not determined.

Evaporation rate: Not determined.

**Solubility in / Miscibility with**

Water: Not determined

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

dynamic: Not determined.

kinematic: Not determined.

**9.2 Other information** No further relevant information available.

**SECTION 10: Stability and reactivity**

**10.1 Reactivity** No information known.  
**10.2 Chemical stability** Stable under recommended storage conditions.

**Thermal decomposition / conditions to be avoided:** No decomposition if used and stored according to specifications.

**10.3 Possibility of hazardous reactions** Reacts with strong oxidizing agents

**10.5 Incompatible materials:** Oxidising agents

**10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Acute toxicity:** Harmful if inhaled.  
Harmful in contact with skin.  
Harmful if swallowed.  
Danger by skin resorption.

**LD/LC50 values that are relevant for classification:** No data

**Skin irritation or corrosion:** Causes skin irritation.

**Eye irritation or corrosion:** May cause irritation

**Sensitization:** May cause an allergic skin reaction.

**Germ cell mutagenicity:** No effects known.

**Carcinogenicity:** No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

**Reproductive toxicity:** No effects known.

**Specific target organ system toxicity - repeated exposure:** No effects known.

**Specific target organ system toxicity - single exposure:** May cause respiratory irritation.

**Aspiration hazard:** No effects known.

**Subacute to chronic toxicity:** No effects known.

**Additional toxicological information:** To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

**SECTION 12: Ecological information**

**12.1 Toxicity** No further relevant information available.

**Aquatic toxicity:** No further relevant information available.

**12.2 Persistence and degradability** No further relevant information available.

**12.3 Bioaccumulative potential** No further relevant information available.

**12.4 Mobility in soil** No further relevant information available.

**Additional ecological information:**

**General notes:** Do not allow product to reach ground water, water bodies or sewage system.  
Water hazard class 2 (Self-assessment): hazardous for water.  
Danger to drinking water if even small quantities leak into soil.  
Also poisonous for fish and plankton in water bodies.  
Toxic to aquatic life.  
May cause long lasting harmful effects to aquatic life.  
Avoid transfer into the environment.

**12.5 Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6 Other adverse effects** No further relevant information available.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Recommendation** Hand over to disposers of hazardous waste.  
Must be specially treated under adherence to official regulations.  
Consult state, local or national regulations for proper disposal.



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Uncleaned packagings:  
Recommendation: Disposal must be made according to official regulations.

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**SECTION 14: Transport information**

UN-Number ADR, IMDG, IATA	UN3272
14.2 UN proper shipping name ADR IMDG, IATA	3272 ESTERS, N.O.S. (tert-Butyl acrylate) ESTERS, N.O.S. (tert-Butyl acrylate)
14.3 Transport hazard class(es) ADR 	
Class Label IMDG, IATA	3 (F1) Flammable liquids. 3
	
Class Label	3 Flammable liquids. 3
Packing group ADR, IMDG, IATA	II
14.5 Environmental hazards:	Environmentally hazardous substance, liquid
14.6 Special precautions for user Kemler Number: EMS Number:	Warning: Flammable liquids. 33 F-E,S-D
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
ADR Excepted quantities (EQ): Limited quantities (LQ) Transport category Tunnel restriction code	E2 1L 2 D/E
UN "Model Regulation":	UN3272, ESTERS, N.O.S. (tert-Butyl acrylate), 3, II

**SECTION 15: Regulatory information**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	
Australian Inventory of Chemical Substances	Substance is listed.
Standard for the Uniform Scheduling of Medicines and Poisons	Substance is not listed.
National regulations	
Information about limitation of use:	Employment restrictions concerning young persons must be observed. For use only by technically qualified individuals.
Water hazard class:	Water hazard class 2 (Self-assessment): hazardous for water.
Other regulations, limitations and prohibitive regulations	
ELINCS (European List of Notified Chemical Substances)	Substance is not listed.
Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.	Substance is not listed.
REACH - Pre-registered substances	Substance is listed.
15.2 Chemical safety assessment:	A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement 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 Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS:	Health, Safety and Environmental Department.
Abbreviations and acronyms:	ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonized System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent vPvB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) NTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA) Flam. Liq. 2: Flammable liquids, Hazard Category 2 Acute Tox. 4: Acute toxicity, Hazard Category 4 Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2 Skin Sens. 1: Sensitisation - Skin, Hazard Category 1 STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3 Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2