

## Chemical Safety Data Sheet MSDS / SDS

**Benzyltriethylammonium chloride**

Revision Date:2024-12-21 Revision Number:1

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name : Benzyltriethylammonium chloride  
CBnumber : CB2145040  
CAS : 56-37-1  
EINECS Number : 200-270-1  
Synonyms : TEBAC,TEBA

**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 : 400-158-6606

**SECTION 2: Hazards identification****GHS Label elements, including precautionary statements**

Symbol(GHS)



Signal word

Warning

**Precautionary statements**

P405 Store locked up.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continuerinsing.

P304+P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.

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

P264 Wash skin thoroughly after handling.

P264 Wash hands thoroughly after handling.

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

**Hazard statements**

H335 May cause respiratory irritation

H319 Causes serious eye irritation

H315 Causes skin irritation

H303 May be harmful if swallowed

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## SECTION 3: Composition/information on ingredients

### Substance

Product name : Benzyltriethylammonium chloride  
Synonyms : TEBAC, TEBA  
CAS : 56-37-1  
EC number : 200-270-1  
MF : C<sub>13</sub>H<sub>22</sub>ClN  
MW : 227.77

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## 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. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### Indication of any immediate medical attention and special treatment needed

No data available

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## SECTION 5: Firefighting measures

### 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, Nitrogen oxides (NOx), Hydrogen chloride gas

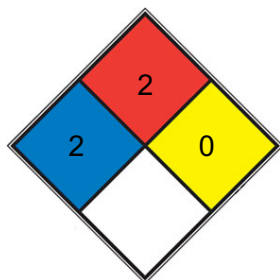
### Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### Further information

No data available

### NFPA 704



HEALTH 2 Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. [diethyl ether](#), ammonium phosphate, iodine)

FIRE 2 Must be moderately heated or exposed to relatively high ambient temperature before ignition can occur and multiple finely divided suspended solids that do not require heating before ignition can occur. Flash point between 37.8 and 93.3 °C (100 and 200 °F). (e.g. diesel fuel, [sulfur](#))

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

SPEC.

HAZ.

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

### Environmental precautions

Do not let product enter drains.

### Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

## Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

## Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. hygroscopic

## Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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# SECTION 8: Exposure controls/personal protection

## control parameter

### Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

## Exposure controls

### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### Personal protective equipment

#### Eye/face protection

Safety glasses with side-shields conforming to EN166 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 Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min

Material tested: Dermatril? (KCL 740 / Aldrich Z677272, Size M)

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min

Material tested: Dermatril? (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, 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 and safety officer 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

Impervious 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

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU

EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Control of environmental exposure

Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Appearance	white crystalline
Odour	No data available
Odour Threshold	No data available d) pH 6,0 - 8,0 at 100 g/l at 20 °C Melting point/freezing point Initial boiling point and boiling range Melting point/range: 190 - 192 °C - dec. 444,8 °C at 1013 hPa Flash point >275 °C - closed cup Evaporation rate No data available Flammability (solid, gas) Upper/lower flammability or explosive limits No data available No data available Vapour pressure No data available Vapour density No data available Relative density No data available Water solubility No data available Partition coefficient: n-octanol/water Autoignition temperature Decomposition temperature No data available No data available 185 °C - Viscosity No data available Explosive properties No data available Oxidizing properties No data available
Melting point/freezing point	Melting point/range: 190 - 192 °C - dec.
Initial boiling point and boiling range	444,8 °C at 1013 hPa
Flash point	>275 °C - closed cup
Evaporation rate	>100°C
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Water solubility	No data available
Partition coefficient: n-octanol/water	H <sub>2</sub> O: 0.1 g/mL, clear
Autoignition temperature	No data available
Decomposition temperature	185 °C -
Viscosity	185°C
Explosive properties	No data available
Oxidizing properties	No data available

### Other safety information

Bulk density 0,55 g/l

## SECTION 10: Stability and reactivity

### Reactivity

No data available

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

No data available

### Incompatible materials

Strong oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas

Other decomposition products - No data available In the event of fire: see section 5

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## SECTION 11: Toxicological information

### Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - 2.219 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity). Gastrointestinal:Changes in structure or function of salivary glands. Skin and

Appendages: Other: Hair.

#### Skin corrosion/irritation

No data available

#### Serious eye damage/eye irritation

No data available

#### Respiratory or skin sensitisation

No data available

#### 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

Inhalation - May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Additional Information**

RTECS: BO8275000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Toxicity**

LD50 orally in Rabbit: 2219 mg/kg

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## SECTION 12: Ecological information

**Toxicity****Toxicity to fish**

LC50 - Pimephales promelas (fathead minnow) - 161 mg/l - 96 h

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**Other adverse effects**

No data available

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## SECTION 13: Disposal considerations

**Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

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## SECTION 14: Transport information

### SECTION 14: Transport information

IATA:

IATA:

UN number

ADR/RID:IMDG:IATA:ADR/RID:IMDG:IATA:

UN number

ADR/RID:IMDG:IATA:ADR/RID:IMDG:IATA:

IATA:IMDG:IATA:

UN number

ADR/RID:IMDG:IATA:

### UN number

ADR/RID: 3295 IMDG: 3295 IATA: 3295

ADR/RID: 1987 IMDG: 1987 IATA: 1987

ADR/RID: FLAMMABLE LIQUID, N.O.S. (1-Bromopropene) IMDG: FLAMMABLE LIQUID, N.O.S. (1-Bromopropene) IATA: Flammable liquid, n.o.s. (1-Bromopropene)

ADR/RID: 3 IMDG: 3 IATA: 3

ADR/RID: 3272 IMDG: 3272 IATA: 3272

ADR/RID: - IMDG: - IATA: -

ADR/RID: 3399 IMDG: 3399 IATA: 3399

ADR/RID: - IMDG: - IATA: -

ADR/RID: 3 (6.1) IMDG: 3 (6.1) IATA: 3 (6.1)

ADR/RID: 1463 IMDG: 1463 IATA: 1463

ADR/RID: 3 IMDG: 3 IATA: 3

### Packaging group

ADR/RID: III IMDG: III IATA: III

ADR/RID: CHROMIUM TRIOXIDE, ANHYDROUS IMDG: CHROMIUM TRIOXIDE, ANHYDROUS IATA: Chromium trioxide, anhydrous

ADR/RID: II IMDG: II IATA: II

ADR/RID: - IMDG: - IATA: -

ADR/RID: ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE (Xylene, Sodium acetylde) IMDG: ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE (Xylene, Sodium acetylde) IATA: Organometallic substance, liquid, water-reactive, flammable (Xylene, Sodium acetylde) Passenger Aircraft: Not permitted for transport

ADR/RID: - IMDG: - IATA: -

ADR/RID: ESTERS, N.O.S. (1,1,1-Trimethoxypentane) IMDG: ESTERS, N.O.S. (1,1,1-Trimethoxypentane) IATA: Esters, n.o.s. (1,1,1-Trimethoxypentane)

ADR/RID: II IMDG: II IATA: II

ADR/RID: 3 IMDG: 3 IATA: 3

ADR/RID: ALCOHOLS, N.O.S. (4-Methylpentan-1-ol) IMDG: ALCOHOLS, N.O.S. (4-Methylpentan-1-ol) IATA: Alcohols, n.o.s. (4-Methylpentan-1-ol)

ADR/RID: HYDROCARBONS, LIQUID, N.O.S. (1,9-decadiene) IMDG: HYDROCARBONS, LIQUID, N.O.S. (1,9-decadiene) IATA: Hydrocarbons,



liquid, n.o.s.

### **Environmental hazards**

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

ADR/RID: 5.1 (6.1, 8) IMDG: 5.1 (6.1, 8) IATA: 5.1 (6.1)(8)

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

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

ADR/RID: 3 IMDG: 3 IATA: 3

ADR/RID: 3 IMDG: 3 IATA: 3

ADR/RID: II IMDG: II IATA: II

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

ADR/RID: 3 IMDG: 3 IATA: 3

ADR/RID: no IMDG Marine pollutant: no IATA: no Special precautions for user Further information Not classified as dangerous in the meaning of transport regulations.

ADR/RID: 4.3 (3) IMDG: 4.3 (3) IATA: 4.3 (3)

### **Special precautions for user**

No data available

ADR/RID: II IMDG: II IATA: II

No data available

ADR/RID: I IMDG: I IATA: I

ADR/RID: III IMDG: III IATA: III

No data available

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

ADR/RID: III IMDG: III IATA: III

ADR/RID: III IMDG: III IATA: III

No data available

### **Environmental hazards**

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

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

No data available

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

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

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

### **Special precautions for user**

No data available

No data available

No data available

No data available

No data available

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## **SECTION 15: Regulatory information**

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

### Regulations on the Safety Management of Hazardous Chemicals

China Catalog of Hazardous chemicals 2015:Not Listed. website: <https://www.mem.gov.cn/>

### Measures for Environmental Management of New Chemical Substances

Korea Existing Chemicals List (KECL):Listed. website: <http://ncis.nier.go.kr>

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: <https://echa.europa.eu/>

EC Inventory:Listed.

New Zealand Inventory of Chemicals (NZIoC):Listed. website: <https://www.epa.govt.nz/>

Vietnam National Chemical Inventory:Listed. website: <https://chemicaldata.gov.vn/>

United States Toxic Substances Control Act (TSCA) Inventory:Listed. website: <https://www.epa.gov/>

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Listed. website: <https://emb.gov.ph/>

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website: <https://www.mee.gov.cn/>

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## 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

【1】 CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

【2】 ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

【3】 ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

【4】 eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:  
[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

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

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

【7】 HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

【8】 IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

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

【10】 Sigma-Aldrich, website: <https://www.sigmaaldrich.com/>

### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of

this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.