

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 18 Nov 2025

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product name:

Benzalkonium chloride

1.1. Catalog No.:

674492

1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical
uses: R&D

1.3. Uses advised against:

HPC Standards GmbH
An der Laakenwiese 7

04838 Jesewitz
Deutschland

Tel. +49 34241 54 990
Fax. +49 34241 54 9999
contact@hpc-standards.com

1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36
This number is only available during office hours.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
Acute toxicity, Dermal (Category 4)
Acute toxicity, Oral (Category 4)
Skin corrosion (Category 1B)
Acute aquatic toxicity (Category 1)
Classification according to EU Directives 67/548/EEC or 1999/45/EC
Causes burns. Harmful in contact with skin and if swallowed. Very toxic to aquatic organisms

2.2. Label elements

2.2.1. Pictogram



2.2.2.

Signal word Danger

Hazard statement(s)

H314 Causes severe skin burns and eye damage.

H400 Very toxic to aquatic life.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

Precautionary statement(s)

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/ physician.

Supplemental Hazard

Statements

none

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

Hazard symbol(s) R-phrases(s)

R21/22 Harmful in contact with skin and if swallowed.

R34 Causes burns.

R50 Very toxic to aquatic organisms.

S-phrases(s)

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms : Alkyldimethylbenzylammonium chloride

Alkylbenzyltrimethylammonium chloride

Component Concentration

Benzalkonium chloride

CAS-No.

EC-No.

Index-No.

63449-41-2

264-151-6

612-140-00-5

-

3.1.1. Formula

Benzyl-C8-18-alkyl

3.1.2. Molecular Weight (g/mol)

0.00

3.1.3. CAS-No.

63449-41-2

4. FIRST AID MEASURES

4.1 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

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. 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

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

4.2 Most important symptoms and effects, both acute and delayed

Cough, Shortness of breath, Headache, Nausea, Vomiting

4.3 Indication of any immediate medical attention and special treatment needed

no data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Nature of decomposition products not known.

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 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.

6.3 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.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 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.

7.2 Conditions for safe storage, including any incompatibilities

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

hygroscopic Store under inert gas.

7.3 Specific end uses

no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

8.2 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. Body Protection

Complete suit protecting against chemicals, 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 particle respirator type N100 (US) or type P3 (EN 143) 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).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance Form: Semi-solid melting to a liquid

Colour: light yellow

b) Odour no data available

c) Odour Threshold no data available

d) pH no data available

e) Melting point/freezing point

no data available

f) Initial boiling point and boiling range

no data available

g) Flash point no data available

h) Evaporation rate no data available

i) Flammability (solid, gas) no data available

j) Upper/lower flammability or explosive limits

no data available

k) Vapour pressure no data available

l) Vapour density no data available

m) Relative density no data available

n) Water solubility no data available
o) Partition coefficient: noctanol/
water
no data available
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
9.2 Other safety information
no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
no data available
10.2 Chemical stability
no data available
10.3 Possibility of hazardous reactions
no data available
10.4 Conditions to avoid
Avoid moisture.
10.5 Incompatible materials
Strong oxidizing agents
10.6 Hazardous decomposition products
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute toxicity
LD50 Oral - mouse - 150 mg/kg
Remarks: Behavioral:Somnolence (general depressed activity). Blood: Hemorrhage.
LD50 Dermal - rat - 1.420 mg/kg
Remarks: Behavioral:Somnolence (general depressed activity). Blood: Hemorrhage.
Skin corrosion/irritation
no data available
Serious eye damage/eye irritation
no data available
Respiratory or skin sensitization
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
no data available
Specific target organ toxicity - repeated exposure
no data available
Aspiration hazard
no data available
Potential health effects
Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of

the mucous membranes and upper respiratory tract.
Ingestion Toxic if swallowed. Causes burns.
Skin Harmful if absorbed through skin. Causes skin burns.
Eyes Causes eye burns Signs and Symptoms of Exposure
Cough, Shortness of breath, Headache, Nausea, Vomiting Additional Information
RTECS: BO3151000

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to fish mortality LOEC - Oncorhynchus kisutch - 17,8 mg/l - 3,0 d
LC50 - Lepomis macrochirus - 0,31 mg/l - 96,0 h
mortality NOEC - Oncorhynchus kisutch - 10 mg/l - 3,0 d
12.2 Persistence and degradability
no data available
12.3 Bioaccumulative potential
no data available
12.4 Mobility in soil
no data available
12.5 Results of PBT and vPvB assessment
no data available
12.6 Other adverse effects
Very toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 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

14. TRANSPORT INFORMATION

14.1 UN number
ADR/RID: 2923 IMDG: 2923 IATA: 2923
14.2 UN proper shipping name
ADR/RID: CORROSIVE SOLID, TOXIC, N.O.S. (Benzalkonium chloride)
IMDG: CORROSIVE SOLID, TOXIC, N.O.S. (Benzalkonium chloride)
IATA: Corrosive solid, toxic, n.o.s. (Benzalkonium chloride)
14.3 Transport hazard class(es)
ADR/RID: 8 (6.1) IMDG: 8 (6.1) IATA: 8 (6.1)
14.4 Packaging group
ADR/RID: III IMDG: III IATA: III
14.5 Environmental hazards
ADR/RID: yes IMDG Marine pollutant: yes IATA: no
14.6 Special precautions for user
no data available

15. REGULATORY INFORMATION

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

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

no data available

15.2 Chemical Safety Assessment

no data available

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide.

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!