

# Benzalkonium chloride

## Safety Data Sheet

**247634**

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU)

2015/830

Issue date: 14/11/2014 Revision date 19/02/2021

Supersedes 17/02/2017

Version: 3.0

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

#### 1.1. Product identifier

Product form	: Substance
Substance name	: Benzalkonium chloride
Chemical name	: quaternary ammonium compounds, benzyl-C8-18-alkyldimethyl, chlorides
EC Index-No.	: 612-140-00-5
EC-No.	: 264-151-6
CAS-No.	: 63449-41-2
REACH registration No	: 01-2119615437-39
Product code	: 247634
Synonyms	: Benzalkonium chloride, Benzalkonii chloridum

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

##### 1.2.1. Relevant identified uses

Main use category	: Pharmaceutical industry
Industrial/Professional use spec	: Industrial For professional use only

##### 1.2.2. Uses advised against

No additional information available

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

##### Supplier

Duchefa Farma BV  
 A. Hofmanweg 71  
 2031BH Haarlem - The Netherlands  
 T +31(0)23-5319093  
[farma@ducheffa.nl](mailto:farma@ducheffa.nl) - [www.duchefa-farma.com](http://www.duchefa-farma.com)

#### 1.4. Emergency telephone number

Emergency number	: Supplier contact information: +31(0)23-5319093 (M-F 09:00-17:00) +31(0)6-30109355 (outside office hours)
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Organisation/Company	Address	Comment
Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (dermal), Category 4	H312
Acute toxicity (oral), Category 4	H302
Skin corrosion/irritation, Category 1B	H314
Hazardous to the aquatic environment — Acute Hazard, Category 1	H400

Full text of H statements : see section 16

#### Adverse physicochemical, human health and environmental effects

No additional information available

### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP] Extra labelling to display Extra classification(s) to display

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazard statements (CLP)

: H312 - Harmful in contact with skin.  
H302 - Harmful if swallowed.  
H314 - Causes severe skin burns and eye damage.  
H400 - Very toxic to aquatic life.

Precautionary statements (CLP)

: P260 - Do not breathe dust.  
P280 - Wear protective gloves, protective clothing, eye protection.  
P273 - Avoid release to the environment.  
P301+P312 - IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
P305 - IF IN EYES:  
P351 - Rinse cautiously with water for several minutes.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Benzalkonium chloride	(CAS-No.) 63449-41-2 (EC-No.) 264-151-6 (EC Index-No.) 612-140-00-5 (REACH-no) 01-2119615437-39	100	Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Aquatic Acute 1, H400

Full text of H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person  
If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.  
Immediately call a POISON CENTER/doctor.
- First-aid measures after skin contact : Immediately call a POISON CENTER/doctor.  
Wash with plenty of water/...  
Wash contaminated clothing before reuse.  
Take off immediately all contaminated clothing.  
Rinse skin with water/shower.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER/doctor.  
Ensure adequate flushing of eyes by separating eyelids with the fingers.
- First-aid measures after ingestion : Rinse mouth  
Immediately call a POISON CENTER/doctor.

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

- Symptoms/effects : Causes severe skin burns and eye damage.
- Symptoms/effects after skin contact : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.
- Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Foam  
Dry powder  
Carbon dioxide  
Water spray  
Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Hydrogen chloride  
Nitrogen oxides.

### 5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.  
Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Large spills: scoop solid spill into closing containers. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

Reference to other sections (8, 13).

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe Substance.
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Comply with applicable regulations.
- Storage conditions : Keep container closed when not in use  
Store in a dry place.  
Keep only in the original container in a cool, well-ventilated place.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight.

### 7.3. Specific end use(s)

Pharmaceutical industry.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

#### Personal protective equipment:

Avoid all unnecessary exposure.

#### Hand protection:

Type	Material	Permeation	Thickness (mm)	Standard
Gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0,11	EN ISO 374

#### Eye protection:

Safety glasses (to European standard EN 166 or equivalent)

#### Skin and body protection:

Protective clothing (with elasticated cuffs and closed neck)

#### Respiratory protection:

Approved dust respirator. Dustmask with filtertype P2

#### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: yellowish.
Odour	: weak.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 29 - 34 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Water: 4000 g/l 20 °C
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Thermal decomposition generates :  
Corrosive vapours.

### 10.2. Chemical stability

Not established.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight  
Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong acids  
Strong bases.

**10.6. Hazardous decomposition products**

Hydrogen chloride

Nitrous fumes

Thermal decomposition generates :

Corrosive vapours.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects**

Acute toxicity : Harmful in contact with skin. Harmful if swallowed.

Benzalkonium chloride (63449-41-2)	
LD50 oral rat	240 mg/kg
LD50 dermal rat	1560 mg/kg

Skin corrosion/irritation : Causes severe skin burns and eye damage.

Additional information : Sensitisation : contact can cause allergic reactions in humans

Serious eye damage/irritation : Serious eye damage, category 1, implicit

Respiratory or skin sensitisation : Not classified

Additional information : Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not classified

Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Reproductive toxicity : Not classified

Additional information : Based on available data, the classification criteria are not met

STOT-single exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

STOT-repeated exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

Aspiration hazard : Not classified

Additional information : Based on available data, the classification criteria are not met

Potential adverse human health effects and symptoms : Harmful if swallowed. Harmful in contact with skin.

**SECTION 12: Ecological information****12.1. Toxicity**

Ecology - water : Very toxic to aquatic life.

**12.2. Persistence and degradability**

Benzalkonium chloride (63449-41-2)	
Persistence and degradability	Not established.

**12.3. Bioaccumulative potential**

<b>Benzalkonium chloride (63449-41-2)</b>	
Bioaccumulative potential	Not established.

**12.4. Mobility in soil**

No additional information available

**12.5. Results of PBT and vPvB assessment**

No additional information available

**12.6. Other adverse effects**

Additional information : Avoid release to the environment.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of this material and its container at hazardous or special waste collection point.

Ecology - waste materials : Avoid release to the environment.

**SECTION 14: Transport information**

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IATA
<b>14.1. UN number</b>	
1759	1759
<b>14.2. UN proper shipping name</b>	
CORROSIVE SOLID, N.O.S.	Not applicable
<b>14.3. Transport hazard class(es)</b>	
8	8
 The pictogram shows a diamond shape divided into two sections. The left section shows a liquid dripping from a test tube onto a hand and a surface, labeled '8'. The right section shows a dead tree and a dead fish.	 The pictogram shows a diamond shape divided into two sections. The left section shows a dead tree and a dead fish. The right section is empty.
<b>14.4. Packing group</b>	
III	Not applicable
<b>14.5. Environmental hazards</b>	
Dangerous for the environment : Yes	Dangerous for the environment : Yes
No supplementary information available	

**14.6. Special precautions for user****. Overland transport**

Classification code (ADR) : C10  
 Special provisions (ADR) : 274  
 Limited quantities (ADR) : 5kg  
 Excepted quantities (ADR) : E1  
 Vehicle for tank carriage : AT  
 Transport category (ADR) : 3



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Hazard identification number : 80  
(Kemler No.)

Orange plates : 

Tunnel restriction code (ADR) : E

EAC code : 2X

**- Air transport**

No data available

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1. EU-Regulations**

No REACH Annex XVII restrictions

Benzalkonium chloride is not on the REACH Candidate List

Benzalkonium chloride is not on the REACH Annex XIV List

**15.1.2. National regulations**

No additional information available

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out

**SECTION 16: Other information**

Indication of changes:

1	Additional information	Modified	change of logo
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Abbreviations and acronyms:

SDS	Safety Data Sheet
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
IMDG	International Maritime Dangerous Goods
IATA	International Air Transport Association
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008

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Data sources	: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
Other information	: DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. REACH Disclaimer: This information is based on current knowledge. Consistency of data in the SDS with CSR is considered, as far as the information is available at the time of compilation (cfr Revision date and Version number).

## Full text of H- and EUH-statements:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.

## SDS EU (REACH Annex II) duchefa nieuwe logo

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*