

Material Safety Data Sheet

According to (EC) No 1907/2006 (REACH) and 1272/2008 (CLP)

BENZALKONII CHLORIDUM

EN

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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name: Benzalkonium chloride
Benzalkonii chloridum
Benzalkoniumchloride
Benzalkonium (chlorure de)
Benzalkoniumchlorid

N° CAS: 8001-54-5

N° EC: 616-786-9

1.2 Relevant identified uses of the substance/mixture and uses advised against

Identified uses: Active Pharmaceutical Ingredient or Excipient.

1.3 Details of the supplier of the safety data sheet

Company: FAC SECUNDUM ARTEM NV
Oostmalsebaan 1c (unit 5)
2960 Sint-Lenaarts
Belgium

Telephone: (+32) (0)3 457 11 76

Email: info@magis-pharma.be

Web page: www.magis-pharma.be

1.4 Emergency telephone number

Public utility foundation:	Belgisch Antigifcentrum	Centre Antipoisons Belge
Telephone:	(+32) (0)70 245 245	(Service 24/7)
Web page:	www.antigifcentrum.be	www.centreantipoisons.be

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance/mixture

Classification according to (EC) n° 1272/2008

Acute Tox. 4	H302+H312
Skin Corr. 1B	H314
Aquatic Acute 1	H400

2.2 Label elements

Labelling according to (EC) n° 1272/2008

Hazard pictogram(s):



Signal word(s): Danger

Hazard statements:

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H302+H312	Harmful if swallowed or in contact with skin.
H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.
Precautionary statements:	
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with soap and plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
P309+P310	If exposed or if you feel unwell: Immediately call a POISON CENTER or doctor/physician.
Additional applicable label elements:	Not applicable.

2.3 Other hazards

Not available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Product name:	Benzalkonium chloride
IUPAC name:	Benzalkonium chloride
Synonyms:	Not applicable
N° CAS:	8001-54-5
N° EC:	616-786-9
Molecular Formula:	(Mixture)
Content:	95.0 per cent to 104.0 per cent of alkylbenzyltrimethylammonium chlorides (anhydrous substance).

3.2 Mixtures

Content:	Benzododecinium chloride (50 per cent to 100 per cent) N° CAS: 139-07-1 Miristalkonium chloride (25 per cent to 50 per cent) N° CAS: 139-08-2
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SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General notes:	Consult a physician. Show this safety data sheet to the doctor in attendance. First aider should protect himself
After inhalation:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

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After 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.
After eye contact:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
After ingestion:	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

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

4.3 Indication of any immediate medical attention and special treatment needed

Not available.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media:	Not available.

5.2 Special hazards arising from the substance/mixture

Nature of decomposition products not known.

5.3 Advice for firefighters

Surrounding fires:	Not available.
Protection against fire:	Wear self-contained breathing apparatus for firefighting if necessary.
Hazardous combustion products:	Not available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Wear respiratory protection. Avoid substance contact. 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.

For emergency responders

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection equipment see section 8.

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 material for containment and cleaning up

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Pick up and arrange disposal without creating dust.
Sweep up and shovel.
Keep in suitable, closed containers for disposal.
Do not empty into drains.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Precautions for safe handling:	For precautions see section 2.2.
Personal protection:	Avoid contact with skin and eyes.
Technical protective measures:	Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.
Handling:	Not available.

7.2 Conditions for safe storage, including any incompatibilities

Storage:	Store in an airtight container. Store at room temperature (15-25°C). The substance is hygroscopic. Storage class (TRGS 510): Non-combustible, corrosive hazardous materials.
Conditions for safe storage, including any incompatibilities:	Keep container tightly closed in a dry and well-ventilated place. Store under inert gas.
Storage – away from:	Not available.

7.3 Specific end use(s)

Active Pharmaceutical Ingredient or Excipient

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Not available.

8.2 Exposure controls

Appropriate engineering control

Appropriate working operations should be given priority over the use of personal protection equipment.

Individual protection measures

Eye/face protection:	Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166(EU).
Skin 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.

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Hand 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.
Respiratory protection:	Where risk assessment shows air-purifying respirators are appropriate, use (EN 143) respirator cartridges as a backup to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Thermal hazards:	Not available.
Environmental exposure control	
Prevent further leakage or spillage if safe to do so.	
Do not let product enter drains.	
Discharge into the environment must be avoided.	

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	White or yellowish-white powder or gelatinous, yellowish-white fragments, hygroscopic. On heating it forms a clear molten mass.
Odour:	Not available.
Odour threshold:	Not available.
pH:	5-6 at 10 to 20 g/L
Melting/freezing point:	40°C
Initial boiling point:	Not available.
Boiling range:	Not available.
Flash point:	Not available.
Evaporation rate:	Not available.
Flammability (solid/gas):	Not available.
Upper/lower flammability or explosive limits:	Not available.
Vapour pressure:	Not available.
Vapour density:	Not available.
Relative density:	0.98 g/cm ³
Solubility:	Very soluble in ethanol (96%). An aqueous solution froths copiously when shaken.
Solubility in water:	Very soluble in water.
Partition coefficient (n-octanol/water):	Not available.
Auto-ignition temperature:	Not available.

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Decomposition temperature: 150-300 °C
Viscosity: Not available.
Explosive properties: Not available.
Oxidising properties: Not available.

9.2 Other information

Not available.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

The following applies in general to flammable organic mixtures and substances: when whirled up, a dust explosion potential may be assumed.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Violent reactions possible with strong oxidizing agents.

10.4 Conditions to avoid

Strong heating (risk of decomposition).

10.5 Incompatible materials

Strong oxidising agents.

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. Nature of decomposition products not known.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity: Oral LD50 (mouse): 150 mg/kg
Remarks: Behavioural: Somnolence (general depressed activity). Blood: Haemorrhage.
Dermal LD50 (rat): 1,420 mg/kg
Remarks: Behavioural: Somnolence (general depressed activity). Blood: Haemorrhage.

Skin corrosion/irritation: Harmful if in contact with skin. Causes severe skin burns.

Serious eye damage/irritation: Causes severe eye damage.

Respiratory/skin sensitisation: Not available.

Germ cell mutagenicity: Not 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: Not available.

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Summary of evaluation of the CMR properties:	Not available.
STOT-single exposure:	Not available.
STOT-repeated exposure:	Not available.
Aspiration Hazard:	Not available.
Other:	RTECS: BO3151000. Cough, shortness of breath, headache, nausea, vomiting.

11.2 Additional information on potential adverse human health effects and symptoms

Eye contact:	Causes severe eye damage.
Skin contact:	Harmful if in contact with skin. Causes severe skin burns.
Inhalation:	Not available.
Ingestion:	Harmful if swallowed. Nausea, blood vomiting, confusion, shock may appear.
Aspiration:	Not available.

SECTION 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

Not available.

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

Not available.

12.5 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.

12.6 Other adverse effects

Very toxic to aquatic life.

SECTION 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 scrubber.
Contaminated packaging: Dispose of as unused product.

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SECTION 14: TRANSPORT INFORMATION

Transport information according to ADR/RID/IMDG/ICAO/IATA

14.1 UN Number

ADR/ RID(Land),IMDG(Sea),
IATA/ICAO (Air) : UN 1759

14.2 UN proper shipping name

ADR/ RID(Land),IMDG(Sea),
IATA/ICAO (Air) : ADR/RID: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (Benzalkonium chloride)
IMDG: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (Benzalkonium chloride)
IATA: Corrosive solid, acidic, organic, n.o.s. (Benzalkonium chloride)

14.3 Transport hazard class(es)

ADR/ RID(Land),IMDG(Sea),
IATA/ICAO (Air) : 8

14.4 Packing group

ADR/ RID(Land),IMDG(Sea),
IATA/ICAO (Air) : II

14.5 Environmental hazards

ADR/ RID(Land),IMDG(Sea),
IATA/ICAO (Air) : ADR/RID: no
IMDG Marine pollutant: no
IATA: no

14.6 Special precautions for user

Not available.

14.7 Transport in bulk according to annex II of Marpol and the IBC Code

Not available.

14.8 Additional transport information

Not available.

SECTION 15: REGULATORY INFORMATION

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

Hazard symbol:



Risk phrases:

R21/22 Harmful in contact with skin and if swallowed.
R50 Very toxic to aquatic organisms

Safety phrases:

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28 After contact with skin, wash immediately with soap and plenty of water.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S61 Avoid release to the environment.

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S62 If swallowed do not induce vomiting: seek medical advice immediately and show this container or label.

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: OTHER INFORMATION

16.1 Changes since the previous version

Not applicable.

16.2 Abbreviations and acronyms used

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS:	Chemical Abstracts Service (division of the American Chemical Society)
EC (number):	European Community (number)
IATA:	International Air Transport Association
ICAO:	International Civil Aviation Organization
IMDG:	International Maritime Code for Dangerous Goods
IUPAC:	International Union of Pure and Applied Chemistry
PBT:	Persistent, Bioaccumulative and Toxic substance
RID:	Regulations Concerning the International Transport of Dangerous Goods by Rail
STOT:	Specific Target Organ Toxicity
UN (number):	United Nations (number)
vPvB:	very Persistent and very Bioaccumulative

16.3 Key literature references/sources for data

European Chemicals Agency.
<https://www.echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database/>

16.4 Method of classification in case of mixture

Not applicable.

16.5 Relevant Hazard statements and/or precautionary statements

For information on hazard and/or precautionary statements refer to section 2 up to and including section 15.

16.6 Training advisement

Not available

16.7 Notice for user(s)

The information provided in this MSDS has been established in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015, amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council, on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation

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(EC) No 1488/94, as well as Council Directive 76/769/EEC and Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC of the Commission.

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16.8 Department issuing MSDS

Quality Department

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