

SAFETY DATA SHEET

Barquat MS-100

Version: 26.09.2008 / EN

1. Identification of the substance/preparation and of the company/undertaking

Trade name : Barquat MS-100

Use : Biocidal product, Surfactant

Company : Lonza Ltd
Muenchensteinerstrasse 38
CH-4002 Basel, Switzerland
Telephone: +41 61 316 81 11

Emergency telephone : Lonza Ltd, CH-4002 Basel, Switzerland
Telephone: +41 61 313 94 94 (24h)

Contact person : prodinfo@lonza.com

2. Hazards identification

Classification

Harmful if swallowed.
Causes burns.
Very toxic to aquatic organisms.

3. Composition/information on ingredients

Components / EC Label	Concentration
Quaternary ammonium compounds, benzyl-C12-14-alkyldimethyl, chlorides (CAS-No.: 85409-22-9) (EEC-No.: 287-089-1) C, N; R22, R34, R50	>= 99 %

R-phrases See chapter 16

4. First aid measures

Inhalation : Move to fresh air. If breathing is irregular or stopped, administer artificial respiration. Give oxygen. First aider needs to protect himself. Call a physician immediately.

Skin contact : Take off all contaminated clothing immediately. After contact with skin, wash immediately with plenty of soap and water. Call a physician immediately.

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- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.
- Ingestion : Call a physician immediately. Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

Notes to physician

- Symptoms : Causes severe irritation of eyes, skin and mucous membranes.

5. Fire-fighting measures

- Suitable extinguishing media : Water spray, Dry powder, Foam
- Specific hazards during fire fighting : Heating or fire can release toxic gas.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
- Additional advice : Use water spray to cool unopened containers.

6. Accidental release measures

- Personal precautions : In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.
- Methods for cleaning up : Sweep up or vacuum up spillage and collect in suitable container for disposal.

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7. Handling and storage

Handling

- Safe handling advice : Provide sufficient air exchange and/or exhaust in work rooms. Avoid contact with skin and eyes. Avoid formation of respirable particles.
- Advice on protection against fire and explosion : Avoid dust formation. Take precautionary measures against static discharges.

Storage

- Requirements for storage areas and containers : Keep container tightly closed. To maintain product quality, do not store in heat or direct sunlight. Keep in a dry, cool and well-ventilated place.

8. Exposure controls/personal protection

Personal protective equipment

- Hygiene measures : Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use.
- Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter. Half mask with a particle filter P2 (EN 143).
- Hand protection : Suitable material : Nitrile rubber
Break through time : > 480 min

Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
- Eye protection : Tightly fitting safety goggles
- Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place., No special protective equipment required.

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9. Physical and chemical properties

Appearance

Physical state	: solid
Form	: powder
Colour	: white
Odour	: bitter almond

Safety data

pH	: 6 - 8 (10 g/l)
Melting point/range	: ca. 48 °C
Flash point	: closed cup : > 100 °C Method: Pensky-Martens c.c.(DIN 51758)
Flammability	: does not ignite
Ignition temperature	: > 365 °C deposited dust > 250 °C dispersed dust cloud, reaction with flame
Auto-flammability	: 248 °C
Bulk density	: 800 kg/m ³
Water solubility	: soluble
Solubility	: Ethanol: > 1 g/l

Other data

Surface tension	: 34,5 mN/m
Burning number	: BZ 2: Brief ignition, rapid extinction (20 °C)
Dust explosion class	: St(H)2: strong dust explosion, indicator 2 Method: Modified Hartmann tube

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10. Stability and reactivity

- Conditions to avoid : no data available
- Materials to avoid : Strong oxidizing agents, Reducing agents, Anionic surfactants
- Hazardous decomposition products : Hydrogen chloride gas, nitrogen oxides (NO_x), Carbon oxides
- Hazardous reactions : Hazardous polymerisation does not occur.
Stable under normal conditions.

11. Toxicological information

The following toxicological data refer to:

N-Alkyl(C12-16)-N,N-dimethyl-N-benzylammonium chloride (CAS-No.: 68424-85-1)

- Acute oral toxicity (LD50) : ca. 344 mg/kg
Species: rat
- Acute dermal toxicity (LD50) : ca. 3 340 mg/kg
Species: rabbit
- Skin irritation : Corrosive
Species: rabbit
Exposure time: 24 h
Method: DOT
- Eye irritation : Corrosive
Species: rabbit
Method: DOT
- Sensitisation : not sensitizing
Species: guinea pig
Buehler Test
Method: OECD Test Guideline 406
- Genotoxicity in vitro : negative
Ames test, Salmonella typhimurium
Method: OECD 471
- negative
Chromosome aberration test in vitro, Human lymphocytes
Method: OECD 473

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12. Ecological information

The following ecotoxicological data refer to:

N-Alkyl(C12-16)-N,N-dimethyl-N-benzylammonium chloride (CAS-No.: 68424-85-1)**Ecotoxicity effects**

- Toxicity to fish (LC50) : 0,93 mg/l
Species: Oncorhynchus mykiss (rainbow trout)
Acute toxicity
Exposure time: 96 h
Method: US-EPA
- Toxicity to fish (LC50) : 0,28 mg/l
Species: Pimephales promelas (fathead minnow)
Acute toxicity
Exposure time: 96 h
Method: US-EPA
- Toxicity to fish (LC50) : 0,515 mg/l
Species: Lepomis macrochirus (Bluegill sunfish)
Acute toxicity
Exposure time: 96 h
Method: US-EPA
- Toxicity to fish (NOEC) : 0,032 mg/l
Species: Pimephales promelas (fathead minnow)
Early-life Stage
Exposure time: 34 d
Method: EPA-FIFRA
- Toxicity to daphnia (EC50) : 0,016 mg/l
Species: Daphnia magna (Water flea)
Immobilization
Exposure time: 48 h
Method: OECD Test Guideline 202
- Toxicity to daphnia (NOEC) : 0,0042 mg/l
Species: Daphnia magna (Water flea)
Reproduction Test
Exposure time: 21 d
Method: EPA-FIFRA
- Toxicity to daphnia (NOEC) : 520 mg/l
Species: Chironomus sp.
Chronic toxicity
Exposure time: 28 d
Method: US-EPA

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- Toxicity to algae (ErC50) : 0,049 mg/l
Species: Pseudokirchneriella subcapitata (green algae)
Cell multiplication inhibition test
Exposure time: 72 h
Method: OECD Test Guideline 201
- Toxicity to bacteria (EC50) : 7,75 mg/l
Species: activated sludge
Respiration inhibition
Exposure time: 3 h
Method: OECD 209
- Toxicity to bacteria (EC100) : ca. 16 mg/l
Species: Pseudomonas putida
Growth inhibition
Exposure time: 96 h
- Toxicity to soil dwelling organisms (LC50) : 7 070 mg/kg
Species: Eisenia fetida (earthworms)
Acute toxicity
Exposure time: 14 d
Method: OECD 207

Mobility

- Behaviour in environmental compartments : Adsorption/Soil immobile
Method: EPA-FIFRA

Persistence and degradability

- Stability in water : hydrolytically stable
Method: EPA-FIFRA
- Biodegradability : OECD Confirmatory Test: > 90 %
Method: OECD 303 A
- Modified SCAS Test: > 99 %
Testing period: 7 d
Method: OECD 302 A
- CO2 Evolution: 95,5 %
Readily biodegradable.
Testing period: 28 d
Method: OECD 301 B

The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

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Bioaccumulative potential

Bioaccumulation : Does not bioaccumulate.
Bioconcentration factor (BCF): 79
Species: Lepomis macrochirus (Bluegill sunfish)
Exposure time: 35 d
Method: US-EPA

13. Disposal considerations

Waste from residues : Dispose of in accordance with local regulations.
Contact waste disposal services.

Contaminated packaging : Where possible recycling is preferred to disposal or incineration.

14. Transport information

ADR : Class: 8
Packaging group: II
Classification Code: C10
Labels: Corrosive substance No. 8
Hazard identification No : 80

UN/ID No. : UN 1759
Proper shipping name : CORROSIVE SOLID, N.O.S.
(Alkyl(C12-14)dimethylbenzylammonium chloride)

RID : Class: 8
Packaging group: II
Classification Code: C10
Labels: Corrosive substance No. 8
Hazard identification No : 80

UN/ID No. : UN 1759
Proper shipping name : CORROSIVE SOLID, N.O.S.
(Alkyl(C12-14)dimethylbenzylammonium chloride)

IATA Cargo : Class: 8
Packaging group: II
Labels: Corrosive substance No. 8
Packing instruction (cargo aircraft): 816

UN/ID No. : UN 1759
Proper shipping name : Corrosive solid, n.o.s.
(Alkyl(C12-14)dimethylbenzylammonium chloride)

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IATA Passenger : Class: 8
Packaging group: II
Labels: Corrosive substance No. 8
Packing instruction (passenger aircraft): 814
UN/ID No. : UN 1759
Proper shipping name : Corrosive solid, n.o.s.
(Alkyl(C12-14)dimethylbenzylammonium chloride)

IMDG-Code : Class: 8
Packaging group: II
Labels: Corrosive substance No. 8
EmS: F-A , S-B
Marine Pollutant: yes
UN/ID No. : UN 1759
Proper shipping name : CORROSIVE SOLID, N.O.S.
(Alkyl(C12-14)dimethylbenzylammonium chloride)

49 CFR : Class: 8
Packaging group: II
Labels: Corrosive substance No. 8
UN/ID No. : UN 1759
Proper shipping name : Corrosive solids, n.o.s.
(Alkyl(C12-14)dimethylbenzylammonium chloride)

TDG : Class: 8
Packaging group: II
Labels: Corrosive substance No. 8
UN/ID No. : UN 1759
Proper shipping name : CORROSIVE SOLID, N.O.S.
(Alkyl(C12-14)dimethylbenzylammonium chloride)


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15. Regulatory information

Additional advice : Classification and labelling according to Directive 67/548/EEC.

Symbol(s) :   

: Corrosive Dangerous for the environment

R-phrase(s) R22: Harmful if swallowed.
 R34: Causes burns.
 R50: Very toxic to aquatic organisms.

S-phrase(s) 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 plenty of soap and water.
 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.

16. Other information

R-phrase(s)

R22 : Harmful if swallowed.
 R34 : Causes burns.
 R50 : Very toxic to aquatic organisms.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.