

ZOONO Z-71

SAFETY DATA SHEET

(Prepared in accordance with Regulation (EC) 2015/830)

Date of Issue: 25 October 2019

SECTION 1 Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product Identifier

Product name: Z-71 Microbe Shield
Surface Sanitiser

Manufacturer's product code: Z-71

1.2 Relevant identified uses of the substance and uses advised against

1.2.1 Relevant identified uses:

Product for use as a surface biocide

1.2.2 Uses advised against

No specific uses advised against.

1.3 Details of the supplier of the Safety Data Sheet

Manufacturer

ZOONO GROUP LIMITED

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Auckland

New Zealand

Phone: +64210659977

info@zoono.com

EU Contact

Zoono Holdings Ltd

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IP32 7BX

Phone: +447852922214

Availability: 24 hours

1.4 Emergency telephone number

Telephone number UK: +447852922214

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ZOONO Z-71

SAFETY DATA SHEET

(Prepared in accordance with Regulation (EC) 2015/830)

Date of Issue: 25 October 2019

SECTION 2 Hazards Identification

2.1 Classification of the mixture

2.1.1 Classification according to Regulation (EC) 1272/2008 [CLP/GHS]

| | |
|--------------------------------------|---|
| Chronic Aquatic Toxicity, Category 3 | H412: Harmful to aquatic life with long lasting effects |
|--------------------------------------|---|

2.1.3 Additional information

For full text of Hazard- and EU Hazard-statements applicable to both the product and the pure active substance: see SECTION 16 of this SDS.

2.2 Label Elements

2.2.1 According to Regulation (EC) 1272/2008 [CLP/GHS]

Pictograms: None

Signal Word: None

Hazard Statements:

H412: Harmful to aquatic life with long lasting effects

Precautionary Statements:

P102: Keep out of reach of children.

P273: Avoid release to the environment.

P501: Dispose of contents in accordance with national regulations.

2.3 Other Hazards

PBT or vPvB not evaluated.

SECTION 3 Composition/information on ingredients

3.1 Substance Not applicable

3.2 Mixture

This mixture is a solution containing Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides

The substances classified according to Regulation (EC) 1272/2008 present in this mixture are reported in the following table.

| Chemical Name (CA) | Common name | CAS Number | EC Number | % (w/w) | Classification according to Regulation (EC) 1272/2008 |
|---|-----------------------|------------|-----------|---------|--|
| Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides | Benzalkonium chloride | 68424-85-1 | 270-325-2 | <1.00 | Acute Tox 4 H302 Skin Corr. 1B H314 Aquatic Acute 1 H400 Aquatic Chronic 1 H410 |

ZOONO Z-71

SAFETY DATA SHEET

(Prepared in accordance with Regulation (EC) 2015/830)

Date of Issue: 25 October 2019

The remaining components are either not hazardous or below the reporting threshold.

SECTION 4 First Aid Measures

4.1 Description of First Aid Measures

General notes:

Treat exposure symptomatically. Seek medical attention if symptoms develop or persist.

Following inhalation: In case of accidental inhalation or feeling unwell, remove to fresh air from exposure. If symptoms develop, seek medical advice.

Following skin contact: If symptoms develop, consult a physician. Take off contaminated clothing.

Following ingestion: If accidentally swallowed, rinse the mouth with plenty of water (only if the person is conscious) and consult a physician.

Following eye contact: Rinse cautiously for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing. If eye irritation persists, get medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

Not known. Exposure should be treated symptomatically.

4.3 Indication of any immediate medical attention and special treatment needed

Not known. Exposure should be treated symptomatically.

SECTION 5 Fire fighting measures

5.1 Suitable extinguishing media

The product is not flammable. Use fire extinguishing media appropriate for surrounding materials.

5.2 Special Hazards arising from the substance or mixture

There are no unusual fire or explosion hazards associated with this product.

5.3 Advice for firefighters

No specific fire-fighting procedures.

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ZOONO Z-71

SAFETY DATA SHEET

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Date of Issue: 25 October 2019

SECTION 6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Follow precautions for safe handling described in this safety data sheet. Refer to Section 8, if appropriate.

6.2 Environmental precautions

Prevent material from entering drains or waterways. If drains, streams, soil or sewers become contaminated then notify local authority.

6.3 Methods and materials for containment and cleaning up

Large amounts (1000L and above): Remove leaking containers to a detached area. Bund spill area and recover – consider recycling. Absorb spilled product with inert material (e.g. sand, earth etc.).

Small amounts (5L or smaller pack sizes): Wash away with plenty of water. Avoid release to the environment. Clean equipment used for clean-up with water.

6.4 Reference to other sections

Refer to sections 8 and 13 for guidance on personal protective equipment and disposal considerations.

SECTION 7 Handling and Storage

7.1 Precautions for safe handling

7.1.1 Protective measures

Measures to prevent fire and explosion: No special measures required.

1000L and above: Avoid eye contact. Wear chemical type goggles or safety glasses. Wear PVC gloves and protective clothing.

5 Litre and below pack sizes: No special measures required

7.1.2 Advice on general occupational hygiene

Use of the personal protective equipment referred to in Section 8 is required.

7.2 Conditions for safe storage including any incompatibilities

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

7.3 Specific end use

This product is for use as a surface biocide.

SECTION 8 Exposure controls/ personal protection

8.1 Control Parameters

None of the components of the mixture currently have exposure limit values.

ZOONO Z-71

SAFETY DATA SHEET

(Prepared in accordance with Regulation (EC) 2015/830)

Date of Issue: 25 October 2019

8.2 Exposure Controls

8.2.1 Appropriate engineering controls

Ventilation: In processes where mists or vapours may be generated, proper ventilation must be provided.

8.2.2 Personal protection

Eye/face protection: No specific eye/face protection noted, but Safety goggles may still be advisable for high volumes of product e.g. 1000L IBC.

Skin protection: No specific hand protection noted, but gloves may still be advisable for high volumes of product e.g. 1000L IBC. Respiratory protection: No specific recommendation made, but respiratory protection must be used if the general level exceeds the recommended occupational exposure limit.

8.2.3 Environmental exposure controls.

Use the product in accordance with label instructions. Avoid unnecessary release to drains and waterways.

SECTION 9 Physical and Chemical Properties

| Property | |
|---|-----------------|
| Appearance | Liquid |
| Odour | Fatty |
| Odour threshold | Not available |
| pH | 6.0 – 9.0 |
| Melting point/Freezing point | Not available |
| Boiling point | >100°C |
| Flash point | >100°C |
| Evaporation rate | Not available |
| Flammability | Not flammable |
| Upper lower flammability/explosive limits | Not available |
| Vapour pressure | Not available |
| Vapour density | Not available |
| Relative density | 0.98 – 1.01 g/L |
| Solubility in water | Soluble |
| Solubility in organic solvents | Not available |
| Partition coefficient (n-octanol/water) | Not applicable |
| Auto-ignition temperature | Not available |
| Decomposition temperature | Not available |
| Viscosity | Not available |
| Explosive properties | Not explosive |
| Oxidising properties | Not oxidising |

ZOONO Z-71

SAFETY DATA SHEET

(Prepared in accordance with Regulation (EC) 2015/830)

Date of Issue: 25 October 2019

SECTION 10 Stability and Reactivity

10.1 Reactivity

Stable under normal operating conditions.

10.2 Chemical Stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions or polymerisation known.

10.4 Conditions to avoid

No conditions known.

10.5 Incompatible materials

Avoid contact with strong oxidising/reducing agents.

10.6 Hazardous decomposition products

Toxic organic vapours/fumes, amines, CO, CO₂, nitrogen oxides, hydrogen chloride may be released during decomposition.

SECTION 11 Toxicological Information

| Toxicological Endpoint | Value |
|-----------------------------------|---|
| Acute Oral Toxicity | Not hazardous based on calculation of components |
| Acute Dermal Toxicity | Not hazardous based on calculation of components |
| Acute Inhalation toxicity | Not hazardous based on calculation of components |
| Skin irritation | Not hazardous based on calculation of components |
| Eye irritation | Not hazardous based on calculation of components |
| Skin sensitisation | Not hazardous based on calculation of components |
| Repeat dose toxicity (Short term) | Data not available |
| Germ cell mutagenicity | None of the components of the mixture are classified as genotoxic. |
| Carcinogenicity | None of the components of the mixture are classified as carcinogenic |
| Reproductive toxicity | None of the components of the mixture are classified as toxic to reproduction |

SECTION 12 Ecotoxicological Information

12.1 Toxicity

The ecotoxicological values for benzalkonium chloride taken from the EU Biocide CAR are presented in the table below

| Species | Timescale | Endpoint | Value |
|-------------|-----------|------------------|-----------|
| <i>Fish</i> | 96 hour | LD ₅₀ | 0.28 mg/L |

ZOONO Z-71

SAFETY DATA SHEET

(Prepared in accordance with Regulation (EC) 2015/830)

Date of Issue: 25 October 2019

| Species | Timescale | Endpoint | Value |
|----------------------|-----------|--------------------------------|------------|
| <i>Invertebrates</i> | 48 hour | EC ₅₀ | 0.016 mg/L |
| <i>Algae</i> | 72 hour | E _r C ₅₀ | 0.049 mg/L |

12.2 Persistence and degradability

Benzalkonium chloride is readily biodegradable.

12.3 Bioaccumulative potential

Benzalkonium chloride is not considered to be bioaccumulative.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

A chemical safety report has not been carried out.

12.6 Other adverse effects

No other adverse effects reported.

SECTION 13 Disposal considerations

13.1 Waste treatment methods

13.1.1 Product/Packaging disposal

Industrial use: Product should be disposed of as hazardous waste. Plastics should be sent for recycling or buried in landfill.

The waste treatment code for this product is 20 01 19 municipal wastes and similar commercial, industrial and institutional wastes: Biocides.

Professional use: Dispose of empty containers for recycling.

13.1.2 Waste treatment information

Waste should not be disposed of by release to sewers.

13.2 Additional information

Ensure compliance with EC, national and local regulations. Do not dispose of wastes in the local sewer or drainage system.

SECTION 14 Transport Information

14.1 UN Number

Not hazardous for transport.

14.2 UN Proper shipping name

Not hazardous for transport.

ZOONO Z-71

SAFETY DATA SHEET

(Prepared in accordance with Regulation (EC) 2015/830)

Date of Issue: 25 October 2019

14.3 Transport hazard classes

Not hazardous for transport.

14.4 Packing group

Not hazardous for transport.

14.5 Environmental hazards

Not hazardous for transport.

SECTION 15 Regulatory Information

15.1 Safety health and environmental regulations specific for the substance

This safety data sheet has been compiled according to the requirements of Regulation (EC) No 1907/2006

Benzalkonium chloride & Dimethyloctadecyl[3-(trimethoxysilyl)propyl]ammonium chloride are active substances currently being reviewed in accordance with Regulation (EU) No 528/2012 concerning the placing of biocidal products on the market.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out.

SECTION 16 Other Information

16.1 Indication of changes

This is the second version of the SDS written in accordance with Commission Regulation (EU) 2015/830.

The changes include an updated classification due to new information. This is impacted other section of the SDS which have also been updated.

16.2 Abbreviations and acronyms

CAS: Chemical Abstracts Service

EC: Emulsifiable Concentrate

IUPAC: International Union of Pure and Applied Chemistry

PBT: Persistent Bioaccumulative Toxic

vPvB: Very persistent very bioaccumulative

16.3 Key literature references and sources for data

Information used in the preparation of this Safety Data Sheet has come from information provided by Zoono Limited. Endpoints for Benzalkonium Chloride were reported by the EU Biocides CAR.

ZOONO Z-71

SAFETY DATA SHEET

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Date of Issue: 25 October 2019

16.4 Classification and procedure used to derive the classification according to Regulation (EC) 1272/2008 (CLP)

All the endpoints for the classification have been derived by the calculation method for the active and co-formulants.

16.5 Relevant H statements

Hazard Statements applicable to the neat active substance (The active substance is always diluted into a Zoono product placed on the market. As such Zoono products will not contain a 100% neat active substance.)

H302: Harmful if swallowed

H314: Causes severe skin burns and eye damage

H400: Very toxic to aquatic life

H410: Very toxic to aquatic life with long lasting effects

Hazard statements applicable to the product as sold:

H412: Harmful to aquatic life with long lasting effects

16.6 Training advice

Read instructions for use before using this product.

16.7 Further information

The above information may be based in part on information provided by component suppliers and is believed to be correct as of the date hereof. However, no warranty of merchantability, fitness for any use, or any other warranty is express or is to be implied regarding the accuracy of these data, the results to be obtained from the use of the material, or the hazards connected with such use. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar, and since data made available subsequent to the date hereof may suggest modification of the information, we assume no responsibility for the result of its use. This information and material furnished on the condition that the person receiving it shall make his/her own determination as to the suitability of the material for his/her particular purpose and on the condition that he/she assume the risk of his/her use thereof.