

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

- Trade name: **Bio Cleanze**

- PRCD Number: 98070

- HSE Approval number: 9936

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

- Application of the substance / the mixture: Biocidal product for the treatment of exterior hard surfaces.

1.3 Details of the supplier of the safety data sheet

- Address and telephone number of the supplier:

BENZ Softwash Ltd

Trabolgan Road

Whitegate

Midleton

Cork, Ireland.

Phone: (IRE) +353 (0) 21 46 22 978

Email: support@benzsoftwash.com

- Competent person responsible for the Material Safety Data Sheet:

Technical director: support@benzsoftwash.com

1.4 EMERGENCY PHONE NUMBERS

National Poisons Information Service UK: **Phone:** +44 (0) 844-892-0111

Poisons Information Service of Ireland: **Phone:** 01 809 2166

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

- Classification according to Regulation (EC) No 1272/2008



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.



GHS05 Corrosion

Skin Corr. 1B
Eye Dam. 1

H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.



GHS09 Environment

Aquatic Acute 1 H400 Very toxic to aquatic life.
Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07 Warning

Acute Tox. 4
STOT SE 3

H302 Harmful if swallowed.
H336 May cause drowsiness or dizziness.

2.2 Label elements

- Labeling according to Regulation (EC) No 1272/2008

The product is labeled according to the CLP regulation.

- Hazard pictograms



GHS02



GHS05



GHS07



GHS09

- Signal word Danger

- Hazard-determining components of labeling:

Didecyldimethylammonium chloride.

Propan-2-ol

- Hazard statements:

H226 Flammable liquid and vapor.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H336 May cause drowsiness or dizziness.

H410 Very toxic to aquatic life with long lasting effects.

- Precautionary statements:

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P391 Collect spillage.

2.3 Other hazards: Other hazards have not been identified for this product.

SECTION 3: Composition/information on ingredients

3.1 Type of product: Microbiozide based on twin chain quaternary ammonium compound.

3.2 mixtures

- Dangerous components:		
CAS: 7173-51-5	didecyldimethylammonium chloride	25 - 50%
EINECS: 230-525-2	Skin Corr. 1B, H314; Eye Dam. 1, H318; Aquatic Acute 1, H400	
Index number: 612-131-00-6	(M=10); Aquatic Chronic 2, H411;	
	Acute Tox. 4, H302	



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CAS: 67-63-0 EINECS: 200-661-7 Index number: 603-117-00-0 Reg.nr 01-2119457558-25	propan-2-ol Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336. Additional information For the wording of the listed risk/hazard phrases refer to section 16.	10 - 25%
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SECTION 4: First aid measures

4.1 Description of first aid measures

- General information

Obtain special instructions from the poison information centre: Phone: +44 (0) 844-892-0111 (UK) or 00353 (01) 8092566 (Ireland) see as well section 1.4.

- **After inhalation** Supply fresh air; consult doctor in case of symptoms.

- After skin contact

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If skin irritation or rash occurs: Get medical advice/attention.

- After eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Call a doctor immediately.

- After swallowing

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

Bring vomiting person into recovery position.

Do not give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Corrosive damage to gastro-intestinal tract.

Dazed

- **Information for doctor** Probable mucosal damage may contraindicate the use of gastric lavage.

- **Danger:** Danger of gastric perforation.

4.3 Indication of any immediate medical attention and special treatment needed

If swallowed, gastric irrigation with activated carbon.

Rinse eyes thoroughly with physiological saline.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- **Suitable extinguishing agents** Water spray jet, extinguishing powder, CO2, foam.

- **Unsuitable extinguishing agents for reasons of safety:** None

5.2 Special hazards arising from the substance or mixture

In case of fire, toxic incineration products may be released such as:



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Nitrogen oxides (NO_x)

Hydrogen chloride (HCl)

Carbon monoxide (CO)

5.3 Advice for firefighters

- **Protective equipment:** Wear self-contained breathing apparatus.

- **Additional information**

Collect contaminated fire fighting water separately. It must not enter drains.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Particular danger of slipping on leaked/spilled product.

Wear protective clothing (see item 8).

Keep unprotected persons away.

When selecting the protective suit attention has to be paid to the complete and safe protection of skin and mucous membranes. Impermeable protective clothes, protective boots made of neoprene, complete face protection and nitrile-rubber-gloves with long tops should be worn.

6.2 Environmental precautions:

As the product is hazardous for the aquatic environment, it must be prevented from reaching surface water.

Prevent from spreading (e. g. by enclosing with a ring of chemical absorbent).

Inform authorities in case of contamination of water or sewage system.

6.3 Methods and material for containment and cleaning up:

Collect large amounts in suitable container. Cover the rest with absorbent, mix intensively and collect mechanically.

Suitable binder: multi-purpose absorbent.

Dispose of contaminated material as waste according to item 13.

Decontamination procedure: Quats are incompatible with anionic compounds, e. g. with anionic surfactants. If product is released unintentionally into waste water, drain the contaminated waste water and collect it in an appropriate container.

Adjust with sodium lauryl sulphate solution (concentration twice as high as the active ingredient in the wastewater) to a mixture ratio of 1:1.

Request further instructions from the supplier. Polluted surfaces can be decontaminated with a 10% sodium lauryl sulphate solution.

6.4 Reference to other sections None.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Ensure good exhaust ventilation at the workplace.

It is preferable to handle the product in a closed system.

Load carefully, avoid splashes.

Risks to the safety and health of workers may not only be created by work involving chemicals but, inter alia by work equipment and the fitting-out of work-places. Those risks shall be identified and evaluated.

- Information about protection against explosion and fire:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Protect against electrostatic charges.

Traces of flammable substances may collect in the voids of closed systems. Keep ignition sources clear.

7.2 Conditions for safe storage, including any incompatibilities**- Storage****- Requirements to be met by storerooms and containers:**

Store only in the original container.

Information about suitable materials for vessels and piping can be requested from our technical department

Tel.: +353(021) 46 22 978 or email support@benzsoftwash.com.

- Information about storage in a common storage facility: Store away from foodstuffs.

- Further information about storage conditions:

Store in a well-ventilated place. Keep cool.

If the product crystallizes at low temperatures, it can be restored by slowly warming the product.

The effectiveness is not affected hereby.

Prevent release to the environment by adequate secondary containment design and use of appropriate spill control procedures.

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters**

Components with critical values that require monitoring at the workplace:	
67-63-0 propan-2-ol (10 - 25%)	
WEL (Great Britain)	Short-term value: 1250 mg/m ³ , 500 ppm
	Long-term value: 999 mg/m ³ , 400 ppm

- Additional information: Information valid at the time of review of safety data sheet.

8.2 Exposure controls**- Personal protective equipment****- General protective and hygienic measures:**

Use skin cream for skin protection.

Avoid contact with the eyes and the skin.

Do not inhale gases/fumes/aerosols.

Wash hands during work breaks and at the end of the shift.

Provide skin protection plan.

- Respiratory protection: Filter A/P2. (DIN/EN 141)

- Protection of hands:

Chemical protective gloves according to DIN EN 374 with CE-labelling.

Check the condition of protective gloves after each use for any damages like holes, cuts or tears.

Do not wear protective gloves longer than necessary.

After use of gloves apply skin-cleaning agents and skin cosmetics.

- **Material of gloves:** Nitrile rubber, NBR

- **Penetration time of glove material:**

Thickness: 0.4 mm; break-through time: 480 min; material: Nitrile; permeation: level 6

- **Gloves made of the following materials are not suitable:**

Gloves for mechanical protection do not provide protection against chemicals.

- **Eye protection:**



Face shield (visor)

A device for rinsing eyes must be available at the work place.

Use visor in combination with goggles.

- **Body protection:**



Protective clothing.

Full head, face and neck protection.

- **Risk management measures**

The operators shall be instructed adequately.

The workplace shall be inspected regularly by competent personnel e.g. the safety representative.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- **General Information**

- **Appearance:**

Form:

Liquid

Colour:

Clear, colourless to slightly yellowish

Odour:

alcoholic

Odour threshold:

Not determined

pH-value:

6-8

Change in condition

Melting point/Melting range:

- 31 °C

Boiling point/Boiling range:

92 °C

Flash point:

34 °C (ISO 13736 - S 3535)

Ignition temperature:

260 °C (IPA)

Self-inflammability:

Product is not self-igniting.

Danger of explosion:

Fumes can combine with air to form an explosive mixture.

Critical values for explosion:



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Lower:	2.0 Vol % (IPA)
Upper:	12.0 Vol % (IPA)
Vapour pressure at 20 °C:	48 hPa (IPA)
Density at 20 °C	0.895-0.915 g/cm ³
Solubility in / Miscibility with	
Water:	Fully miscible
Organic solvents:	20 %
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity: Corrosive action on metals possible.

- 10.2 Chemical stability

- Conditions to be avoided:

Before handling, the product should not be diluted or mixed with other chemicals, in order to avoid any negative influences on the ingredient(s).

- Minimum shelf life: 24 months from production date.

10.3 Possibility of hazardous reactions: No dangerous reactions known.

10.4 Conditions to avoid: No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products:

None, if storage and handling is done according to specification

SECTION 11: Toxicological information

11.1 Information on toxicological effects

- Acute toxicity

Harmful if swallowed.

- LD/LC50 values that are relevant for classification:

Oral: LD50 658 mg/kg (rat)

Dermal: LD50 > 2000 mg/kg (rat)

- Evaluation: Harmful if swallowed.

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

- Results of studies: 7173-51-5 didecyldimethylammonium chloride

Dermal: OECD 404 (skin) corrosive (rabbit) (OECD 404)

- Serious eye damage/irritation: Causes serious eye damage.

- Sensitisation: Non sensitising.

- Results of studies: 7173-51-5 didecyldimethylammonium chloride



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Sensitisation	OECD 406 (Buehler)	not sensitising (Guinea pig) (OECD 406) S 464
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- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** May cause drowsiness or dizziness.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: 7 173-51-5 didecyldimethylammonium chloride	
EC50 / 48h:	0.06 mg/l (Daphnia)
EC50 / 96h:	0.12 mg/l (Selenastrum capricornutum)
LC50 / 96h:	0.97 mg/l (Brachydanio rerio)

- Evaluation:

Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

- Toxicity on activated sludge organisms:

7173-51-5 didecyldimethylammonium chloride

EC0 2 mg/l (Activated Sludge)

- **Evaluation:** Depending on concentration, toxic effects on activated sludge organisms are possible.

- 12.2 Persistence and degradability

- Degree of elimination:

- Biodegradability: 7173-51-5 didecyldimethylammonium chloride	
OECD 301 D Closed-Bottle-Test	> 70 % (Activated Sludge) (OECD 301 D) S 598

- **Evaluation:** The component(s) is (are) rapidly biodegradable.

- **Evaluation:** The substances are biodegradable/eliminable in activated sludge units.

12.3 Bio accumulative potential

BCF / LogKow: 7173-51-5 didecyldimethylammonium chloride	
OECD 117 Log Kow (HPLC method)	(n-Octanol/water) (OECD 117) not determinable
OECD 305 Biokonzentrationsfaktor BCF	81 BCF (Fish) (OECD 305) literature

- **Evaluation:** Not worth-mentioning accumulating in organisms

12.4 Mobility in soil



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No further relevant information available.

12.5 Results of PBT and vPvB assessment

- **PBT:** This mixture does not contain substances that meet the PBT-criteria of REACH, annex XIII.
- **vPvB:** This mixture does not contain substances that meet the vPvB-criteria of REACH, annex XIII.

12.6 Other adverse effects Any other adverse effects on the environment are not expected.

12.7 Additional information

- **Metals and their compounds according Directive 2006/11/EC:** None
- **European Water Framework Directive 2000/60/EC (WFD) dated 23.10.2000:**

The product does not contain any priority substances according WFD that require a water monitoring.

- **Absorbable organic halogen compounds (AOX - DIN EN ISO 9562):**

The product does not contain substances, which can influence the AOX of waste water.

Care should be paid to properly washing out the chloride when performing the AOX method.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- **Recommendation**

Must be specially treated under adherence to official regulations.

Appropriate disposal operations according to Directive 2008/98/EC on waste: D 10 Incineration on land.

- **European waste catalogue**

16 00 00	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 03 00	Off-specification batches and unused products
16 03 05*	Organic wastes containing dangerous substances

- **Contaminated packaging:**

- **Recommendation:** Packaging can be reused or recycled after cleaning.
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

14.1 UN-Number

- **ADR, IMDG, IATA**

UN2920

- **14.2 UN proper shipping name**

- **ADR:**

2920 CORROSIVE LIQUID, FLAMMABLE, N.O.S.

(didecyldimethylammonium chloride,
ISOPROPANOL (ISOPROPYL ALCOHOL)),

ENVIRONMENTALLY HAZARDOUS

- **IMDG:**

CORROSIVE LIQUID, FLAMMABLE, N.O.S.

(didecyldimethylammonium chloride,

Trade name: **Bio Cleanze**

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- IATA

ISOPROPANOL (ISOPROPYL ALCOHOL)),
MARINE POLLUTANT
CORROSIVE LIQUID, FLAMMABLE, N.O.S.
(didecyldimethylammonium chloride,
ISOPROPANOL (ISOPROPYL ALCOHOL))

14.3 Transport hazard class(es)

- ADR



- Class

8 (CF1) Corrosive substances.

- Label

8 + 3

- IMDG



- Class:

8 Corrosive substances.

- Label:

8/3

- IATA



Class

8 Corrosive substances.

- Label:

8 (3)

14.4 Packing group

- ADR, IMDG, IATA

II

- 14.5 Environmental hazards:

- Marine pollutant:

Yes

Symbol (fish and tree)

- Special marking (ADR):

Symbol (fish and tree)

- 14.6 Special precautions for user

Warning: Corrosive substances.

- Kemler Number:

83

- EMS Number:

F-E,S

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

Not applicable.

- Transport/Additional information:

- ADR

- Limited quantities (LQ)

1L

- Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

- Transport category

2

- Tunnel restriction code

D/E



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- IMDG

- Limited quantities (LQ)

1L

- Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

- IATA

- Remarks:

Packing Instructions / max. net weight: Passenger aircraft: 851 / 1 L; Cargo aircraft: 855 / 30 L

- UN "Model Regulation":

UN 2920 CORROSIVE LIQUID, FLAMMABLE, N.O.S. (DIDECYLDIMETHYLAMMONIUM CHLORIDE, ISOPROPANOL (ISOPROPYL ALCOHOL)), 8 (3), II, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

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

- National regulations:

- Information about limitation of use:

Take note of Directive 94/33/EC on the protection of young people at work.

Take note of Directive 92/85/EC on the safety and health of pregnant women at work.

- Regulations which may apply in event of accident: **Control of Major Accident Hazards (COMAH)**

Critical quantity values according to the regulations on accidents (Seveso Directive) should be adhered to.

- Indication of VOC:

- VOC according to Directive 1999/13/EC: VOC-value: 20 % (calculated)

- VOC according to Decopaint Directive (2004/42/EC): Max. VOC-content: 181 g/L.

- SVOC according to EU-Ecolabel for interior and exterior paints (2014/312/EU):

This product does not contain any Semi Volatile Organic Compounds in the definition of the 2014/312/EU.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This data is based on our current knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally valid contractual relationship.

- Relevant phrases

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.



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H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

- Training hints

Further information regarding the directions for use can be found in the Product Data Sheet.

- Classification according to Regulation (EC) No 1272/2008

The classification includes the relevant available information about the mixture or the substances contained therein.

The evaluation of the available information within the scope of classification refers to the forms and aggregate states in which the mixture has been placed on the market and will be used most likely.

- **Contact for technical information:** support@benzsoftwash.com

- Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

PBT: persistent, bioaccumulative, toxic

vPvB: very persistent, very bioaccumulative

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Met. Corr.1: Corrosive to metals, Hazard Category 1

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

- Key literature references and sources for data:

Data source(s): Biocidal product dossier(s)

Own studies (reference to S-number).