



mirius™
A Coventry Group Company

SAFETY DATA SHEET

ReFresh! Antibacterial Cleaner

According to the REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577, as amended.

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

1.1. Product identifier

| | |
|----------------|--------------------------------|
| Product name | ReFresh! Antibacterial Cleaner |
| Product number | 800-301-0501 |
| Container size | 750 ml |

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

| | |
|----------------------|--|
| Identified uses | Detergent. Disinfectant. |
| Uses advised against | Not for Oral Consumption. Do not use for personal cleansing. Use only for intended applications. |

1.3. Details of the supplier of the safety data sheet

| | |
|----------------|--|
| Supplier | MIRIUS™ A Coventry Group Company Coventry Chemicals Limited, Woodhams Road, Siskin Drive, Coventry, England, CV3 4FX Coventry Chemicals (Ireland) Limited, 4th Floor 8-34 Percy Place, Dublin, D04 P5K3, Ireland. +44 (0)2476639739 www.mirius.com info@mirius.com |
| Contact person | For content of safety data sheet:, sds@mirius.com |

1.4. Emergency telephone number

| | |
|---------------------|---|
| Emergency telephone | +44 (0) 1865407333 (Strictly for emergencies only: incidents involving damage to human health and/or the environment) |
|---------------------|---|

| | |
|-------------------------------------|---|
| National emergency telephone number | UK: In case of a medical emergency following exposure to a chemical call NHS Direct in England or Wales 0845 46 47 or NHS 24 in Scotland 08454 24 24 24 Ireland: For information or to report a poisoning incident contact The National Poisons Information Centre (01 8092166) |
|-------------------------------------|---|

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (SI 2019 No. 720)

| | |
|-----------------------|----------------|
| Physical hazards | Not Classified |
| Health hazards | Not Classified |
| Environmental hazards | Not Classified |

2.2. Label elements

| | |
|-------------------|-------------------|
| Hazard statements | NC Not Classified |
|-------------------|-------------------|

ReFresh! Antibacterial Cleaner

| | |
|---|--|
| Precautionary statements | P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P264 Wash contaminated skin thoroughly after handling. P262 Do not get in eyes, on skin, or on clothing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/ attention. P501 Dispose of contents/ container in accordance with local regulations. |
| Biocide Labelling | This product contains substances with biocidal properties., Contains active substance: Alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/BKC (C12-16)), 0.13g/100g |
| Detergent labelling | < 5% disinfectants |
| Supplementary precautionary statements | P103 Read label before use. |

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB. This product is not classified as, nor contains substances classed as having endocrine disrupting characteristics at levels >0.1% by weight (according to Regulation (EU) 2018/605). The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC) >0.1% published by the European Chemicals Agency (ECHA) under article 57 of the REACH regulation (as amended).

SECTION 3: Composition/information on ingredients

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------|---|
| Inhalation | Move affected person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues. |
| Ingestion | Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention if any discomfort continues. |
| Skin contact | Rinse immediately with plenty of water. Remove contaminated clothing. Get medical attention if irritation persists after washing. |
| Eye contact | Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing. Show this Safety Data Sheet to the medical personnel. |

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

| | |
|---------------------|--|
| Inhalation | Unlikely to be hazardous by inhalation because of the low vapour pressure of the product at ambient temperature. Abusive inhalation may cause irritation, remove to fresh air. |
| Ingestion | Unlikely exposure route without abuse. Symptoms will include, Sickness, possible Irritation of GI Tract. A soapy taste may be reported. |
| Skin contact | Prolonged contact may cause redness, irritation and dry skin. |
| Eye contact | May cause temporary eye irritation. |

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

| | |
|-----------------------------|---|
| Notes for the doctor | No specific recommendations. Treat symptomatically. |
|-----------------------------|---|

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|-------------------------------------|---|
| Suitable extinguishing media | The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire. Foam, carbon dioxide or dry powder. |
|-------------------------------------|---|

ReFresh! Antibacterial Cleaner

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Oxides of carbon. Toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Control run-off water by containing and keeping it out of sewers and watercourses.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions For personal protection, see Section 8. In case of spills, beware of slippery floors and surfaces.

For emergency responders Wear self-contained breathing apparatus. Wear protective clothing, gloves, eye and face protection. Dilute with plenty of water. Do not allow uncontrolled discharge of product into the environment. Evacuate unnecessary personnel.

6.2. Environmental precautions

Environmental precautions Collect and dispose of spillage as indicated in Section 13. Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if safe to do so. Absorb in vermiculite, dry sand or earth and place into containers. Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Provide adequate ventilation. Avoid contact with skin and eyes. Do not mix with other chemicals or detergents.

Advice on general occupational hygiene No specific hygiene procedures recommended but good personal hygiene practices should always be observed when working with chemical products. Wash at the end of each work shift and before eating, smoking and using the toilet.

7.2. Conditions for safe storage, including any incompatibilities

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

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Ingredient comments No exposure limits known for ingredient(s).

ALKYL (C12-16) DIMETHYLBENZYL AMMONIUM CHLORIDE (ADBAC/BKC (C12-16)) (CAS: 68424-85-1)

ReFresh! Antibacterial Cleaner

| | |
|-------------|--|
| DNEL | Workers - Dermal; Long term systemic effects: 5.7 mg/kg/day Workers - Inhalation; Long term systemic effects: 3.96 mg/m ³ General population - Oral; Long term systemic effects: 3.4 mg/kg/day General population - Dermal; Long term systemic effects: 3.4 mg/kg/day General population - Inhalation; Long term systemic effects: 1.64 mg/m ³ |
| PNEC | - Fresh water; 0.001 mg/l Intermittent release, Fresh water; 0 mg/l marine water; 0.001 mg/l STP; 0.4 mg/l Sediment (Freshwater); 12.27 mg/kg Sediment (Marinewater); 13.09 mg/kg Soil; 7 mg/kg |

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation.

Personal protection

This is not a COSHH/risk assessment, but should be used to assist in the development of a COSHH/risk assessment. Although unclassified, the use of gloves and eye protection should be considered when mitigating risks.

Eye/face protection

No specific eye protection required during normal use.

Hand protection

For users with sensitive skin, it is recommended that suitable protective gloves are worn.

Other skin and body protection

Wear appropriate clothing to prevent repeated or prolonged skin contact. Use appropriate skin cream to prevent drying of skin.

Hygiene measures

Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Use appropriate skin cream to prevent drying of skin.

Respiratory protection

Respiratory protection not required.

Environmental exposure controls

Avoid releasing into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|---|
| Appearance | Liquid. |
| Colour | Colourless. |
| Odour | Perfume. |
| Odour threshold | Not available. |
| pH | pH (concentrated solution): 10.0-11.5 |
| Melting point | Not determined. |
| Initial boiling point and range | No information available. |
| Flash point | This product does not sustain combustion. |

ReFresh! Antibacterial Cleaner

| | |
|---|--|
| Evaporation rate | No information available. |
| Evaporation factor | Not applicable. |
| Flammability (solid, gas) | Not flammable |
| Upper/lower flammability or explosive limits | No information available. |
| Other flammability | Not applicable. |
| Vapour pressure | No information available. |
| Vapour density | Not determined. |
| Relative density | 0.995 - 1.005 @ 20°C |
| Bulk density | Not applicable. |
| Solubility(ies) | Soluble in water. |
| Partition coefficient | Not technically possible for a mixture. |
| Auto-ignition temperature | No information available. |
| Decomposition Temperature | Not determined. |
| Viscosity | Not determined. |
| Explosive properties | There are no chemical groups present in the product that are associated with explosive properties. |
| Explosive under the influence of a flame | Not considered to be explosive. |
| Oxidising properties | There are no chemical groups present in the product that are associated with oxidising properties. |
| Comments | Information given is applicable to the product as supplied. |

9.2. Other information

| | |
|--------------------------|-----------------|
| Other information | Not relevant. |
| Refractive index | 0.4-1.0 |
| Particle size | Not applicable. |

SECTION 10: Stability and reactivity

10.1. Reactivity

| | |
|-------------------|---|
| Reactivity | There are no known reactivity hazards associated with this product. |
|-------------------|---|

10.2. Chemical stability

| | |
|------------------|--|
| Stability | Stable at normal ambient temperatures. |
|------------------|--|

10.3. Possibility of hazardous reactions

| | |
|---|-----------------|
| Possibility of hazardous reactions | Not applicable. |
|---|-----------------|

10.4. Conditions to avoid

| | |
|----------------------------|---|
| Conditions to avoid | Avoid exposure to high temperatures or direct sunlight. |
|----------------------------|---|

10.5. Incompatible materials

ReFresh! Antibacterial Cleaner

Materials to avoid No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects Information given is based on data of the components and of similar products.

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Skin corrosion/irritation Not classified. Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation Not sensitising. Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Not classified. Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Does not contain any substances known to be mutagenic.

Carcinogenicity

Carcinogenicity Does not contain any substances known to be carcinogenic.

Reproductive toxicity

Reproductive toxicity - fertility Does not contain any substances known to be toxic to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

General information

This product has low toxicity.

Inhalation

The product is considered to be a low hazard under normal conditions of use. Unlikely route of exposure, but in abuse use, vapours may irritate the throat and nose.

Ingestion

May cause irritation. Symptoms following overexposure may include the following: Stomach pain. Nausea, vomiting. Diarrhoea.

ReFresh! Antibacterial Cleaner

Skin contact Skin irritation should not occur when used as recommended. Repeated exposure may cause skin dryness or cracking.

Eye contact May cause temporary eye irritation.

11.2 Information on other hazards

11.2.1. Endocrine disrupting properties This product is not classified as, nor contains substances classed as having endocrine disrupting characteristics at levels >0.1% by weight (according to Regulation (EU) 2018/605).

11.2.2 Other information None known

Toxicological information on ingredients.

ALKYL (C12-16) DIMETHYLBENZYL AMMONIUM CHLORIDE (ADBAC/BKC (C12-16))

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 397.5

Species Rat

ATE oral (mg/kg) 397.5

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 3,412.5

Species Rabbit

ATE dermal (mg/kg) 3,412.5

Skin corrosion/irritation

Skin corrosion/irritation Corrosive to skin.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

Respiratory sensitisation

Respiratory sensitisation Not sensitising.

Skin sensitisation

Skin sensitisation Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro This substance has no evidence of mutagenic properties.

Carcinogenicity

Carcinogenicity Not classified.

Reproductive toxicity

Reproductive toxicity - fertility Not classified.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified. Swallowing concentrated chemical may cause severe internal injury.

Specific target organ toxicity - repeated exposure

ReFresh! Antibacterial Cleaner

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Not classified.

SECTION 12: Ecological information

Ecotoxicity There are no data on the ecotoxicity of this product. Not regarded as dangerous for the environment.

12.1. Toxicity

Toxicity Not considered toxic to fish.

Ecological information on ingredients.

ALKYL (C12-16) DIMETHYLBENZYL AMMONIUM CHLORIDE (ADBAC/BKC (C12-16))

Acute aquatic toxicity

| | |
|---|---|
| LE(C)₅₀ | 0.01 < L(E)C ₅₀ ≤ 0.1 |
| M factor (Acute) | 10 |
| Acute toxicity - fish | LC ₅₀ , 96 hours: 0.515 mg/l, Lepomis macrochirus (Bluegill) |
| Acute toxicity - aquatic invertebrates | EC ₅₀ , 48 hours: 0.016 mg/l, Daphnia magna |
| Acute toxicity - aquatic plants | LC ₅₀ , : 0.03 mg/l, |
| <u>Chronic aquatic toxicity</u> | |
| NOEC | 0.001 < NOEC ≤ 0.01 |
| Degradability | Rapidly degradable |
| M factor (Chronic) | 1 |
| Chronic toxicity - fish early life stage | NOEC, : 0.32 mg/l, |
| Chronic toxicity - aquatic invertebrates | NOEC, : 0.025 mg/l, Daphnia magna NOEC, : 0.009 mg/l, Freshwater algae |

12.2. Persistence and degradability

Persistence and degradability The surfactant(s) contained in this product complies(comply) with the biodegradability criteria as laid down in The Detergents Regulations (as amended).

Ecological information on ingredients.

ALKYL (C12-16) DIMETHYLBENZYL AMMONIUM CHLORIDE (ADBAC/BKC (C12-16))

| | |
|-------------------------------|---|
| Phototransformation | REACH dossier information. Air - Half-life : 0.25 days |
| Stability (hydrolysis) | REACH dossier information. - Half-life : 1 year @ 20°C |
| Biodegradation | - 63-95%: 28 days |

12.3. Bioaccumulative potential

ReFresh! Antibacterial Cleaner

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not technically possible for a mixture.

Ecological information on ingredients.

ALKYL (C12-16) DIMETHYLBENZYL AMMONIUM CHLORIDE (ADBAC/BKC (C12-16))

Bioaccumulative potential Low potential for bioaccumulation.

Partition coefficient log Kow: 2.75

12.4. Mobility in soil

Mobility The product is water-soluble and may spread in water systems.

Ecological information on ingredients.

ALKYL (C12-16) DIMETHYLBENZYL AMMONIUM CHLORIDE (ADBAC/BKC (C12-16))

Henry's law constant 0 Pa m³/mol @ 20°C

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Endocrine disrupting properties

Endocrine disrupting properties This product is not classified as, nor contains substances classed as having endocrine disrupting characteristics at levels >0.1% by weight (according to Regulation (EU) 2018/605).

Ecological information on ingredients.

ALKYL (C12-16) DIMETHYLBENZYL AMMONIUM CHLORIDE (ADBAC/BKC (C12-16))

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current UK criteria.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible.

Disposal methods The packaging must be empty (drop-free when inverted). Wash with plenty of water. Waste packaging should be collected for reuse or recycling. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Normal use solutions are expected to be flushed to sewers.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

ReFresh! Antibacterial Cleaner

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

Not applicable.

SECTION 15: Regulatory information

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

National regulations

The Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No. 2677) (as amended).
EH40/2005 Workplace exposure limits.
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].
The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019 (as amended).
The Detergents (Amendment) (EU Exit) Regulations 2019 (S.I. 2019/672); Detergents (Safeguarding) (Amendment) (EU Exit) Regulations 2019 (S.I. 2019/671); Detergents (Amendment) (EU Exit) Regulations 2020 (S.I. 2020-1617) - as amended
The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 (SI 2020 No. 1577) (as amended).

EU legislation

European Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (as amended)
European Regulation (EC) No 1907/2006 - Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended)
European Regulation (EC) No 648/2004 on detergents (as amended)
European Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products (BPR) as amended
Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) 1907/2006.

Guidance

Workplace Exposure Limits EH40.
COSHH Essentials.
ECHA Guidance on the Application of the CLP Criteria.
ECHA Guidance on the compilation of safety data sheets.

ReFresh! Antibacterial Cleaner

15.2. Chemical safety assessment

Currently we do not have information from our suppliers about this.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet PBT: Persistent, Bioaccumulative and Toxic substance.
vPvB: Very Persistent and Very Bioaccumulative.

Revision comments NOTE: Lines within the margin indicate significant changes from the previous revision. Note: Finished product SDS take their revision history from the parent bulk liquid SDS. The revision data will show that of the parent liquid. Review with no changes to classification

Revision date 06/03/2023

Revision 9

Supersedes date 29/06/2022

SDS number 23383

Risk phrases in full Not classified.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.
----- END OF SDS -----