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Revision: 10 July 2020 Version number: 5

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

1.1 Product identifier — **MMC-PRO**

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

Hard surface biocide

Uses advised against: not available.

1.3 Details of the supplier of the safety data sheet

Brinton Products Ltd.
24 Roseneath Road
London SW11 6AH
Tel 0845 2505976; Fax 0870 429 2035
admin@brintonproducts.co.uk

1.4 Emergency telephone number — 01865 407333

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008: Skin Irrit 2, H315; Eye Dam 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 3, H412.

See Section 16 'Other information' for full text of the H-statements.

2.2 Label elements

Signal word: Danger

Hazard statements:
Causes skin irritation.
Causes serious eye damage.
Very toxic to aquatic life.
Harmful to aquatic life with long lasting effects.

Precautionary statements

prevention:
Do not breathe mist/spray.
Wear protective gloves and eye/face protection.
Collect spillage.

response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

storage: None.

disposal: Dispose of contents/container in accordance with local/national regulation.

Supplemental: None.

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information

2.3 Other hazards Not available.

SECTION 3: Composition/information on ingredients

3.2 Mixtures [a,b]

Declarable components	*Conc. (wt%)*	*EC No.*	*CAS No.*	*Reg. No.*	*Classification*
Didecyldimeth-ylammonium chloride (DDAC)	5–10	230-525-2	7173-51-5	01-2119945987-15	Acute Tox 4, H302; Skin Corr 1B, H314; Eye Dam 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 2, H411
Propan-2-ol	1–5	200-661-7	67-63-0	01-2119457558-25	Flam Liq 2, H225; Eye Irrit 2, H319; STOT SE 3, H336
C9-11 Alcohol, ethoxylated	Ca. 1	NA	68439-46-3	NA	Acute Tox 4, H302; Eye Dam 1, H318
Other components					
Water	>75	231-791-2	7732-18-5	NA	Not classified

[a] NA: not available.

[b] See Section 16 'Other information' for full text of the H-statements.

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation: If inhalation is suspected, remove exposed person to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms, call a doctor.

Skin: Wash with plenty of soap and water. Call a doctor if irritation or other symptoms occur. Wash contaminated clothing before re-use.

Eye: In case of contact with eyes, irrigate with room-temperature water for several minutes, occasionally lifting eyelids. Speed is essential. Remove any contact lenses if easy to do. Continue rinsing. Get immediate medical attention.

Ingestion: If swallowed, rinse mouth thoroughly and give water to drink. Get medical attention. Do not induce vomiting, unless instructed by medical personnel.

4.2 Most important symptoms and effects, both acute and delayed Causes burns to eye, and digestive tract. Causes skin irritation. Inhalation of mist or spray may irritate or burn the respiratory system.

4.3 Indication of any immediate medical attention and special treatment needed Treat symptoms as they occur. Dilution of the product with water will reduce its hazardous properties.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable	Water spray, carbon dioxide, dry chemical powder and alcohol-resistant foam are recommended.
Unsuitable	Not available

5.2 Special hazards arising from the substance or mixture — The product is an aqueous solution. However, if heated or involved in a fire product may produce flammable or toxic vapours and gases.

5.3 Advice for firefighters — Remove product from fire or cool with water spray. Firefighters should wear self-contained breathing apparatus and full protective clothing.

Prevent water from firefighting from entering water-courses or drainage system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures — For large spills, wear personal protection. Keep unauthorised personnel from the spillage area. Ventilate area and extinguish all sources of ignition. Take precautionary measures against static discharge and use non-sparking equipment. May cause slip hazard. Follow prescribed procedures for responding to spills and reporting to authorities.

6.2 Environmental precautions — Prevent product from entering water courses or drainage system by using bunding or absorption with inert material.

6.3 Methods and material for containment and cleaning up — Stop the source of leak or release. Clean up spill as soon as possible.

For small quantities, wipe off with cloth or paper, and wash affected area with water and detergent.

For large quantities, recover by using appropriate techniques such as pumping, or absorption with an inert material such as dry sand. Wash contaminated surfaces with water and detergent.

Collect spill, contaminated materials, and washings in a container for disposal.

6.4 Reference to other sections — For recommended personal protective equipment, see Section 8.

For disposal considerations, see Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling — Avoid contact with skin and eyes. Wear protective clothing as in Section 8. Good general ventilation is recommended. Wash hands after handling. Keep away from sources of ignition. Use only non-sparking equipment. Take precautionary measures against static discharge, and electrically ground container and receiving equipment.

7.2 Conditions for safe storage, including any incompatibilities — Keep containers in a cool, dry place. Recommended storage temperature: 20° C.

7.3 Specific end use(s) — Not available.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

EU limit values	None.
UK limit values	Propan-2-ol: WEL: 8 h TWA, 999 mg/m^3 (400 ppm); 15 min, 1250 mg/m^3 (500 ppm).
Monitoring procedure	BS EN 14042:2003; Workplace Atmospheres; Guide for the Application and Use of Procedures for the Assessment of Exposure to Chemical and Biological Agents, or specific national equivalent.
Other: human health (DNELs, DMELs)	DDAC: DNELs: workers, long-term exposure, systemic effects, inhalation, 18.2 mg/m^3; workers, long-term exposure, systemic effects, dermal, 8.6 mg/kg/d. Propan-2-ol: DNELs: worker, long-term exposure, systemic effects, dermal, 888 mg/kg/day; worker, long-term exposure, systemic effects, inhalation, 500 mg/m^3.
Other: environmental (PNEC)	DDAC: PNECs: freshwater, 0.002 mg/L; intermittent release, 0.0003 mg/L; sewage treatment plant, 0.595 mg/L; freshwater sediment, 2.82 mg/kg dry sediment; soil, 1.4 mg/kg dry soil. Propan-2-ol: PNECs: freshwater, 140.9 mg/L; intermittent release, 140.9 mg/L; sewage treatment plant, 2251 mg/L; freshwater sediment, 552 mg/kg dry sediment; soil, 28 mg/kg dry soil.

8.2 Exposure controls

Engineering controls	Good general ventilation is recommended for the workplace.
Personal protective equipment	For professional use, the need for personal protective equipment should be based on a workplace risk assessment for the particular use. Avoid skin and eye contact by wearing chemical resistant gloves (eg rubber, 0.4 mm, or nitrile) and safety goggles. Where more extensive contact may occur, wear protective clothing (eg overalls, boots). Wear respiratory protective equipment if exposure to spray is possible. PPE should be to European (EN) standards.
Environmental exposure controls	Not available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Clear, colourless liquid
Odour	Bland
Odour threshold	Not available
pH	Neutral
Melting/freezing point	Not available (0 °C for water)
Initial boiling point/range	Not available (82.3 °C for propan-2-ol; 100 °C for water)

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Flash point	Not available (12 °C for propan-2-ol)
Evaporation rate	Not available
Flammability (solid, gas)	Not applicable
Flamm. or expl. limits	Propan-2-ol: lower explosive limit 2, upper explosive limit 13 vol%
Vapour pressure	Not available (6020 Pa at 25 °C for propan-2-ol)
Vapour density	Not available
Relative density	0.995
Solubilities	Soluble in water
Partition coeff. (log K_{ow})	Not available
Auto-ignition temp.	Not available
Decomposition temp.	Not available
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 Not available.

10.2 Chemical stability Stable under recommended storage conditions. No hazardous polymerisation.

10.3 Possibility of hazardous reactions Not available.

10.4 Conditions to avoid Avoid storage at high temperatures, or in direct sunlight.

10.5 Incompatible materials Water-reactive substances, acids, and strong oxidizing agents.

10.6 Hazardous decomposition products Not available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity	The product is not expected to meet the criteria for classification by the oral, dermal or inhalation routes. DDAC: LD_{50} (oral, rat), 329 mg/kg; LD_{50} (dermal, rabbit), >1000 mg/kg.
Skin corrosion/irritation	Not classified as corrosive (test on mixture). Classified as irritant (test on mixture). May cause irritation of the linings of the mouth, throat and gastro-intestinal tract. DDAC: classified as corrosive to skin.

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Serious eye damage/irritation	Ocular irritation and damage may occur (test on mixture). DDAC: classified as causing serious damage to eyes.
Respiratory or skin sensitisation	Based on available information, the product is not expected to meet the criteria for classification. DDAC: not sensitising (Buehler test in the guinea pig)
Germ cell mutagenicity	Based on available information, the product is not expected to meet the criteria for classification.
Carcinogenicity	Based on available information, the product is not expected to meet the criteria for classification.
Reproductive toxicity	Based on available information, the product is not expected to meet the criteria for classification.
STOT-single exposure	Based on available information, the product is not expected to meet the criteria for classification. Propan-2-ol: may cause drowsiness and dizziness.
STOT-repeated exposure	Based on available information, the product is not expected to meet the criteria for classification.
Aspiration hazard	Based on available information, the product is not expected to meet the criteria for classification.

SECTION 12: Ecological information

12.1 Toxicity

The product is expected to be very toxic to aquatic organisms.

DDAC: LC_{50} (fish, 96 h, Method OECD 203), 0.49 mg/L; EC_{50} (Daphnia magna, 48 h), 0.029 mg/L; NOEC (Daphnia magna, 21 d, Method OECD 211), 0.021 mg/L; ErC_{50} (algae, 72 h, Method OECD 201), 0.062 mg/L, NOEC, 0.013 mg/L. EC_{10} (activated sludge, 3 h), 5.95 mg/L. M-factor (acute), 10.

12.2 Persistence and degradability

DDAC: rapidly biodegradable (>70% in OECD 301 D closed-bottle test).

12.3 Bioaccumulative potential

DDAC has been shown not to bioaccumulate (bioconcentration factor 81, 46 d, bluegill sunfish).

12.4 Mobility in soil

Not available.

12.5 Results of PBT and vPvB assessment

DDAC: does not meet the criteria for PBT or vPvB.

12.6 Other adverse effects

Not available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

The recommended disposal for industrial or professional use is incineration. Small amounts of product may be suitable for dilution and disposal via the drains or in landfill.

Disposal must be in accordance with current national and local regulations. For professional use, chemical residues generally count as special waste, and their disposal may be regulated in the EC member countries through corresponding laws and regulations. General EU requirements are given in the Waste Framework Directive (75/442/EEC)

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and the Hazardous Waste Directive (91/689/EEC).

SECTION 14: Transport information

14.1 UN Number	3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N O S (contains didecyldimethylammonium chloride)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environmental hazards	Marine pollutant/environmentally hazardous
14.6 Special precautions for user	Not available
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	*UK*: Control of Substances Hazardous to Health Regulations 2002 (COSHH), as amended (also implementing 90/394/EEC on carcinogens at work). COSHH Essentials: Easy Steps to Control Chemicals; HSE Books 2003 (also available on the HSE web site). Workplace Exposure Limits EH40/2005 (Third edition, 2018); Health and Safety Executive. Approved under the Control of Pesticides Regulations (COPR), 1986, as amended: HSE number 7824. The surfactant contained in this mixture complies with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. *Ireland*: PCS number 93764.
15.2 Chemical safety assessment	Not available.

SECTION 16: Other information

Revisions	This SDS is the fifth version in EU format, superseding version four of 13 June 2019. The COPR HSE number has been added to Section 15.
Abbreviations	DNEL, derived no-effect level; DMEL, derived minimum effect level; EC, effect concentration; NOEC, No-observed-effect-concentration; PBT, persistent, bioaccumulative, and toxic; STOT RE, specific organ toxicity repeated exposure; STOT SE, specific target organ toxicity single exposure; vPvB, very persistent, very bioaccumulative.
References	Search for chemicals; available at the European Chemicals Agency (ECHA) website: http://echa.europa.eu/.

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	Supplier safety data sheets.
Basis of classification	The mixture is self-classified on the basis of available information on the ingredients.
List of hazard statements	H225: Highly flammable liquid and vapour; H302: Harmful if swallowed; H314: Causes severe skin burns and eye damage; H315: Causes skin irritation; H318: Causes serious eye damage; H319: Causes serious eye irritation; H336: May cause drowsiness or dizziness; H400: Very toxic to aquatic life; H410: Very toxic to aquatic life with long lasting effects; H411: Toxic to aquatic life with long lasting effects; H412: Harmful to aquatic life with long lasting effects.