SAFETY DATA SHEET
Aquaguard (Radiance)

According to the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practise, 2021.

SECTION 1: Identification: Product identifier and chemical identity

Product identifier

Product name Aquaguard (Radiance)

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

Application Car maintenance product.

Uses advised against For professional use only. This product is not recommended for any industrial, professional or consumer use other than the Identified uses above.

Details of the supplier of the safety data sheet

Supplier
Autosmart Australia
11 Darrambal Close
Rathmines
NSW 2283
Australia
www.autosmartaustralia.com.au
Tel: 02 49 75 14 88 (Mon to Fri, 08:00 - 16:00 AEST) (General Information. Transport Information. Mild Medical Information)
autosmart@autosmartaustralia.com.au

Contact Person Mr. Russell Butler

Emergency telephone number

Emergency telephone
NCEC - For Chemical Emergency Support ONLY (spill, leak, fire, exposure or accident), Call NCEC at 18000 74234 (toll free 24Hrs) - when calling please quote "AUTOSMART 29003-NCEC"
Local number +61 2 8 014 4558
General Information. Transport Information. Mild medical Information:-
Tel: 02 49 75 14 88 (Mon to Fri, 08:00 - 16:00 AEST)

National emergency telephone number Poison Information Hotline: 13 11 26

SECTION 2: Hazard(s) identification

Classification of the substance or mixture

Physical hazards Not Classified

Health hazards Skin Corr. 1B - H314 Eye Dam. 1 - H318

Environmental hazards Aquatic Acute 2 - H401 Aquatic Chronic 3 - H412

Label elements

Aquaguard (Radiance)

Hazard pictograms

Signal word	DANGER
Hazard statements	H314 Causes severe skin burns and eye damage. H401 Toxic to aquatic life. H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	P260 Do not breathe vapour/ spray. P264 Wash contaminated skin thoroughly after handling. P273 Avoid release to the environment. P280 Wear protective gloves, eye and 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. P501 Dispose of contents/ container in accordance with national regulations.
Supplemental label information	For professional users only.
Contains	Dicocodimethylammonium chloride, Tallow alkylamine ethoxylate (CE35)

Other hazards

This product does not contain any substances classified as PBT (persistent, bioaccumulative and toxic) or vPvB (very persistent and very bioaccumulative).

SECTION 3: Composition and information on ingredients

Mixtures

2-BUTOXYETHANOL **20<30%**

CAS number: 111-76-2

Substance with a Community workplace exposure limit.

Classification

Acute Tox. 4 - H302
Acute Tox. 4 - H312
Acute Tox. 4 - H332
Skin Irrit. 2 - H315
Eye Irrit. 2A - H319

Aquaguard (Radiance)

Dicocodimethylammonium chloride **5<10%**

CAS number: 61789-77-3

M factor (Acute) = 1

Classification
Acute Tox. 4 - H302
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Aquatic Acute 1 - H400
Aquatic Chronic 2 - H411

DISTILLATES (PETROLEUM), HYDROTREATED MIDDLE; GASOIL - UNSPECIFIED **3<5%**

CAS number: 64742-46-7

Classification
Asp. Tox. 1 - H304

Silicone Quaternium-17 (Polymer) **3<5%**

CAS number: 519142-86-0

Classification
Aquatic Chronic 3 - H412

Isopropyl alcohol **2<3%**

CAS number: 67-63-0

Substance with a Community workplace exposure limit.

Classification
Flam. Liq. 2 - H225
Eye Irrit. 2A - H319
STOT SE 3 - H336

Tallow alkylamine ethoxylate (CE35) **1<1.25%**

CAS number: 61791-26-2

Classification
Acute Tox. 4 - H302
Acute Tox. 2 - H330
Eye Dam. 1 - H318
Aquatic Chronic 2 - H411

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

Description of first aid measures

General information Get medical attention immediately. Show this Safety Data Sheet to the medical personnel. Chemical burns must be treated by a physician.

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Inhalation Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.

Ingestion Rinse mouth thoroughly with water. Remove any dentures. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.

Skin Contact It is important to remove the substance from the skin immediately. Take off immediately all contaminated clothing. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention. Chemical burns must be treated by a physician.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue. If it is suspected that volatile contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

Most important symptoms and effects, both acute and delayed

General information See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation A single exposure may cause the following adverse effects: Severe irritation of nose and throat. Symptoms following overexposure may include the following: Corrosive to the respiratory tract.

Ingestion May cause chemical burns in mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.

Skin contact Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.

Eye contact Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

Indication of any immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

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Specific hazards	Containers can burst violently or explode when heated, due to excessive pressure build-up. Severe corrosive hazard. Water used for fire extinguishing, which has been in contact with the product, may be corrosive.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Very toxic or corrosive gases or vapours.

Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
Special protective equipment for firefighters	Regular protection may not be safe. Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to Australia/New Zealand Standards AS/NZS 4967 (for clothing) AS/NZS 1801 (for helmets), AS/NZS 4821 (for protective boots), AS/NZS 1801 (for protective gloves) will provide a basic level of protection for chemical incidents.
Hazchem Code	2X

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Avoid inhalation of vapours and spray/mists. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes. Avoid contact with contaminated tools and objects.

Environmental precautions

Environmental precautions	Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

Methods for cleaning up	Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. This product is corrosive. Approach the spillage from upwind. Small Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Large Spillages: If leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labelled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Reference to other sections

Aquaguard (Radiance)

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage, including how the chemical may be safely used

Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. This product is corrosive. Immediate first aid is imperative. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). Store in accordance with local regulations. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Bund storage facilities to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.

Storage class Corrosive storage.

Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.

SECTION 8: Exposure controls and personal protection

Control parameters

Occupational exposure limits

2-BUTOXYETHANOL

Long-term exposure limit (8-hour TWA): 20 ppm 96.9 mg/m³
Short-term exposure limit (15-minute): 50 ppm 242 mg/m³
Sk

Isopropyl alcohol

Long-term exposure limit (8-hour TWA): 400 ppm 983 mg/m³
Short-term exposure limit (15-minute): 500 ppm 1230 mg/m³
Sk = Absorption through the skin may be a significant source of exposure.

Dicocodimethylammonium chloride (CAS: 61789-77-3)

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

DISTILLATES (PETROLEUM), HYDROTREATED MIDDLE; GASOIL - UNSPECIFIED (CAS: 64742-46-7)

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

Tallow alkylamine ethoxylate (CE35) (CAS: 61791-26-2)

Aquaguard (Radiance)

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

Exposure controls

Protective equipment

Appropriate engineering controls

Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with Australia/New Zealand Standard AS/NZS 1337. Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. The breakthrough time for any glove material may be different for different glove manufacturers. To protect hands from chemicals, gloves should comply with Australia/New Zealand Standard AS/NZS 2161. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended. The choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. When used with mixtures, the protection time of gloves cannot be accurately estimated. Gloves made from the following material may provide suitable chemical protection: Nitrile rubber. Thickness: >0.2mm The selected gloves should have a breakthrough time of at least 0.5 hours. Glove thickness is not necessarily a good measure of glove resistance as the permeation rate will depend on the exact glove composition. Repeated exposure to chemicals will degrade the ability of the glove to provide resistance to chemicals. Specific work environments and material handling practices may vary, therefore safety procedures should be developed for each intended application. Use thin cotton gloves inside natural rubber gloves if there is an allergy risk to natural rubber.

Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

Hygiene measures

Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.

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Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and complies with Australia/New Zealand Standard AS/NZS 1716. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with Australia/New Zealand Standard AS/NZS 1716. Full face mask respirators with replaceable filter cartridges should comply with Australia/New Zealand Standard AS/NZS 1716. Half mask and quarter mask respirators with replaceable filter cartridges should comply with Australia/New Zealand Standard AS/NZS 1716.
Environmental exposure controls	Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Store in a demarcated bunded area to prevent release to drains and/or watercourses.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Pink.
Odour	Fruity.
pH	pH (concentrated solution): ~ 7.1 pH (diluted solution): ~ 7.1 @ 1%
Flash point	~ 59°C Closed cup.
Other flammability	This product does not sustain combustion, according to the sustained combustibility test L.2, Part III, section 32 of the UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria.
Comments	Information declared as "Not available" or "Not applicable" is not considered to be relevant to the implementation of the proper control measures.
Other information	No information required.

SECTION 10: Stability and reactivity

Reactivity	See the other subsections of this section for further details.
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
Possibility of hazardous reactions	No potentially hazardous reactions known.
Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.
Materials to avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Corrosive gases or vapours.

SECTION 11: Toxicological information

Information on toxicological effects

Aquaguard (Radiance)

Acute toxicity - oral

Notes (oral LD_{50})	Based on available data the classification criteria are not met.
ATE oral (mg/kg)	2,671.98

Acute toxicity - dermal

Notes (dermal LD_{50})	Based on available data the classification criteria are not met.
ATE dermal (mg/kg)	4,305.55

Acute toxicity - inhalation

Notes (inhalation LC_{50})	Based on available data the classification criteria are not met.
ATE inhalation (vapours mg/l)	22.01

Skin corrosion/irritation

Animal data	Skin Corr. 1B - H314 Causes severe burns.

Serious eye damage/irritation

Serious eye damage/irritation	Eye Dam. 1 - H318 Corrosive to skin. Corrosivity to eyes is assumed.

Respiratory sensitisation

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

Skin sensitisation

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

Germ cell mutagenicity

Genotoxicity - in vitro	Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	Contains a substance which may be potentially carcinogenic. IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Reproductive toxicity

Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.

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	Based on available data the classification criteria are not met.

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Corrosive to the respiratory tract. Symptoms following overexposure may include the following: Severe irritation of nose and throat.
Ingestion	May cause chemical burns in mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.

Aquaguard (Radiance)

Skin Contact	Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target Organs	No specific target organs known.

Toxicological information on ingredients.

2-BUTOXYETHANOL

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	1,300.0
Species	Rat
ATE oral (mg/kg)	1,300.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,270.0
Species	Rat
ATE dermal (mg/kg)	1,100.0

Acute toxicity - inhalation

ATE inhalation (vapours mg/l)	11.0

Skin sensitisation

Skin sensitisation	Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro	Gene mutation:: Negative. This substance has no evidence of mutagenic properties.

Carcinogenicity

IARC carcinogenicity	IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Reproductive toxicity

Reproductive toxicity - fertility	Fertility: - NOAEL 720 mg/kg, , Mouse
Reproductive toxicity - development	Developmental toxicity: - NOAEL: 100 mg/kg, , Rat

Dicocodimethylammonium chloride

Other health effects	There is no evidence that the product can cause cancer.

Isopropyl alcohol

Acute toxicity - oral

Aquaguard (Radiance)

Acute toxicity oral (LD_{50} mg/kg)	5,840.0
Species	Rat
Notes (oral LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	16.4
Species	Rabbit
Notes (dermal LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC_{50})	Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data	Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation	Causes serious eye irritation.

Respiratory sensitisation

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

Skin sensitisation

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

Germ cell mutagenicity

Genotoxicity - in vitro	Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Reproductive toxicity

Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure	STOT SE 3 - H336 May cause drowsiness or dizziness.
Target organs	Central nervous system

Specific target organ toxicity - repeated exposure

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

Aspiration hazard

Aspiration hazard	Based on available data the classification criteria are not met. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

Aquaguard (Radiance)

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Headache. Nausea, vomiting. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo. Narcotic effect.
Ingestion	A single exposure may cause the following adverse effects: Confusion, agitation and/or excitation. Symptoms following overexposure may include the following: May cause nausea, headache, dizziness and intoxication. Unconsciousness.
Skin Contact	A single exposure may cause the following adverse effects: Temporary irritation. Prolonged contact may cause dryness of the skin.
Eye contact	Irritating to eyes.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target Organs	Central nervous system

Tallow alkylamine ethoxylate (CE35)

Other health effects	There is no evidence that the product can cause cancer.
Acute toxicity - oral	
Notes (oral LD_{50})	Acute Tox. 4 - H302 Harmful if swallowed.
Acute toxicity - dermal	
Notes (dermal LD_{50})	Based on available data the classification criteria are not met.
Acute toxicity - inhalation	
Notes (inhalation LC_{50})	Acute Tox. 2 - H330 Fatal if inhaled.
ATE inhalation (vapours mg/l)	0.5
Skin corrosion/irritation	
Animal data	Based on available data the classification criteria are not met.
Extreme pH	≥ 11.5 Corrosive.
Serious eye damage/irritation	
Serious eye damage/irritation	Eye Dam. 1 - H318 Causes serious eye damage.
Respiratory sensitisation	
Respiratory sensitisation	Based on available data the classification criteria are not met.
Skin sensitisation	
Skin sensitisation	Based on available data the classification criteria are not met.
Germ cell mutagenicity	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
Carcinogenicity	
Carcinogenicity	Based on available data the classification criteria are not met.

Aquaguard (Radiance)

IARC carcinogenicity	None of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.

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	Based on available data the classification criteria are not met.

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Difficulty in breathing. Unconsciousness, possibly death.
Ingestion	May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.
Skin Contact	Prolonged contact may cause dryness of the skin.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target Organs	No specific target organs known.

SECTION 12: Ecological information

Ecological information on ingredients.

Isopropyl alcohol

Ecotoxicity	Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

Tallow alkylamine ethoxylate (CE35)

Ecotoxicity	The product contains substances which are toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

Toxicity Aquatic Chronic 3 - H412 Harmful to aquatic life with long lasting effects.

Ecological information on ingredients.

2-BUTOXYETHANOL

Acute aquatic toxicity

Acute toxicity - fish	LC50, 96 hours: > 100 mg/l, Lepomis macrochirus (Bluegill)

Aquaguard (Radiance)

Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 1550 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, >: > 100 mg/l,
Acute toxicity - microorganisms	EC_{50}, >: > 1000 mg/l,

Chronic aquatic toxicity

Chronic toxicity - fish early life stage	NOEC, 21 days: > 100 mg/l,
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 100 mg/l, Daphnia magna

Dicocodimethylammonium chloride

Acute aquatic toxicity

LE(C)$_{50}$	0.1 < L(E)C50 ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LC_{50}, 96 hours: 0.195 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 0.01-0.1 mg/l, Daphnia magna

Silicone Quaternium-17 (Polymer)

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: > 10 - 100 mg/l, Brachydanio rerio (Zebra Fish)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: > 10 - 100 mg/l, Daphnia magna

Isopropyl alcohol

Toxicity	Based on available data the classification criteria are not met.

Acute aquatic toxicity

Acute toxicity - fish	LC50, 96 hours: ~ 9640 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC_{50}, >: > 1000 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 72 hours: > 1000 mg/l, Scenedesmus subspicatus
Acute toxicity - microorganisms	EC_{50}, >: > 1000 mg/l, Activated sludge

Tallow alkylamine ethoxylate (CE35)

Toxicity	Aquatic Chronic 2 - H411 Toxic to aquatic life with long lasting effects.

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: 1.3 mg/l, Fish

Aquaguard (Radiance)

Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 1.7 mg/l, Daphnia magna

Persistence and degradability

Persistence and degradability The degradability of the product is not known.

Ecological information on ingredients.

2-BUTOXYETHANOL

Persistence and degradability	The product is biodegradable.
Biodegradation	Water - Degradation (%) 90.4: 28 days

Dicocodimethylammonium chloride

Persistence and degradability	The product is biodegradable.

Silicone Quaternium-17 (Polymer)

Persistence and degradability	The product is biodegradable.

Isopropyl alcohol

Persistence and degradability	The product is readily biodegradable.
Biodegradation	Degradation (%) - 95: 21 days
Biological oxygen demand	~ 1171 g O_2/g substance
Chemical oxygen demand	~ 2294 g O_2/g substance

Tallow alkylamine ethoxylate (CE35)

Persistence and degradability	The degradability of the product is not known.

Bioaccumulative potential

Bioaccumulative Potential No data available on bioaccumulation.

Ecological information on ingredients.

2-BUTOXYETHANOL

Bioaccumulative Potential	The product is not bioaccumulating.
Partition coefficient	: 0.81

Dicocodimethylammonium chloride

Bioaccumulative Potential	The product does not contain any substances expected to be bioaccumulating.

Isopropyl alcohol

Aquaguard (Radiance)

Bioaccumulative Potential No data available on bioaccumulation.

Partition coefficient log Pow: 0.05

Tallow alkylamine ethoxylate (CE35)

Bioaccumulative Potential No data available on bioaccumulation.

Mobility in soil

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

Ecological information on ingredients.

2-BUTOXYETHANOL

Mobility The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.

Adsorption/desorption coefficient Water - Koc: ~ 67 @ °C

Henry's law constant 0.000016 atm m3/mol @ °C

Surface tension 65 mN/m @ °C

Dicocodimethylammonium chloride

Mobility The product is soluble in water.

Isopropyl alcohol

Mobility The product is water-soluble and may spread in water systems. Volatile liquid. The product contains organic solvents which will evaporate easily from all surfaces.

Adsorption/desorption coefficient Water - Koc: ~ 1.1 @ °C

Henry's law constant 0.00000338 atm m3/mol @ 25°C

Tallow alkylamine ethoxylate (CE35)

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

Other adverse effects

Other adverse effects None known.

Ecological information on ingredients.

Isopropyl alcohol

Other adverse effects None known.

Tallow alkylamine ethoxylate (CE35)

Other adverse effects None known.

SECTION 13: Disposal considerations

Waste treatment methods

Aquaguard (Radiance)

General information

The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods

Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: Transport information

UN number

UN No. (ADG) 1760

UN No. (IMDG) 1760

UN No. (ICAO) 1760

UN proper shipping name

Proper shipping name (ADG) CORROSIVE LIQUID, N.O.S. (CONTAINS Dicocodimethylammonium chloride)

Proper shipping name (IMDG) CORROSIVE LIQUID, N.O.S. (CONTAINS Dicocodimethylammonium chloride)

Proper shipping name (ICAO) CORROSIVE LIQUID, N.O.S. (CONTAINS Dicocodimethylammonium chloride)

Transport hazard class(es)

ADG class 8

ADG classification code C9

ADG label 8

IMDG class 8

ICAO class/division 8

Transport labels

Packing group

ADG packing group II

IMDG packing group II

ICAO packing group II

Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

Special precautions for user

Aquaguard (Radiance)

EmS	F-A, S-B
Hazchem Code	2X
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

SECTION 15: Regulatory information

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

National regulations

The Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
National Code of Practice for the Preparation of Material Safety Data Sheets.
Approved Criteria for Classifying Hazardous Substances.
Exposure Standards for Atmospheric Contaminants in the Occupational Environment.
Guidance Note on the Interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment.
National Code of Practice for the Labelling of Workplace Substances.
National Model Regulations for the Control of Workplace Hazardous Substances.
National Code of Practice for the Control of Workplace Hazardous Substances.
National Standard for the Storage and Handling of Workplace Dangerous Goods.
National Code of Practice for the Storage and Handling of Workplace Dangerous Goods.
Guidance Note for Placarding Stores for Dangerous Goods and Specified Hazardous Substances. Guidance Note for the Assessment of Health Risks Arising from Hazardous Substances in the Workplace.
National Standard for the Control of Major Hazard Facilities. National Code of Practice for the Control of Major Hazard Facilities.

Schedule (SUSMP) Schedule 6. Poison.

Inventories

Australia - AIIC

All the ingredients are listed or exempt.

SECTION 16: Any other relevant information

Abbreviations and acronyms used in the safety data sheet

ADG: Australian dangerous goods code

IATA: International air transport association.
ICAO: Technical instructions for the safe transport of dangerous goods by air.
IMDG: International maritime dangerous goods.
CAS: Chemical abstracts service.
ATE: Acute toxicity estimate.
LC_{50}: Lethal concentration to 50 % of a test population.
LD_{50}: Lethal dose to 50% of a test population (median lethal dose).
EC_{50}: 50% of maximal effective concentration.
PBT: Persistent, bioaccumulative and toxic substance.
vPvB: Very persistent and very bioaccumulative.

Classification abbreviations and acronyms

Eye Dam. = Serious eye damage
Skin Corr. = Skin corrosion
Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Training advice Read and follow manufacturer's recommendations. Only trained personnel should use this material.

Aquaguard (Radiance)

Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
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Revision date	7/06/2021
Revision	2
Supersedes date	25/02/2019
SDS No.	21669
SDS status	Approved.
Hazard statements in full	H225 Highly flammable liquid and vapour. H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H318 Causes serious eye damage. H319 Causes serious eye irritation. H330 Fatal if inhaled. H332 Harmful if inhaled. H336 May cause drowsiness or dizziness. H400 Very toxic to aquatic life. H401 Toxic to aquatic life. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.