



SAFETY DATA SHEET

Marine Descaler

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 Marine Descaler

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

Application Cleaning agent.

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 Met. Corr. 1 - H290

Health hazards Acute Tox. 4 - H302 Acute Tox. 3 - H311 Skin Corr. 1A - H314 Eye Dam. 1 - H318

Environmental hazards Not Classified

Label elements

Marine Descaler

Hazard pictograms



Signal word

DANGER

Hazard statements

H290 May be corrosive to metals.
 H302 Harmful if swallowed.
 H311 Toxic in contact with skin.
 H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe vapour/ spray.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 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.
 P310 Immediately call a POISON CENTER or doctor/ physician.
 P321 Specific treatment (see medical advice on this label).

Supplemental label information

For professional users only.

Contains

SULPHURIC ACID 8.5%, hydrochloric acid 3.2%, Alcohols, C12-14, ethoxylated, hydrofluoric acid 0.98%

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

SULPHURIC ACID 8.5%

5<10%

CAS number: 7664-93-9

Substance with a Community workplace exposure limit.

Classification

Skin Corr. 1A - H314

Eye Dam. 1 - H318

hydrochloric acid 3.2%

3<5%

CAS number: 7647-01-0

Substance with a Community workplace exposure limit.

Classification

Met. Corr. 1 - H290

Skin Corr. 1B - H314

Eye Dam. 1 - H318

STOT SE 3 - H335

Marine Descaler

Alcohols, C12-14, ethoxylated 1.5<1.75% CAS number: 68439-50-9
Classification Skin Irrit. 2 - H315 Eye Dam. 1 - H318
hydrofluoric acid 0.98% 0.7<1.0% CAS number: 7664-39-3 Substance with a Community workplace exposure limit.
Classification Acute Tox. 2 - H300 Acute Tox. 1 - H310 Acute Tox. 2 - H330 Skin Corr. 1A - H314 Eye Dam. 1 - H318 STOT SE 3 - H335

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.
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. Care should be taken to avoid contact with contaminants when removing contaminated clothing. First aid personnel should wear appropriate protective equipment during any rescue. Rinse immediately with plenty of water. Continue to rinse for at least 10 minutes. Apply Calcium Gluconate Gel over the affected areas. Get medical attention immediately. Effects may be delayed. Chemical burns must be treated by a physician. Show this Safety Data Sheet to the medical personnel. Wash contaminated clothing before reuse.
Eye contact	Get medical attention immediately. Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes. Consult a physician for specific advice. Effects may be delayed. Medical aid should instil several drops of sterile calcium gluconate solution. Show this Safety Data Sheet to the medical personnel.

Marine Descaler

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. Effects may be delayed. Keep affected person under observation. 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: Corrosive to the respiratory tract. Symptoms following overexposure may include the following: Delayed, often serious, breathing problems. 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.

Skin contact A single exposure may cause the following adverse effects: Pain. Reddened skin if chemical is not removed by washing. Later, white and wrinkled skin without pain, often with delayed skin burns. Small amounts may cause serious damage.

Eye contact Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness. Vapour or spray may cause eye damage, impaired sight or blindness.

Indication of any immediate medical attention and special treatment needed

Notes for the doctor Specific notes for fluoride derivatives: Keep affected person under observation. If calcium gluconate gel is available, rub it into affected skin. Do not use this method for treatment of eyes. Massage continuously until pain disappears. If ingested, give milk or calcium gluconate by mouth. Development of symptoms may be delayed for 24 to 48 hours.

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

Specific hazards Containers can burst violently or explode when heated, due to excessive pressure build-up. This product is toxic.

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. 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. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

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Special protective equipment for firefighters 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 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. Do not use sawdust or other combustible material. Provide adequate ventilation. 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. Neutralise with alkali. Caution. May generate heat. Following dilution and neutralisation, discharge to the sewer with plenty of water may be permitted. The requirements of the local water authority must be complied with if contaminated water is flushed directly to the sewer. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Reference to other sections

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 toxic. Immediate first aid is imperative. 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.

Marine Descaler

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. Store away from the following materials: Alkalis. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Store in corrosive resistant container with a resistant inner liner. 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

Toxic 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

SULPHURIC ACID 8.5%

Long-term exposure limit (8-hour TWA): 1 mg/m³

Short-term exposure limit (15-minute): 3 mg/m³

hydrochloric acid 3.2%

Ceiling value: 5 ppm 7.5 mg/m³

hydrofluoric acid 0.98%

Ceiling value: 3 ppm 2.6 mg/m³
as F

Alcohols, C12-14, ethoxylated (CAS: 68439-50-9)

Ingredient comments

No exposure limits known for ingredient(s).

Alcohols C9-11, ethoxylated (CAS: 68439-46-3)

Ingredient comments

No exposure limits known for ingredient(s).

Quaternary ammonium compounds, coco alkylbis(hydroxyethyl)methyl, ethoxylated, chlorides (CAS: 61791-10-4)

Ingredient comments

No exposure limits known for ingredient(s).

Exposure controls

Protective equipment



Marine Descaler

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.

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.

Marine Descaler

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 banded 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	Red.
Odour	Acidic.
Odour threshold	Not available.
pH	pH (concentrated solution): ~ 1.0
Melting point	~ 0°C
Initial boiling point and range	~ 100°C @ 760 mm Hg
Flash point	Not applicable.
Evaporation rate	Not available. «59» «184» «109020»
Flammability Limit - Lower(%)	Not applicable.
Vapour pressure	Not available.
Relative density	~ 1.063 @ 20°C
Solubility(ies)	Soluble in water. Miscible with water.
Partition coefficient	Not available.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Not available.
Viscosity	~1 cSt @ 20°C
Oxidising properties	Not applicable.
Comments	Information declared as "Not available" or "Not applicable" is not considered to be relevant to the implementation of the proper control measures.
Volatile organic compound	This product contains a maximum VOC content of 0 g/l.

SECTION 10: Stability and reactivity

Reactivity	May be corrosive to metals.
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	Alkalis. Amines. Mild steel. Stainless steel. Aluminium. May be corrosive to metals.

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Hazardous decomposition products Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Acute Tox. 4 - H302 Harmful if swallowed.

ATE oral (mg/kg) 509.01

Acute toxicity - dermal

Notes (dermal LD₅₀) Acute Tox. 3 - H311 Toxic in contact with skin.

ATE dermal (mg/kg) 509.01

Acute toxicity - inhalation

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

ATE inhalation (vapours mg/l) 50.9

ATE inhalation (dusts/mists mg/l) 5.09

Skin corrosion/irritation

Animal data Corrosive.

Extreme pH ≤ 2 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.

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.

Marine Descaler

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Prolonged inhalation of high concentrations may damage respiratory system.
Ingestion	May cause chemical burns in mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.
Skin Contact	A single exposure may cause the following adverse effects: Pain. Unconsciousness, possibly death. Harmful: possible risk of irreversible effects in contact with skin.
Eye contact	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness. Contact with concentrated chemical may very rapidly cause severe eye damage, possibly loss of sight.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target Organs	No specific target organs known.

Toxicological information on ingredients.

SULPHURIC ACID 8.5%

Toxicological effects No data recorded.

hydrochloric acid 3.2%

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 1,449.0

Species Mouse

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 5,010.0

Species Rabbit

Skin sensitisation

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

Carcinogenicity

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

Alcohols, C12-14, ethoxylated

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

Animal data Irritating.

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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.

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 Prolonged inhalation of high concentrations may damage respiratory system.

Ingestion May cause irritation.

Skin Contact Redness. Irritating to 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.

hydrofluoric acid 0.98%

Toxicological effects This product is toxic.

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

Acute toxicity - inhalation

Marine Descaler

ATE inhalation (vapours mg/l)	0.5
ATE inhalation (dusts/mists mg/l)	0.05
Acute and chronic health hazards	This chemical can be hazardous when inhaled and/or touched. Toxic in contact with skin.
Route of exposure	Inhalation Skin absorption Ingestion.
Target Organs	Bone structure Heart & cardiovascular system Teeth Central nervous system
Medical Symptoms	Reddened skin if chemical is not removed by washing. Later, white and wrinkled skin without pain, often with delayed skin burns.

SECTION 12: Ecological information

Ecotoxicity The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.

Ecological information on ingredients.

SULPHURIC ACID 8.5%

Ecotoxicity The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.

hydrochloric acid 3.2%

Ecotoxicity The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.

Alcohols, C12-14, ethoxylated

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

hydrofluoric acid 0.98%

Ecotoxicity The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.

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

Ecological information on ingredients.

hydrochloric acid 3.2%

Acute aquatic toxicity

Acute toxicity - fish LC50, 96 hours: ~ 7.45 mg/l, *Oncorhynchus mykiss* (Rainbow trout)
LC50, 96 hours: ~ 24.6 mg/l, *Lepomis macrochirus* (Bluegill)
LC₅₀, 96 hours: 4-100 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: ~ 0.492 mg/l, *Daphnia magna*

Marine Descaler

Acute toxicity - aquatic plants EC₅₀, 72 hours: ~ 0.78 mg/l, Selenastrum capricornutum

Alcohols, C12-14, ethoxylated

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

hydrofluoric acid 0.98%

Acute aquatic toxicity

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: ~ 10.6 mg/l, Daphnia magna

Persistence and degradability

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

Ecological information on ingredients.

SULPHURIC ACID 8.5%

Persistence and degradability The product is biodegradable.

hydrochloric acid 3.2%

Persistence and degradability The product contains inorganic substances which are not biodegradable.

Alcohols, C12-14, ethoxylated

Persistence and degradability The product is readily biodegradable.

hydrofluoric acid 0.98%

Persistence and degradability The product contains inorganic substances which are not biodegradable.

Bioaccumulative potential

Bioaccumulative Potential No data available on bioaccumulation.

Partition coefficient Not available.

Ecological information on ingredients.

SULPHURIC ACID 8.5%

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

hydrochloric acid 3.2%

Bioaccumulative Potential The product is not bioaccumulating.

Alcohols, C12-14, ethoxylated

Bioaccumulative Potential No data available on bioaccumulation.

Partition coefficient Not available.

Marine Descaler

hydrofluoric acid 0.98%

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

Mobility in soil

Mobility The product is non-volatile.

Ecological information on ingredients.

SULPHURIC ACID 8.5%

Mobility The product is soluble in water.

hydrochloric acid 3.2%

Mobility The product is soluble in water.

Alcohols, C12-14, ethoxylated

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

hydrofluoric acid 0.98%

Mobility The product is soluble in water.

Other adverse effects

Other adverse effects None known.

Ecological information on ingredients.

Alcohols, C12-14, ethoxylated

Other adverse effects None known.

SECTION 13: Disposal considerations

Waste treatment methods

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

General

For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

UN number

Marine Descaler

UN No. (ADG)	2922
UN No. (IMDG)	2922
UN No. (ICAO)	2922

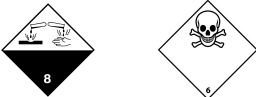
UN proper shipping name

Proper shipping name (ADG)	CORROSIVE LIQUID, TOXIC, N.O.S. (CONTAINS SULPHURIC ACID, HYDROFLUORIC ACID)
Proper shipping name (IMDG)	CORROSIVE LIQUID, TOXIC, N.O.S. (CONTAINS SULPHURIC ACID, HYDROFLUORIC ACID)
Proper shipping name (ICAO)	CORROSIVE LIQUID, TOXIC, N.O.S. (CONTAINS SULPHURIC ACID, HYDROFLUORIC ACID)

Transport hazard class(es)

ADG class	8
ADG subsidiary risk	6.1
ADG classification code	CT1
ADG label	8
IMDG class	8
IMDG subsidiary risk	6.1
ICAO class/division	8
ICAO subsidiary risk	6.1

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

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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.

Marine Descaler

SECTION 15: Regulatory information

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

National regulations	<p>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.</p>
Schedule (SUSMP)	Schedule 6. Poison.

Inventories

Australia - AIC

All the ingredients are listed or exempt.

SECTION 16: Any other relevant information

Abbreviations and acronyms used in the safety data sheet	<p>ADG: Australian dangerous goods code</p> <p>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. LC₅₀: Lethal concentration to 50 % of a test population. LD₅₀: Lethal dose to 50% of a test population (median lethal dose). EC₅₀: 50% of maximal effective concentration. PBT: Persistent, bioaccumulative and toxic substance. vPvB: Very persistent and very bioaccumulative.</p>
Classification abbreviations and acronyms	<p>Met. Corr. = Corrosive to metals Acute Tox. = Acute toxicity Eye Dam. = Serious eye damage Skin Irrit. = Skin irritation</p>
Training advice	Read and follow manufacturer's recommendations. Only trained personnel should use this material.
Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Issued by	<p>Prepared by Autosmart International Ltd, Lynn Lane, Shenstone, Lichfield, Staffordshire, WS14 0DH, Great Britain. www.autosmartinternational.com rbutler@autosmart.co.uk Tel +44 (0)1543 481616</p>

Marine Descaler

Revision date	26/05/2021
Revision	2
Supersedes date	16/05/2018
SDS No.	22257
SDS status	Approved.
Hazard statements in full	H290 May be corrosive to metals. H300 Fatal if swallowed. H302 Harmful if swallowed. H310 Fatal in contact with skin. H311 Toxic in contact with skin. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H318 Causes serious eye damage. H330 Fatal if inhaled. H335 May cause respiratory irritation.

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.