SAFETY DATA SHEET
Red Wheel Acid

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 Red Wheel Acid

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

Application Car maintenance product. - Aluminium cleaner

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 Acute Tox. 3 - H301 Acute Tox. 2 - H310 Acute Tox. 3 - H331 Skin Corr. 1A - H314 Eye Dam. 1 - H318

Environmental hazards Not Classified

Label elements

Red Wheel Acid

Hazard pictograms

Signal word	DANGER
Hazard statements	H301+H331 Toxic if swallowed or if inhaled. H310 Fatal in contact with skin. H314 Causes severe skin burns and eye damage.
Precautionary statements	P262 Do not get in eyes, on skin, or on clothing. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P308+P313 IF exposed or concerned: Get medical advice/ attention. P320 Specific treatment is urgent (see medical advice on this label). P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/ container in accordance with national regulations.
Supplemental label information	For professional users only.
Contains	hydrofluoric acid ... %, phosphoric acid ...%

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

hydrofluoric acid ... % **5<10%**

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

phosphoric acid ...% **5<10%**

CAS number: 7664-38-2

Substance with a Community workplace exposure limit.

Classification
Skin Corr. 1B - H314
Eye Dam. 1 - H318

Red Wheel Acid

C9-C11 Alcohol ethoxylate (6)	0.7<1.0%
CAS number: 68439-46-3	

Classification
Acute Tox. 4 - H302
Eye Dam. 1 - H318

2-BUTOXYETHANOL	0.7<1.0%
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

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

SECTION 4: First aid measures

Description of first aid measures

General information
CAUTION! First aid personnel must be aware of own risk during rescue! First aid personnel should wear appropriate protective equipment during any rescue. Get medical attention immediately. Effects may be delayed. Keep affected person under observation. Show this Safety Data Sheet to the medical personnel. Chemical burns must be treated by a physician.

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. Symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure. Get medical attention immediately.

Ingestion
Rinse mouth thoroughly with water. Remove any dentures. Give a few small glasses of water or milk to drink. Give milk instead of water if readily available. 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. Get medical attention immediately.

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.

Red Wheel Acid

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.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue. 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. Ingestion of even small quantities may be fatal.

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

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.

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. 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. Hydrogen fluoride (HF).

Advice for firefighters

Red Wheel Acid

Protective actions during firefighting

Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. 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 dust and vapours. 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. Do not touch or walk into spilled material. Clear up spills immediately and dispose of waste safely. This product is corrosive. Provide adequate ventilation. Approach the spillage from upwind. Small Spillages: Neutralise with alkali. 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. Neutralise spilled material with crushed limestone, slaked lime (calcium hydroxide), soda ash (sodium carbonate) or sodium bicarbonate. 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

Red Wheel Acid

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. This product is corrosive. 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. Antidote must be found in place of work.

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 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. Store at temperatures between 5°C and 35°C. 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. 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

hydrofluoric acid ... %

Ceiling value: 3 ppm 2.6 mg/m³
as F

phosphoric acid ...%

Long-term exposure limit (8-hour TWA): 1 mg/m³
Short-term exposure limit (15-minute): 3 mg/m³

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
Sk = Absorption through the skin may be a significant source of exposure.

Exposure controls

Protective equipment

Red Wheel Acid

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.

Red Wheel Acid

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	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	~ 1.055 @ 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/litre.

SECTION 10: Stability and reactivity

Reactivity	There are no known reactivity hazards associated with this product. Reacts with alkalis and generates heat.
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.

Red Wheel Acid

Materials to avoid	Alkalis. Amines.
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

Acute toxicity - oral

Notes (oral LD_{50})	Acute Tox. 3 - H301 Toxic if swallowed.
ATE oral (mg/kg)	56.24

Acute toxicity - dermal

Notes (dermal LD_{50})	Acute Tox. 2 - H310 Fatal in contact with skin.
ATE dermal (mg/kg)	56.24

Acute toxicity - inhalation

Notes (inhalation LC_{50})	Acute Tox. 4 - H332 Harmful if inhaled.
ATE inhalation (vapours mg/l)	5.62
ATE inhalation (dusts/mists mg/l)	0.56

Skin corrosion/irritation

Animal data	Skin Corr. 1A - H314 Causes severe burns.
Extreme pH	≤ 2 Corrosive.

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.

Red Wheel Acid

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.
Skin Contact	A single exposure may cause the following adverse effects: Pain. Unconsciousness, possibly death.
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.

hydrofluoric acid ... %

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

Acute toxicity - inhalation

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.

phosphoric acid ...%

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

Skin sensitisation

Skin sensitisation	Not sensitising.

C9-C11 Alcohol ethoxylate (6)

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

Red Wheel Acid

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

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.

hydrofluoric acid ... %

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

phosphoric acid ...%

Ecotoxicity	The product may contribute to an excessive enrichment of the aquatic environment with nutrients. 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.

Red Wheel Acid

Ecological information on ingredients.

hydrofluoric acid ... %

Acute aquatic toxicity

Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: ~ 10.6 mg/l, Daphnia magna

phosphoric acid ...%

Acute aquatic toxicity

Acute toxicity - fish	LC50, : 100 mg/l, Freshwater fish
Acute toxicity - aquatic invertebrates	EC_{50}, : 29 mg/l, Daphnia magna NOEC, 72 hours: 100 mg/l, Daphnia magna
Acute toxicity - aquatic plants	IC_{50}, 72 hours: 590 mg/l, Freshwater algae

C9-C11 Alcohol ethoxylate (6)

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: 10 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 10 mg/l, Daphnia magna
Acute toxicity - aquatic plants	IC_{50}, 72 hours: 10 mg/l, Algae

2-BUTOXYETHANOL

Acute aquatic toxicity

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

Persistence and degradability

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

Ecological information on ingredients.

hydrofluoric acid ... %

Red Wheel Acid

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

phosphoric acid ...%

Persistence and degradability The product contains mainly inorganic substances which are not biodegradable. The other substances in the product are expected to be readily biodegradable.

C9-C11 Alcohol ethoxylate (6)

Persistence and degradability The product is biodegradable.

2-BUTOXYETHANOL

Persistence and degradability The product is biodegradable.

Biodegradation Water - Degradation (%) 90.4: 28 days

Bioaccumulative potential

Bioaccumulative Potential No data available on bioaccumulation.

Partition coefficient Not available.

Ecological information on ingredients.

hydrofluoric acid ... %

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

phosphoric acid ...%

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

C9-C11 Alcohol ethoxylate (6)

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

2-BUTOXYETHANOL

Bioaccumulative Potential The product is not bioaccumulating.

Partition coefficient : 0.81

Mobility in soil

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

Ecological information on ingredients.

hydrofluoric acid ... %

Mobility The product is soluble in water.

phosphoric acid ...%

Mobility The product is soluble in water.

Red Wheel Acid

C9-C11 Alcohol ethoxylate (6)

Mobility	The product is soluble in water.

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

Other adverse effects

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 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

UN No. (ADG)	1790
UN No. (IMDG)	1790
UN No. (ICAO)	1790

UN proper shipping name

Proper shipping name (ADG)	HYDROFLUORIC ACID
Proper shipping name (IMDG)	HYDROFLUORIC ACID
Proper shipping name (ICAO)	HYDROFLUORIC ACID

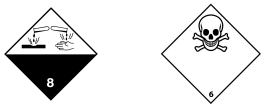
Transport hazard class(es)

ADG class 8

Red Wheel Acid

ADG subsidiary risk	6.1
ADG label	8 & 6.1
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.

SECTION 15: Regulatory information

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

Schedule (SUSMP)	Schedule 7. Dangerous Poison.

Inventories

Australia - AIIC

All the ingredients are listed or exempt.

SECTION 16: Any other relevant information

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.

Red Wheel Acid

Issued by	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
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SDS No.	21187
SDS status	Approved.
Hazard statements in full	H300 Fatal if swallowed. H301 Toxic if swallowed. H302 Harmful if swallowed. H310 Fatal in contact with skin. 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. H331 Toxic if inhaled. H332 Harmful if inhaled. H335 May cause respiratory irritation.