

SAFETY DATA SHEET



GROUT RESTORE 60

APPLIED PRODUCTS AUSTRALIA PTY LTD

Catalogue number: AP159.05

Version No: 4.1

Issue date: 05/11/2020

Safety Data Sheet according to WHS and ADG requirements

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	GROUT RESTORE 60
Product code	AP159.05
Pack sizes	5L

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

Relevant identified uses	Heavy duty Phosphoric Acid based detergent and cleaner
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Details of the supplier of the safety data sheet

Registered company name	APPLIED PRODUCTS AUSTRALIA PTY LTD
Address	11 Gamma Close, Beresfield 2322 NSW Australia
Telephone	(02) 4966 5516
Website	www.actichem.com.au
Email	info@actichem.com.au

Emergency telephone number

Association / Organisation	Poisons Information Centre
Emergency telephone numbers	13 1126
Other emergency telephone numbers	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the Model WHS Regulations and the ADG Code.

Poisons Schedule	6
GHS Classification	Serious Eye Damage Category 1, Skin Corrosion/Irritation Category 1B, Acute Toxicity (Oral) Category 4. <i>Classification drawn from HCIS and ECHA C&L Inventory.</i>

Label elements

Hazard pictograms	
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SIGNAL WORD	DANGER
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Hazard statements

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage

Precautionary statement(s) Prevention

P260	Do not breathe fumes / vapours.
P280	Wear protective gloves / protective clothing / eye protection / face protection.
P264	Wash contaminated skin thoroughly after handling

Precautionary statement(s) Response

P301+P310+P330+P331	IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting.
P303+P310+P361+P353+P352	IF ON SKIN (or hair): Immediately call a POISON CENTER or doctor. Take off immediately all contaminated clothing. Rinse skin with water/shower and soap.
P305+P310+P351+P338	IF IN EYES: Immediately call a POISON CENTER or doctor. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P310+P340	IF INHALED: Immediately call a POISON CENTER or doctor. Remove person to fresh air and keep at rest in a position comfortable for breathing.
P363	Wash contaminated clothing before reuse.

Precautionary statement(s) Storage

P405	Store locked up
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Precautionary statement(s) Disposal

P501	Dispose of contents / container in accordance with local regulations
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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
7664-38-2	60	<u>phosphoric acid</u>
Trade secret	<10	<u>proprietary</u>

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	<p>If this product comes in contact with the eyes: Seek medical advice / attention without delay. Immediately hold eyelids apart and flush the eye continuously with running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. If necessary, transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</p>
Skin Contact	<p>If skin or hair contact occurs: Seek medical advice / attention without delay. Immediately flush body and clothes with large amounts of water, using safety shower if available. Quickly remove all contaminated clothing, including footwear. Wash skin and hair with running water. Continue flushing with water for 20 minutes or until advised to stop by the Poisons Information Centre. If necessary, transport to hospital, or doctor.</p>
Inhalation	<p>If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Seek medical advice / attention without delay. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. If necessary, transport to hospital, or doctor. Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema. Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs). As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested. Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered. This must definitely be left to a doctor or person authorised by him/her.</p>
Ingestion	<p>For advice, contact a Poisons Information Centre or a doctor at once. Urgent hospital treatment is likely to be needed. If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Transport to hospital or doctor without delay.</p>

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

For acute or short term repeated exposures to strong acids:

- ▶ Airway problems may arise from laryngeal edema and inhalation exposure. Treat with 100% oxygen initially.
- ▶ Respiratory distress may require cricothyroidotomy if endotracheal intubation is contraindicated by excessive swelling. Intravenous lines should be established immediately in all cases where there is evidence of circulatory compromise.
- ▶ Strong acids produce a coagulation necrosis characterised by formation of a coagulum (eschar) as a result of the desiccating action of the acid on proteins in specific tissues.

INGESTION:

- ▶ Immediate dilution (milk or water) within 30 minutes post ingestion is recommended.
- ▶ **DO NOT attempt to neutralise the acid since exothermic reaction may extend the corrosive injury.**
- ▶ Be careful to avoid further vomit since re-exposure of the mucosa to the acid is harmful. Limit fluids to one or two glasses in an adult.
- ▶ Charcoal has no place in acid management.
- ▶ Some authors suggest the use of lavage within 1 hour of ingestion.

SKIN:

- ▶ Skin lesions require copious saline irrigation. Treat chemical burns as thermal burns with non-adherent gauze and wrapping.
- ▶ Deep second-degree burns may benefit from topical silver sulfadiazine.

EYE:

- ▶ Eye injuries require retraction of the eyelids to ensure thorough irrigation of the conjunctival cul-de-sacs. Irrigation should last at least 20-30 minutes. **DO NOT use neutralising agents or any other additives.** Several litres of saline are required.
- ▶ Cycloplegic drops, (1% cyclopentolate for short-term use or 5% homatropine for longer term use) antibiotic drops, vasoconstrictive agents or artificial tears may be indicated dependent on the severity of the injury.
- ▶ Steroid eye drops should only be administered with the approval of a consulting ophthalmologist).

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

Extinguishing media	Foam. Dry chemical powder. BCF (where regulations permit). Carbon dioxide. Water spray or fog.
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Special hazards arising from the substrate or mixture

Fire incompatibility	None known
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Advice for firefighters

Fire Fighting	Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use firefighting procedures suitable for surrounding area. Do not approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. Equipment should be thoroughly decontaminated after use.
Fire/Explosion Hazard	Non-combustible. Not considered to be a significant fire risk. Acids may react with metals to produce hydrogen, a highly flammable and explosive gas. Heating may cause expansion or decomposition leading to violent rupture of containers. May emit corrosive, poisonous fumes. May emit acid smoke. Decomposition may produce toxic fumes of phosphorus oxides (POx).
HAZCHEM	2R

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills	Check regularly for spills and leaks. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Contain and absorb spill with sand, earth, inert material or vermiculite. Wipe up. Place in a suitable, labelled container for waste disposal.
Major Spills	Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Stop leak if safe to do so. Absorb on sand, dirt, vermiculite or similar absorbent material. Place into labelled drums and dispose of according to local government regulations. Immediately notify emergency services (Police or Fire Brigade) if the spill is too large for you to safely and effectively handle.

Personal protective equipment advice is contained in Section 8 of this SDS

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	<p>DO NOT allow clothing wet with material to stay in contact with skin</p> <p>Avoid all personal contact, including inhalation.</p> <p>Wear protective clothing when risk of exposure occurs.</p> <p>Use in a well-ventilated area.</p> <p>WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material.</p> <p>Avoid smoking, naked lights or ignition sources.</p> <p>Avoid contact with incompatible materials.</p> <p>When handling, DO NOT eat, drink or smoke.</p> <p>Keep containers securely sealed when not in use.</p> <p>Avoid physical damage to containers.</p> <p>Always wash hands with soap and water after handling.</p>
Other information	<p>Store in original containers.</p> <p>Keep containers securely sealed.</p> <p>Store in a cool, dry, well-ventilated area.</p> <p>Store away from incompatible materials and foodstuff containers.</p> <p>Protect containers against physical damage and check regularly for leaks.</p> <p>Observe manufacturer's storage and handling recommendations contained within this SDS.</p>

Conditions for safe storage, including any incompatibilities

Suitable container	<p>DO NOT use aluminium or galvanised containers</p> <p>Check regularly for spills and leaks.</p> <p>Plastic pail.</p> <p>Packing as recommended by manufacturer.</p> <p>Check all containers are clearly labelled and free from leaks.</p>
Storage incompatibility	<p>Avoid storage with strong alkalis, oxidising agents and reducing agents.</p> <p>Is corrosive to aluminium, tin and zinc.</p>

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA


Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	phosphoric acid	Phosphoric acid	1 mg/m3	3 mg/m3	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
phosphoric acid	Phosphoric acid	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
phosphoric acid	10,000 mg/m3	1,000 mg/m3

Exposure controls

Appropriate engineering controls	<p>Maintain adequate ventilation at all times. In most circumstances natural ventilation systems are adequate.</p> <p>If ventilation is poor, then the use of a local exhaust ventilation system is recommended.</p>
Personal protection	
Eye and face protection	<p>Chemical goggles.</p> <p>Full face shield may be required for supplementary but never for primary protection of eyes.</p> <p>Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. Lens should be removed at the first signs of eye redness or irritation. Lens should be removed in a clean environment only after workers have washed hands thoroughly.</p>
Skin protection	<p>See Hand protection below</p>
Hands/feet protection	<p>Wear chemical protective gloves. Neoprene or butyl are recommended for this application.</p> <p>Wear safety footwear or safety gumboots, e.g. Rubber</p>
Body protection	<p>Overalls</p> <p>When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.</p>
Other protection	<p>PVC Apron.</p> <p>Eyewash unit.</p> <p>Ensure there is ready access to a safety shower.</p>
Thermal hazards	<p>Not Available</p>

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Dark green liquid		
Physical state	Liquid	Relative density (Water = 1)	1.35-1.40
Odour	Acid	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	<1	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Flammable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	Contact with alkaline material liberates heat
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	Corrosive acids can cause irritation of the respiratory tract, with coughing, choking and mucous membrane damage. There may be dizziness, headache, nausea and weakness. The material may produce respiratory tract irritation, and result in damage to the lung including reduced lung function.
Ingestion	Ingestion of acidic corrosives may produce burns around and in the mouth, the throat and oesophagus. Immediate pain and difficulties in swallowing and speaking may also be evident. As absorption of phosphates from the bowel is poor, poisoning this way is less likely. Effects can include vomiting, tiredness, fever, diarrhoea, low blood pressure, slow pulse, cyanosis, spasms of the wrist, coma and severe body spasms. Ingestion of large quantity of phosphoric acid may cause severe abdominal pains, thirst, academia, difficult breathing, convulsions, collapse, shock and death. Although less hazardous than nitric and sulfuric acid, phosphoric acid has equal corrosive action upon ingestion. Death of an individual 19 days after ingestion of phosphoric acid was due to recurrent internal haemorrhage.
Skin Contact	Skin contact with the material may be harmful; systemic effects may result following absorption. The material can produce chemical burns following direct contact with the skin. Skin contact with acidic corrosives may result in pain and burns; these may be deep with distinct edges and may heal slowly with the formation of scar tissue. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. The material may cause severe inflammation of the skin either following direct contact or after a delay of some time.
Eye	The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating. Direct eye contact with acid corrosives may produce pain, tears, sensitivity to light and burns. Mild burns of the epithelia generally recover rapidly and completely.
Chronic	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Repeated or prolonged exposure to acids may result in the erosion of teeth, swelling and/or ulceration of mouth lining. Irritation of airways to lung, with cough, and inflammation of lung tissue often occurs. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering

Toxicological effects of ingredients

Acute toxicity	Phosphoric acid	Oral LD50 (rat) 1250 mg/kg Dermal LD50 (rabbit) 2740 mg/kg
	Proprietary ingredient	Oral (calculated) 555.6 mg/kg Dermal LD50 (rabbit) >2000 mg/kg
Skin corrosion/irritation	Phosphoric acid	Corrosive to skin
	Proprietary ingredient	Maybe irritating to skin
Eye damage/irritation	Phosphoric acid	Corrosive to eyes; contact can cause corneal burns. Contamination of eyes can result in permanent injury
	Proprietary ingredient	Causes serious eye damage
Respiratory/skin sensitization	Phosphoric acid	No data available
	Proprietary ingredient	Not expected to be a skin or respiratory sensitizer
Germ cell mutagenicity	Phosphoric acid	No data available
	Proprietary ingredient	Not considered to be a mutagenic hazard
Carcinogenicity	Phosphoric acid	No data available
	Proprietary ingredient	Not considered to be carcinogenic hazard
Reproductive toxicity	Phosphoric acid	No data available
	Proprietary ingredient	Not considered to be toxic to reproduction
STOT (single exposure)	Phosphoric acid	No data available
	Proprietary ingredient	Not expected to cause toxicity to a specific target organ
STOT (repeated exposure)	Phosphoric acid	Prolonged exposures can cause necrosis of nasal passages and oedema of lungs
	Proprietary ingredient	Not expected to cause toxicity to a specific target organ
Aspiration toxicity	Phosphoric acid	No data available
	Proprietary ingredient	Not expected to be

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

	Endpoint	Duration (hr.)	Species	Value
Phosphoric acid	LC50	96	Fish	75.1mg/L
	EC50	48	Crustacea	>5.62mg/L
	EC50	72	Algae or other aquatic plants	15.29mg/L
	EC10	72	Algae or other aquatic plants	37.7mg/L
	NOEC	72	Algae or other aquatic plants	3.71mg/L

Extracted from Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
phosphoric acid	HIGH	HIGH

Bio accumulative potential

Ingredient	Bioaccumulation
phosphoric acid	LOW (LogKOW = -0.7699)

Mobility in soil

Ingredient	Mobility
phosphoric acid	HIGH (KOC = 1)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / packaging disposal	Recycle containers whenever possible. Product residues and containers should be disposed of in accordance with local government regulations
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SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
HAZCHEM	2R

Land transport (ADG) – NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS IN PACK SIZES OF 5L OR LESS

SECTION 15 REGULATORY INFORMATION

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

PHOSPHORIC ACID IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
Australian Inventory of Industrial Chemicals (AIIC)

SECTION 16 OTHER INFORMATION

Revision Schedule

Revision Date	05/11/2020
Initial Date	28/04/2016

SDS Version Summary

Version	Issue Date	Sections Updated
4.1	05/11/2020	Sections 2,5,11,12,15,16 have been updated or corrected

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources such as the ECHA C&L Chemical Inventory, HSNO (CCID) New Zealand, AICIS and HCIS Australia

DISCLAIMER: While the information in this Safety Data Sheet (SDS) is believed to be true and accurate based on the current level of knowledge available to us, the author makes no representations as to its accuracy or sufficiency. Conditions of use are beyond the control of APPLIED PRODUCTS AUSTRALIA PTY LTD and therefore the users are responsible to verify this data under their own particular conditions of use, applications and regulations to determine whether the product is suitable for their particular purpose and they assume all risks of their use, handling, disposal, reliance upon, publication or use of the information contained herein. This information applies only to the product designated above and does not necessarily apply to its use in combination with other materials, products, chemical compounds, structures, or processes

Definitions and abbreviations

PC-TWA;	Permissible Concentration-Time Weighted Average
PC-STEL;	Permissible Concentration-Short Term Exposure Limit
IARC:	International Agency for Research on Cancer
ACGIH:	American Conference of Government Industrial Hygienists
STEL:	Short Term Exposure Limit
TEEL:	Temporary Emergency Exposure Limit
IDLH:	Immediate Danger to Life or Health Concentrations
OSF:	Odour Safety Factor
NOAEL:	No Observed Effects Level
TLV:	Threshold Limit Value
LOD:	Limit Of Detection
OTV:	Odour Threshold Value
BCF:	Bio Concentration Factors
BEI:	Biological Exposure Index

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End of SDS

SAFETY DATA SHEET



GROUT RESTORE 60

APPLIED PRODUCTS AUSTRALIA PTYLTD

Catalogue number: AP159.15

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Safety Data Sheet according to WHS and ADG requirements

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	GROUT RESTORE 60
Product code	AP159.15
Pack sizes	15L
Proper shipping name	PHOSPHORIC ACID, SOLUTION

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

Relevant identified uses	Heavy duty Phosphoric Acid based detergent and cleaner
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HAZCHEM	2R

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Personal precautions, protective equipment and emergency procedures

Minor Spills	Check regularly for spills and leaks. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Contain and absorb spill with sand, earth, inert material or vermiculite. Wipe up. Place in a suitable, labelled container for waste disposal.
Major Spills	Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Stop leak if safe to do so. Absorb on sand, dirt, vermiculite or similar absorbent material. Place into labelled drums and dispose of according to local government regulations. Immediately notify emergency services (Police or Fire Brigade) if the spill is too large for you to safely and effectively handle.

	Personal protective equipment advice is contained in Section 8 of this SDS
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SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	<p>DO NOT allow clothing wet with material to stay in contact with skin</p> <p>Avoid all personal contact, including inhalation.</p> <p>Wear protective clothing when risk of exposure occurs.</p> <p>Use in a well-ventilated area.</p> <p>WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material.</p> <p>Avoid smoking, naked lights or ignition sources.</p> <p>Avoid contact with incompatible materials.</p> <p>When handling, DO NOT eat, drink or smoke.</p> <p>Keep containers securely sealed when not in use.</p> <p>Avoid physical damage to containers.</p> <p>Always wash hands with soap and water after handling.</p>
Other information	<p>Store in original containers.</p> <p>Keep containers securely sealed.</p> <p>Store in a cool, dry, well-ventilated area.</p> <p>Store away from incompatible materials and foodstuff containers.</p> <p>Protect containers against physical damage and check regularly for leaks.</p> <p>Observe manufacturer's storage and handling recommendations contained within this SDS.</p>

Conditions for safe storage, including any incompatibilities

Suitable container	<p>DO NOT use aluminium or galvanised containers</p> <p>Check regularly for spills and leaks.</p> <p>Plastic pail.</p> <p>Packing as recommended by manufacturer.</p> <p>Check all containers are clearly labelled and free from leaks.</p>
Storage incompatibility	<p>Avoid storage with strong alkalis, oxidising agents and reducing agents.</p> <p>Is corrosive to aluminium, tin and zinc.</p>

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA


Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	phosphoric acid	Phosphoric acid	1 mg/m3	3 mg/m3	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
phosphoric acid	Phosphoric acid	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
phosphoric acid	10,000 mg/m3	1,000 mg/m3

Exposure controls

Appropriate engineering controls	<p>Maintain adequate ventilation at all times. In most circumstances natural ventilation systems are adequate.</p> <p>If ventilation is poor, then the use of a local exhaust ventilation system is recommended.</p>
Personal protection	
Eye and face protection	<p>Chemical goggles.</p> <p>Full face shield may be required for supplementary but never for primary protection of eyes.</p> <p>Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. Lens should be removed at the first signs of eye redness or irritation. Lens should be removed in a clean environment only after workers have washed hands thoroughly.</p>
Skin protection	<p>See Hand protection below</p>
Hands/feet protection	<p>Wear chemical protective gloves. Neoprene or butyl are recommended for this application.</p> <p>Wear safety footwear or safety gumboots, e.g. Rubber</p>
Body protection	<p>Overalls</p> <p>When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.</p>
Other protection	<p>PVC Apron.</p> <p>Eyewash unit.</p> <p>Ensure there is ready access to a safety shower.</p>
Thermal hazards	<p>Not Available</p>

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Dark green liquid		
Physical state	Liquid	Relative density (Water = 1)	1.35-1.40
Odour	Acid	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	<1	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Flammable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	Contact with alkaline material liberates heat
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	Corrosive acids can cause irritation of the respiratory tract, with coughing, choking and mucous membrane damage. There may be dizziness, headache, nausea and weakness. The material may produce respiratory tract irritation, and result in damage to the lung including reduced lung function.
Ingestion	Ingestion of acidic corrosives may produce burns around and in the mouth, the throat and oesophagus. Immediate pain and difficulties in swallowing and speaking may also be evident. As absorption of phosphates from the bowel is poor, poisoning this way is less likely. Effects can include vomiting, tiredness, fever, diarrhoea, low blood pressure, slow pulse, cyanosis, spasms of the wrist, coma and severe body spasms. Ingestion of large quantity of phosphoric acid may cause severe abdominal pains, thirst, academia, difficult breathing, convulsions, collapse, shock and death. Although less hazardous than nitric and sulfuric acid, phosphoric acid has equal corrosive action upon ingestion. Death of an individual 19 days after ingestion of phosphoric acid was due to recurrent internal haemorrhage.
Skin Contact	Skin contact with the material may be harmful; systemic effects may result following absorption. The material can produce chemical burns following direct contact with the skin. Skin contact with acidic corrosives may result in pain and burns; these may be deep with distinct edges and may heal slowly with the formation of scar tissue. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. The material may cause severe inflammation of the skin either following direct contact or after a delay of some time.
Eye	The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating. Direct eye contact with acid corrosives may produce pain, tears, sensitivity to light and burns. Mild burns of the epithelia generally recover rapidly and completely.
Chronic	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Repeated or prolonged exposure to acids may result in the erosion of teeth, swelling and/or ulceration of mouth lining. Irritation of airways to lung, with cough, and inflammation of lung tissue often occurs. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering

Toxicological effects of ingredients

Acute toxicity	Phosphoric acid	Oral LD50 (rat) 1250 mg/kg Dermal LD50 (rabbit) 2740 mg/kg
	Proprietary ingredient	Oral (calculated) 555.6 mg/kg Dermal LD50 (rabbit) >2000 mg/kg
Skin corrosion/irritation	Phosphoric acid	Corrosive to skin
	Proprietary ingredient	Maybe irritating to skin
Eye damage/irritation	Phosphoric acid	Corrosive to eyes; contact can cause corneal burns. Contamination of eyes can result in permanent injury
	Proprietary ingredient	Causes serious eye damage
Respiratory/skin sensitization	Phosphoric acid	No data available
	Proprietary ingredient	Not expected to be a skin or respiratory sensitizer
Germ cell mutagenicity	Phosphoric acid	No data available
	Proprietary ingredient	Not considered to be a mutagenic hazard
Carcinogenicity	Phosphoric acid	No data available
	Proprietary ingredient	Not considered to be carcinogenic hazard
Reproductive toxicity	Phosphoric acid	No data available
	Proprietary ingredient	Not considered to be toxic to reproduction
STOT (single exposure)	Phosphoric acid	No data available
	Proprietary ingredient	Not expected to cause toxicity to a specific target organ
STOT (repeated exposure)	Phosphoric acid	Prolonged exposures can cause necrosis of nasal passages and oedema of lungs
	Proprietary ingredient	Not expected to cause toxicity to a specific target organ
Aspiration toxicity	Phosphoric acid	No data available
	Proprietary ingredient	Not expected to be

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

	Endpoint	Duration (hr.)	Species	Value
Phosphoric acid	LC50	96	Fish	75.1mg/L
	EC50	48	Crustacea	>5.62mg/L
	EC50	72	Algae or other aquatic plants	15.29mg/L
	EC10	72	Algae or other aquatic plants	37.7mg/L
	NOEC	72	Algae or other aquatic plants	3.71mg/L

Extracted from Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
phosphoric acid	HIGH	HIGH

Bio accumulative potential

Ingredient	Bioaccumulation
phosphoric acid	LOW (LogKOW = -0.7699)

Mobility in soil

Ingredient	Mobility
phosphoric acid	HIGH (KOC = 1)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / packaging disposal	Recycle containers whenever possible. Product residues and containers should be disposed of in accordance with local government regulations
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SECTION 14 TRANSPORT INFORMATION

Labels Required

	
Marine Pollutant	NO
HAZCHEM	2R

Land transport (ADG)

UN number	1805				
Packing group	III				
UN proper shipping name	PHOSPHORIC ACID, SOLUTION				
Environmental hazard	No relevant data				
Transport hazard class(es)	<table border="1"> <tr> <td>Class</td> <td>8</td> </tr> <tr> <td>Sub risk</td> <td>Not Applicable</td> </tr> </table>	Class	8	Sub risk	Not Applicable
Class	8				
Sub risk	Not Applicable				
Special precautions for user	<table border="1"> <tr> <td>Special provisions</td> <td>223</td> </tr> <tr> <td>Limited quantity</td> <td>5 L</td> </tr> </table>	Special provisions	223	Limited quantity	5 L
Special provisions	223				
Limited quantity	5 L				

SECTION 15 REGULATORY INFORMATION

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

PHOSPHORIC ACID IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
Australian Inventory of Industrial Chemicals (AIIC)

SECTION 16 OTHER INFORMATION

Revision Schedule

Revision Date	05/11/2020
Initial Date	28/04/2016

SDS Version Summary

Version	Issue Date	Sections Updated
4.1	05/11/2020	Sections 2,5,11,12,15,16 have been updated or corrected

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources such as the ECHA C&L Chemical Inventory, HSNO (CCID) New Zealand, AICIS and HCIS Australia

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Definitions and abbreviations

PC-TWA:	Permissible Concentration-Time Weighted Average
PC-STEL:	Permissible Concentration-Short Term Exposure Limit
IARC:	International Agency for Research on Cancer
ACGIH:	American Conference of Government Industrial Hygienists
STEL:	Short Term Exposure Limit
TEEL:	Temporary Emergency Exposure Limit
IDLH:	Immediate Danger to Life or Health Concentrations
OSF:	Odour Safety Factor
NOAEL:	No Observed Effects Level
TLV:	Threshold Limit Value
LOD:	Limit Of Detection
OTV:	Odour Threshold Value
BCF:	Bio Concentration Factors
BEI:	Biological Exposure Index

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End of SDS