Safety Data Sheet

HAZARDOUS ACCORDING TO THE CRITERIA OF N.O.H.S.C.

1. SUBSTANCE IDENTIFICATION/ PREPARATION AND COMPANY DETAILS

Product Name:	**KLEEN WALL**
Correct Shipping Name:	Corrosive Liquid, Toxic, N.O.S. (Phosphoric Acid Solution)
Recommended Use:	An acidic cleaner for car washing bay – walls and tiles.
Supplier: **ACN:**	Stelco Chemicals Pty Ltd 151 834 347
Street Address:	46-48 Henderson Road Rowville 3178 Australia
Telephone: **Facsimile:**	+61 9757 3100 +61 9763 8243
Emergency Telephone Number:	**0412 318 882**

2. HAZARDS INDENTIFICATION

Classified as Hazardous according to the criteria of NOHSC.

GHS classification:

Acute toxicity (dermal), Category 3, **H311**
Acute toxicity (inhalation), Category 2, **H330**
Acute toxicity (oral), Category 3, **H301**
Skin corrosion/irritation, Category 1B, **H314**
Serious eye damage/Eye irritation, Category 1, **H318**

Signal word: **Danger**

Hazard statements:

H301 + H311:	Toxic if swallowed or in contact with skin.
H314:	Causes severe skin burns and eye damage.
H330:	Fatal if inhaled.

Precautionary statements:

P264:	Wash hands thoroughly after handling.
P270:	Do not eat, drink or smoke when using this product.

P280:	Wear protective gloves/protective clothing/eye protection/face protection.
P303 + P361 + P353: IF ON SKIN (or hair):	Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338: IF IN EYES:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310:	Immediately call a POISON CENTER/doctor/

Hazard Category

T:	Toxic
C:	Corrosive.

Risk Phrases

R23/24/25:	Toxic by inhalation, in contact with skin and if swallowed.
R36/38:	Irritating to eyes and skin.
R35	Causes severe burns
R26	Very toxic by inhalation
R27	Very toxic in contact with skin
R28	Very toxic if swallowed
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R36/37/38	Irritating to eyes, respiratory system and skin

Safety Phrases

S2/7/9:	Keep container closed in a cool, well ventilated place.
S26:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39:	Wear suitable protective clothing, gloves and eye/face protection.
S45:	In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

Classified as Dangerous Goods for the purpose of transport by road or rail. Refer to relevant regulations for storage and transport requirements.

Poisons Schedule: S6

This material is a Scheduled Poison S6 and must be stored, maintained and used in accordance with the relevant regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemicals	CAS No.	Proportion	Risk Phrases
Blend of Phosphoric and Hydrofluoric Acid	7664-38-2 7664-39-3	25 – 30%	R34, R35
Ammonium Bifluoride	1341-49-7	< 6%	R23/24/25, R34
Glycol Monobutyl Ether	111-76-2	<5%	R20/21/22, R36/37/38
Proprietary blend of surfactants	-	<5%	R20/21/22, R36/37/38
Non-hazardous component(s)	-	50-70%	-

4. FIRST AID MEASURES

Poison Information Centres in each state Capital city can provide additional assistance for scheduled poisons,

(Phone Australia 131 126; New Zealand 03 4747 000) EVERY CONTACT WITH HYDROFLUORIC ACID MUST BE TREATED QUICKLY AND CORRECTLY. IF PROVIDING FIRST AID ENSURE THAT YOU WEAR NITRILE OR RUBBER GLOVES AND OTHER APPROPRIATE PROTECTIVE BEFORE TREATMENT BEGINS.

Ingestion: If swallowed, do NOT induce vomiting. Immediately rinse mouth with water and seek Immediate medical attention.

Skin Contact: If skin contact occurs, immediately remove contaminated clothing using nitrile or natural rubber gloves. Flush skin thoroughly under running water to remove all acid. Apply Calcium Gluconate Gel (2.5-3.0%) to and around the contaminated area with gloved fingers. Continue massage with repeated applications of the gel for 15 minutes after the pain has subsided or until medical treatment is available. Destroy all contaminated clothing. Seek immediate medical assistance.

Eye Contact: If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Urgently seek medical assistance.

Inhalation: Remove victim from exposure – avoid becoming a casualty. Remove contaminated clothing. Attend to victim's breathing and circulation, then treat affected skin as detailed above. Allow patient to assume comfortable position and keep warm. Keep at rest until fully recovered. If breathing is laboured and patient cyanotic (blue), ensure airways are clear and have a qualified person give oxygen through a face mask. If breathing has stopped apply artificial respiration at once. Seek immediate medical assistance.

Notes to physician: Treat symptomatically and as for exposure to corrosive acids.
Delayed pulmonary oedema may result. There is significant risk of low serum calcium and magnesium levels (from systematic fluoride poisoning), resulting in cardiac irregularity, when large area of skin or inhalation or ingestion are involved. Nasogastric suction with calcium gluconate solution may reduce systematic fluoride toxicity when ingested, but gastrointestinal burns must still be considered. Calcium gluconate gel should continue to be applied to the skin for 15 minutes after the pain has completely subsided. If necrotic tissue forms a barrier it should be excised, and the gel massaged into the burns. If burns fail to respond to the gel, subcutaneous injection of sterile 10% calcium gluconate solution should be considered. Relief of pain is an indication that immediate treatment is successful. Because of this, local anaesthetics are contra-indicated and generally anaesthesia should be considered for situations where the skin is tightly adhered to underlying tissue. Exposure of subungual tissue may require the removal of the nail in order to treat adequately.

5. FIRE-FIGHTING MEASURES

Specific Hazards: Non-combustible material. keep away from common metals.

Fire-fighting advice: Not combustible, however, if material is involved in a fire use: Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

Precautions for fire fighters and special protective equipment: Decomposes on heating emitting toxic fumes, including those of ammonia, and hydrogen fluoride. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

Hazchem Code: 2X

6. ACCIDENTAL RELEASE MEASURES

Clear area of all unprotected personnel. Increase ventilation. Wear full protective equipment, including nitrile or natural rubber soled footwear. Work up wind. For large spills notify Emergency Services.

Small spills: Use water only if available in large amounts to rapidly dilute the liquid and suppress most of the vapour released – dilution by a factor of at least ten is desirable.

Large spills: Contain using sand or soil – prevent runoff into drains and waterways. Spillage should be run off at a controlled rate for dilution as above. A large amount of fume will be given off from the pool of hydrogen fluoride which should be suppressed as far as possible using fog nozzles downwind of the spill.

In all cases carefully neutralise with soda ash or slaked lime. All water should be added by hose from a safe Distance as reaction is exothermic. Wash neutralised solution to drain with excess of water. If contamination Of crops or waterways has occurred, advice emergency services or State Department of Agriculture.

7. HANDLING AND STORAGE

Handling advice: Avoid skin and eye contact and breathing in vapour.

Storage advice: Store in a cool, well ventilated place and out of direct sunlight. Store away from oxidising agents, glass, silicone-containing materials and foodstuffs. Keep containers closed when not in use – check regularly for leaks.
This material is a Scheduled Poison S7 and must be stored, maintained and used in accordance with the relevant regulations.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits: No value assigned for this specific material by the National Occupational Health and Safety Commission (NOHSC).

However, Exposure Standard(s) for constituents(s):

Chemicals	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Hydrogen fluoride	3	2.6	-	**
Phosphoric acid	-	1	-	3
Ammonium Bifluoride	-	-	-	-
Glycol Monobutyl Ether	20	-	50	256

****** Due to the acute effects of this substance, averaging of airborne concentration over an 8-hour period is inappropriate. So the exposure standard for these substances represents a maximum or peak concentration to which workers maybe exposed, (see below for definition).
Peak Limitation – a ceiling concentration which should not be exceeded over a measurement period which should be as short as possible but not exceeding 15 minutes.
These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Engineering Control Measures: Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Exposure Standards. Use with local exhaust ventilation or while wearing respirator. Keep containers closed when not in use.

Personal protection equipment: OVERALLS, SAFETY SHOES, FACE SHIELD OR AIR MASK, NITRILE GLOVES (Long).
Wear overalls, full face shield, elbow-length impervious gloves, splash apron and rubber boots. Available information suggests that gloves made from nitrile rubber or natural rubber should be suitable for intermittent contact (2). However, due to variations in construction and local conditions, a final assessment should be made by the user. Use with adequate ventilation. If inhalation risk exists wear a respirator fitted with acid / gas filters meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or reusing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Colour:	Green, thin liquid.
Odour:	**F**aint acid odour.
Solubility:	Soluble in water
Specific Gravity:	1.1 @ 20°C
% Volatile by Volume:	90
Boiling Point/Range (°C):	99 - 100
pH (neat):	1.0, Highly acidic.
pH (1% dilution):	1-2

10. STABILITY AND REACTIVITY

Stability: Incompatible with alkalis, glass and any silicon-containing material.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion: Swallowing can result in nausea, vomiting of blood and eroded tissue; chemical burns of the mouth, throat and abdomen; perforation of gastrointestinal tract and possible death.

Eye contact: Contamination of the eyes can result in permanent injury. Corrosive to eyes; contact can cause corneal burns. Vapour is an irritant to the eyes and may lead to conjunctivitis.

Skin contact: Corrosive to skin – may cause painful skin burns. Ammonium Bifluoride may produce Hydrofluoric Acid. Any direct contact with skin must be avoided. May cause destruction of tissue and blood vessels that can penetrate to the bone. Serious skin splashes have resulted in death. Contact with dilute solution (1-20) may result in delayed burns – symptoms have taken up to 17 hours to occur.

Inhalation: Fumes are irritant to mucous membranes and respiratory tract resulting in a burning sensation in the nose and throat, coughing and pain in the chest. Experimental human exposures reported redness of the skin and some burning and irritation of the nose and eyes at concentrations above 3 ppm. Repeated exposures for 6 hours/day or 10 or 50 days at concentrations up to 4.7 ppm were tolerated without severe effects. There were no significant changes in lung function from occupational

exposure at an average concentration of 1.03 ppm. Nausea, vomiting, diarrhea, ulceration of the gums, bleeding from the nose and sinus disorders may also occur. Exposure to high concentrations can cause laryngitis, bronchitis, and pulmonary oedema (fluid in the lungs). Effects may be delayed.

Long term effects: Chronic low dose exposure by inhalation can lead to ulceration and perforation of the nasal septum. Chronic exposure to excessive quantities of gaseous or particulate fluoride results in nausea, vomiting, loss of appetite and diarrhoea or constipation. Fluorises or other chronic effects may result from significant acute exposures. (1)

Toxicological Data: No LD50 data available for the product. However, for hydrofluoric acid (1):
Inhalation LC50 (rat): 1276 ppm (1 hour)
Inhalation Lowest Lethal Concentration (human): 50 ppm (30 min.)
There are a number of inconclusive reports on the reproductive toxicity of hydrofluoric acid on animals.

Component	LD50 Oral mg/kg	LD50 Dermal mg/kg	LC50 Inhalation mg/l
Hydrogen fluoride	-	-	-
Phosphoric acid	Rat: 1250	Rabbit: 2470	-
Ammonium Bifluoride	Rat: 60-120 Guinea Pig: 150	-	-
Glycol Monobutyl Ether	Rat: 1300 Guinea Pig: 1400	Guinea Pig: >2000	Guinea Pig: >3.1

12. ECOTOXICOLOGICAL INFORMATION

Ecotoxicity: No specific information available. Avoid contaminating waterways.

Persistence/degradability: No specific information available.

Aquatic toxicity:

Glycol Monobutyl Ether	Toxicity to fish	LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 h: 1,474 mg/l
	Toxicity to daphnia and other aquatic invertebrates	EC50, Daphnia magna (Water flea), static test, 48 h, immobilization: 1,550 mg/l
	Toxicity to algae	EbC50, Pseudokirchneriella subcapitata (green algae), static test, biomass growth inhibition, 74 h: 911 mg/l
	Toxicity to bacteria	IC50; Bacteria: > 1,000 mg/l
	Fish Chronic Toxicity Value (ChV)	Danio rerio (zebra fish), semi-static test, 21 d, reproduction, NOEC: 100 mg/l
Ammonium Bifluoride	Toxicity to fish	96hr LC50 (fish): 51 mg/L (fluorides) (Salmo gairdneri)
Phosphoric acid	-	-
Hydrogen fluoride	-	-

13. DISPOSAL CONSIDERATIONS

Refer to State Land Waste Management Authority. After dilution or careful neutralisation, approved liquid waste land fill site should be suitable. Decontamination or destruction of containers should be considered.

14. TRANSPORT INFORMATION

Road and Rail Transport: Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by road or rail.

UN No:	2922	
Class-primary:	8	Corrosive
Subsidiary Risk:	6.1	Toxic
Packing Group:	II	
Proper Shipping Name:	Corrosive Liquid, Toxic, N.O.S. (Phosphoric Acid Solution)	
Hazchem Code:	2X	

Marine Transport: Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

UN No:	2922	
Class-primary:	8	Corrosive
Subsidiary Risk:	6.1	Toxic
Packing Group:	II	
Proper Shipping Name:	Corrosive Liquid, Toxic, N.O.S. (Phosphoric Acid Solution)	
Hazchem Code:	2X	

Air Transport: Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

UN No:	2922	
Class-primary:	8	Corrosive
Subsidiary Risk:	6.1	Toxic
Packing Group:	II	
Proper Shipping Name:	Corrosive Liquid, Toxic, N.O.S. (Phosphoric Acid Solution)	
Hazchem Code:	2X	

Segregation Dangerous Goods: Not to be loaded with explosives (Class 1), flammable gases (Class 2.1), in bulk, poisonous gases (Class 2.3), spontaneously combustible substances (Class 4.2), oxidising agents (Class 5.1), organic peroxide4s (Class 5.2), radioactive substances (Class 7), however exemptions may apply.

15. REGULATORY INFORMATION

Poisons Schedule: S6

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

This Material Safety Data sheet has been prepared by Stelco Chemicals Pty Ltd
Latest Issue Date: 21.01.2022
Supersedes Previous Issue Date: 27.07.2016
Reason(s) for Issue: Five-year update.

This MSDS summarises at the date of issue our best knowledge of the health and safety information of the product, and in particular how to safely handle and use the product in the workplace. As each workplace is different each user must, prior to use, review thus MSDS in the context of how the user intends to handle and

use the product in the workplace. If clarification of further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.