

Surface Preparation

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

Product Identifier:

Product name	Surface Preparation
Synonyms	AKK1017, AKZ1017W
Proper shipping name	HYDROCHLORIC ACID
Other means of identification	n/a

Relevant identified uses of the substance/mixture:

Relevant identified use	Concrete etching solution
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Details of manufacturer/supplier:

Company name	Peter Fell Ltd
Address	81 Patiki Rd, Avondale, Auckland 1026, New Zealand
Telephone	+64 9 828 6460
Website	www.peterfell.co.nz
e-mail	info@peterfell.co.nz

Emergency telephone number:

Association/Organisation	National Poison Centre
Telephone	0800 764 766
Website	www.poisons.co.nz

SECTION 2: HAZARD IDENTIFICATION

Classification of the substance/mixture:

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation. Classified as Dangerous Goods for transport purposes.

HSNO Approval Code	HSR001557
HSNO Classification	Acute Toxicity (Oral) - Category 4, Acute Toxicity (Dermal) - Category 4, Acute Toxicity (Inhalation) - Category 2, Corrosive to Metals - Category 1, Skin Corrosion/Irritation - Category 1B, Serious Eye Damage/Irritation - Category 1.

Label Elements:

Hazard pictogram(s)	 
Signal word	Danger

Hazard statement(s):

H290	May be corrosive to metals
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes sever skin burns and eye damage.
H330	Fatal if inhaled.

Precautionary Statement(s) Prevention:

P102	Keep out of reach of children
P103	Read label before use.
P234	Keep only in original container.
P260	Do not breathe dust, fume, gas, mist, vapours or spray.
P264	Wash hands, face and all exposed skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only in well-ventilated areas
P280	Wear protective gloves, protective clothing, eye protection and face protection.
P284	Wear respiratory protection.

Precautionary Statement(s) Responses:

P101	If medical advice is needed, have product container or label at hand.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTRE/doctor/physician/first aider.
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 (or shower).
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable breathing.
P305+P351+PP338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses., if present and easy to do so. Continue rinsing.
P310	Immediatley call a POISON CENTRE or doctor/physician for medical advice.
P320	Specific treatment is urgent (see product label).
P330	Rinse mouth
P363	Wash contaminated clothing before reuse
P390	Absorb spillage to prevent damage

Precautionary Statement(s) Storage:

P403+P233	Store in a well-ventilated space. Keep container tightly closed.
P405	Store locked up.
P406	Store in original container with resistant inner liner.

Precautionary Statement(s) Disposal:

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.
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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances:

Name	CAS Number	Proportion
Hydrochloric acid	7647-01-0	20-33%
water	7732-18-5	66-80%

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

SECTION 4: FIRST AID

NZ Poisons Centre 0800 POISON (0800 764 766) | NZ Emergency Services: 111

Description of first aid measures:

Eye Contact	- Wash out immediately with fresh 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.
	- Seek medical attention without delay; if pain persists or recurs seek medical attention.
	- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	- Immediately remove all contaminated clothing, including footwear.
	- Flush skin and hair with running water (and soap if available).
	- Seek medical attention in event of irritation.
Inhalation	- If fumes or combustion products are inhaled remove from contaminated area.
	- Lay patient down. Keep warm and rested.
	- Prosthesis 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.
	- Transport to hospital, or doctor, without delay.
Ingestion	- If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.
	- 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.
	- Seek medical advice.

SECTION 5: FIREFIGHTING MEASURES

Type of Hazard

Hazchem Code: 2R

Extinguishing Media

If material is involved in a fire use water fog (or if unavailable fine water spray), alcohol resistant foam, standard foam, dry agent (carbon dioxide, dry chemical powder).

Specific Hazards

Non-combustable material.

Advice for firefighters

Not applicable.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Method and material for containment and cleaning up – Minor spills

Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours or dust. Wipe up with absorbent (clean rag or paper towels). Collect and seal in properly labelled containers or drums for disposal.

Method and material for containment and cleaning up – Major spills

Clear area of all unprotected personnel. Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.

7. STORAGE AND HANDLING

Precautions for safe handling.

Avoid eye and skin contact. Avoid inhalation of vapour, mist or aerosol.

Conditions for safe storage.

Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Store away from sources of heat and/or ignition. Store locked up. Store in corrosive resistant container with resistant inner liner. Keep the container standing upright. Keep containers closed when not in use – check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National occupational exposure limits

7647-01-0, Hydrochloric acid, ACGIH; 2 ppm ceiling

7647-01-0, Hydrochloric acid, NIOSH; 5 ppm ceiling, 7 mg/m³ ceiling

Biological Limit Values:

As per the WorkSafe New Zealand the ingredients in this material do not have a Biological Limit Allocated.

Engineering Measures:

Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use only in well ventilated areas. Use with local exhaust ventilation or while wearing appropriate respirator.

Personal Protection

Personal Protection	
Eye and Face Protection	- Safety glasses with side shields. - Chemical goggles. - Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.
Skin Protection	- See Hand protection below
Hand/feet Protection	- Wear chemical protective gloves. - Recommended: PE/EVAL/PE or PVA or Teflon or Viton. - Wear safety footwear or safety gumboots e.g rubber
	- The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
	- The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.
Body Protection	- Overalls - PVC Apron - PVC protective suit may be required if exposure severe.
Thermal Hazards	Not Available
Other Protection	Not Available

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear to yellow	Relative Density to water (water = 1)	1.14
Physical State	Liquid	Auto-Ignition Temperature (°C)	Not Available
Odour	Acidic odour	Decomposition Temperature (°C)	Not Available
pH	Not Available	Viscosity (cSt)	Not Available
Melting Point (°C)	Not Available	Molecular weight (g/mol)	Not Available
Freezing Point (°C)	Not Available	Taste	Not Available
Boiling Point (°C)	91-98	Explosive Properties	Not Available
Flash Point (°C)	Not Available	Oxidising Properties	Not Available
Evaporation Rate	Not Available	Volatile Component (%)	Not Available
Explosive Properties	Not Available	VOC g/L	Not Available
Upper Explosive Limit (%)	Not Available	Solubility in water (g/L)	Miscible in water
Lower Explosive Limit (%)	Not Available	Vapour Density in Air (Air = 1)	Not Available

10. STABILITY AND REACTIVITY

Chemical stability:

This material is thermally stable when stored and used as directed.

Conditions to avoid:

Elevated temperatures and sources of ignition

Incompatible materials:

Oxidising agents.

Hazardous decomposition products:

Oxides of carbon and nitrogen, smoke and other toxic fumes.

Hazardous reactions:

No known hazardous reactions.

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:

Acute Effects

Inhalation: Fatal if inhaled. Material may be an irritant to mucous membranes and respiratory tract.

Skin contact: Harmful in contact with skin. Can be absorbed through the skin with resultant toxic effects. Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.

Ingestion: Harmful if swallowed. Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.

Eye contact: A severe eye irritant. Corrosive to eyes: contact can cause corneal burns. Contamination of eyes can result in permanent injury.

Acute toxicity

Inhalation: This material has been classified as a 6.1B - Substances that are acutely toxic. Acute toxicity estimate (based on ingredients): $0.5 < LC50 \leq 2.0$ mg/L for vapours or $0.05 < LC50 \leq 0.5$ mg/L for dust and mist

Skin contact: This material has been classified as a 6.1D - Substances that are acutely toxic. Acute toxicity estimate (based on ingredients): 1,000 - 2,000 mg/Kg bw

Ingestion: This material has been classified as a 6.1D - Substances that are acutely toxic. Acute toxicity estimate (based on ingredients): 300 - 2,000 mg/Kg bw

Corrosion/Irritancy: Eye: this material has been classified as a 8.3A - Substances that are corrosive to ocular tissue. Skin: this material has been classified as a 8.2B - Substances that are corrosive to dermal tissue.

Sensitisation: Inhalation: this material has been classified as not a respiratory sensitiser. Skin: this material has been classified as not a skin sensitiser.

Aspiration hazard: This material has been classified as non-hazardous.

Specific target organ toxicity (single exposure): This material has been classified as non-hazardous.

Chronic Toxicity

Mutagenicity: This material has been classified as non-hazardous.

Carcinogenicity: This material has been classified as non-hazardous.

Reproductive toxicity (including via lactation): This material has been classified as non-hazardous.

Specific target organ toxicity (repeat exposure): This material has been classified as non-hazardous

12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

Acute aquatic hazard: This material has been classified as not hazardous for acute aquatic exposure. Acute toxicity estimate (based on ingredients): >100 mg/ml.

Long-term aquatic hazard: This material has been classified as non-hazardous. Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data, Acute toxicity estimate (based on ingredients): >100 mg/L, where the substance is not rapidly degradable and/or $BCF < 500$ and/or $\log Kow < 4$.

Ecotoxicity in the soil environment: This material has been classified as non-hazardous.

Ecotoxicity to terrestrial vertebrates: This material has been classified as non-hazardous.

Ecotoxicity to terrestrial invertebrates: This material has been classified as non-hazardous.

Ecotoxicity: No information available.

Persistence and degradability: No information available.

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Water Treatment methods

Product/Packaging Disposal	- Ensure that the disposal of material is carried out in accordance with Hazardous Substances (Disposal) Notice 2017.
	- Containers may still present a chemical hazard/ danger when empty
	- Return to supplier for reuse/ recycling if possible.
	- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
	- Where possible retain label warnings and MSDS and observe all notices pertaining to the product

14. TRANSPORT INFORMATION

Label Requirements

Label Requirements



HAZCHEM

2R

Land Transport (UN)

v 1789

Packing Group

II

UN Proper Shipping Name

HYDROCHLORIC ACID

Emergency Response Guide No

40

Transport Hazard Class(es)

8

Segregation Dangerous Goods

Not to be loaded with explosives (Class 1), dangerous when wet substances (Class 4.3), oxidising agents (Class 5.1), organic peroxides (Class 5.2), radioactive substances (Class 7) or food and food packaging in any quantity. Note 1: Concentrated strong alkalis are incompatible with concentrated strong acids. Note 2: Concentrated strong acids are incompatible with concentrated strong alkalis. Note 3: Acids are incompatible with Dangerous Goods of Class 6 which are cyanides. Exemptions may apply.

Air Transport (ICAO-IATA/DGR)

UN Number

1789

Packing Group

II

UN Proper Shipping Name

HYDROCHLORIC ACID

Emergency Response Guide No

40

Transport Hazard Class(es)

8

Segregation Dangerous Goods

Not to be loaded with explosives (Class 1), dangerous when wet substances (Class 4.3), oxidising agents (Class 5.1), organic peroxides (Class 5.2), radioactive substances (Class 7) or food and food packaging in any quantity. Note 1: Concentrated strong alkalis are incompatible with concentrated strong acids. Note 2: Concentrated strong acids are incompatible with concentrated strong alkalis. Note 3: Acids are incompatible with Dangerous Goods of Class 6 which are cyanides. Exemptions may apply.

Sea Transport (IMDG-Code/GGVSee)

UN Number

1789

Packing Group

II

UN Proper Shipping Name

HYDROCHLORIC ACID

Emergency Response Guide No

40

Transport Hazard Class(es)

8

Segregation Dangerous Goods

Not to be loaded with explosives (Class 1), dangerous when wet substances (Class 4.3), oxidising agents (Class 5.1), organic peroxides (Class 5.2), radioactive substances (Class 7) or food and food packaging in any quantity. Note 1: Concentrated strong alkalis are incompatible with concentrated strong acids. Note 2: Concentrated strong acids are incompatible with concentrated strong alkalis. Note 3: Acids are incompatible with Dangerous Goods of Class 6 which are cyanides. Exemptions may apply.

15. REGULATORY INFORMATION

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

This material is not subject to any specific regulations. the following international agreements:

HSNO Approval Code: HSR001557

16. OTHER INFORMATION

SDS Created	April 2025
SDS Updated	April 2025

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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 Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit.
- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL : No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index
- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European Inventory of Existing Commercial chemical Substances
- ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ENCS: Existing and New Chemical Substances Inventory
- NZIoC: New Zealand Inventory of Chemicals
- TSCA: Toxic Substances Control Act
- NCI: National Chemical Inventory