

SAFETY DATA SHEET

Porcelain Etch

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product Name:	Porcelain Etch
Product Codes:	DL1511
Recommended Use:	Rapidly, chemically etches porcelain and ceramic restorations to facilitate bonding procedures and improve bond adhesion.
Contact Information:	Dentalife Australia Pty. Ltd. Factory 9/505 Maroondah Highway Ringwood, VIC, 3134, Australia Phone: +61 3 9879 1226
Emergency Telephone Number:	+61 3 9879 1226
Poisons Information Centre:	24 hour, 7 days a week in an emergency call: 13 11 26

2. HAZARD IDENTIFICATION

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

Signal Word: DANGER



Hazard Classifications: Acute Toxicity (Oral) Category 2, Acute Toxicity (Dermal) Category 1, Serious Eye Damage Category 1, Acute Toxicity (Inhalation) Category 1, Skin Sensitizer Category 1, Skin Corrosion/Irritation Category 1A

Hazard Statement:
H300 Fatal if swallowed
H310 Fatal in contact with skin
H373 May cause damage to organs through prolonged or repeated exposure
H330 Fatal if inhaled
H317 May cause an allergic skin reaction
H341 Suspected of causing genetic defects
H314 Causes severe skin burns and eye damage.

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Prevention Precautionary Statements:

P201 Obtain special instructions before use.
 P260 Do not breath mist/vapours/spray
 P262 Do not get in eyes, on kin, or on clothing.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area
 P280 Wear protective clothing, gloves, eye/face protection and suitable respirator.
 P284 Wear respirator protection.
 P272 Contaminated work clothing should not be allowed out of workplace

Response Precautionary Statements:

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P320 Specific treatment is urgent (see advice on this label).
 P322 Specific measures (see advice on this label)
 P363 Wash contaminated clothing before use
 P302+P350 IF ON SKIN: Gently wash with plenty of soap and water.
 P302+P352 IF ON SKIN: Wash with plenty of water
 P333+P313 if skin irritation or rash occurs: Get medical advice/attention.

Storage Precautionary Statements:

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Disposal Precautionary Statements:

P501 Dispose of contents/container in accordance with local, regional, national, and international regulations.

Poison Schedule:

Not Applicable

3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO.	PROPORTION %
Hydrofluoric Acid	7664-39-3	9-10%
Balance ingredients (non-hazardous)	-	> 5%
Water	7732-18-5	to 100 %

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4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Inhalation:

If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested.

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.

Transport to hospital, or doctor, without delay.

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.
(ICSC13719)

Skin Contact:

If there is evidence of severe skin irritation or skin burns:

Avoid further contact. Immediately remove contaminated clothing, including footwear.

Flush skin under running water for 15 minutes.

Avoiding contamination of the hands, massage calcium gluconate gel into affected areas, pay particular attention to creases in skin.

Contact the Poisons Information Centre.

Continue gel application for at least 15 minutes after burning sensation ceases.

If pain recurs, repeat application of calcium gluconate gel or apply every 20 minutes.

If no gel is available, continue washing for at least 15 minutes, using soap if available. If patient is conscious, give six calcium gluconate or calcium carbonate tablets in water by mouth.

Transport to hospital, or doctor, urgently.

Eye contact:

If this product comes in contact with the eyes:

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

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upper and lower lids.

Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay.

Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Ingestion:

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.

Indication of any immediate medical attention and special treatment needed

Following acute or short term repeated exposure to hydrofluoric acid:

Subcutaneous injections of Calcium Gluconate may be necessary around the burnt area. Continued application of Calcium Gluconate Gel or subcutaneous Calcium Gluconate should then continue for 3-4 days at a frequency of 4-6 times per day. If a "burning" sensation recurs, apply more frequently.

Systemic effects of extensive hydrofluoric acid burns include renal damage, hypocalcaemia and consequent cardiac arrhythmias. Monitor haematological, respiratory, renal, cardiac and electrolyte status at least daily. Tests should include FBE, blood gases, chest X-ray, creatinine and electrolytes, urine output, Ca ions, Mg ions and phosphate ions. Continuous ECG monitoring may be required.

Where serum calcium is low, or clinical, or ECG signs of hypocalcaemia develop, infusions of calcium gluconate, or if less serious, oral Sandocal, should be given. Hydrocortisone 500 mg in a four to six hourly infusion may help.

Antibiotics should not be given as a routine, but only when indicated.

Eye contact pain may be excruciating and 2-3 drops of 0.05% pentocaine hydrochloride may be instilled, followed by further irrigation.

5. FIRE FIGHTING MEASURES

Hazchem Code:

2X

Suitable Extinguishing Media:

There is no restriction on the type of extinguisher which may be used. Use extinguishing media suitable for surrounding area.

Specific Hazards:

None known.

Firefighting Further Advice

Non combustible. Not considered as significant fire risk, however containers may burn. May emit corrosive fumes.

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6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protection Equipment and Emergency Procedures: See section 8

Environmental Precautions: See section 12

Methods and Material for Containment and Cleaning Up:

Minor Spills: Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material. Check regularly for spills and leaks. Clean up all spills immediately. Avoid breathing vapours/ aerosols or dusts and avoid contact with skin and eyes. Place in a suitable, labelled container for waste disposal.

7. HANDLING AND STORAGE

Safe Handling: Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Avoid smoking, naked lights or ignition sources. Avoid contact with incompatible materials. When handling, **DO NOT** eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Launder contaminated clothing before re-use. Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS.

Other Information: Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS.

Storage incompatibility: The dissolution of inorganic acids in water or the dilution of their concentrated solutions with additional water may generate significant heat.

Hydrogen fluoride:

- reacts violently with strong oxidisers, acetic anhydride, alkalis, 2-aminoethanol, arsenic trioxide (with generation of heat), bismuthic acid, calcium oxide, chlorosulfonic acid, cyanogen fluoride,

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ethylenediamine, ethyleneimine, fluorine, nitrogen trifluoride, N-phenylazopiperidine, oleum, oxygen difluoride, phosphorus pentoxide, potassium permanganate, potassium tetrafluorosilicate(2-),

- beta-propiolactone, propylene oxide, sodium, sodium tetrafluorosilicate, sulfuric acid, vinyl acetate
- reacts (possibly violently) with aliphatic amines, alcohols, alkanolamines, alkylene oxides, aromatic amines, amides, ammonia, ammonium hydroxide, epichlorohydrin, isocyanates, metal acetylides, metal silicides, methanesulfonic acid, nitrogen compounds, organic anhydrides, oxides, silicon compounds, vinylidene fluoride
- attacks glass and siliceous materials, concrete, ceramics, metals (flammable hydrogen gas may be produced), metal alloys, some plastics, rubber coatings, leather, and most other materials with the exception of lead, platinum, polyethylene, wax.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits (OEL):

Ingredient Data:

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	Hydrofluoric acid	Hydrogen fluoride	Not available	Not available	3 ppm / 2.6 mg/m3	Not available

Emergency Limits:

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
Hydrofluoric acid	Hydrogen fluoride (Hydrofluoric acid)	Not available	Not available	Not available

Ingredient	Original IDLH	Revised IDLH
Hydrofluoric acid	30 ppm	Not available

Material Data:

Odour Threshold for hydrogen fluoride: 0.042 ppm

NOTE: Detector tubes for hydrogen fluoride, measuring in excess of 1.5 ppm, are available commercially. Long-term measurements (8 hrs) may be conducted to detect concentrations exceeding 0.25 ppm.

Hydrogen fluoride is a primary irritant which as a gas causes severe respiratory irritation and as a liquid which causes severe and painful burns to the skin and eyes. The recommendation for TLV-TWA is based on the results of controlled inhalation studies in human volunteers. The limit is thought to minimise the potential for occurrence of dental and/or osteofluorosis (systemic fluorosis) and to prevent the risk of primary irritation to the eyes, nose, throat and lower respiration system.

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At concentrations exceeding 3 ppm there have been reports of skin reddening and burning of the nose and eyes.

Personal Protection Equipment:

SAFETY SHOES, OVERALLS, GLOVES, CHEMICAL GOGGLES, RESPIRATOR.

Personal protective equipment (PPE) must be suitable for the nature of the work and any hazard associated with the work as identified by the risk assessment conducted.

Wear safety shoes, overalls, gloves, chemical goggles, respirator. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking, or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Eye and face protection:

Safety glasses with unperforated side shields may be used where continuous eye protection is desirable, as in laboratories; spectacles are not sufficient where complete eye protection is needed such as when handling bulk quantities, where there is a danger of splashing, or if the material may be under pressure.

Chemical goggles. Whenever there is a danger of the material coming in contact with the eyes; goggles must be properly fitted.

Full face shield (20 cm, 8 in minimum) may be required for supplementary but never for primary protection of eyes; these afford face protection.

Alternatively, a gas mask may replace splash goggles and face shields.

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. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience.

Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. 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. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]



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Other Protection: Overalls.
PVC Apron. PVC protective suit may be required if exposure severe.
Eyewash unit.
Ensure there is ready access to a safety shower.

Hygiene Measures: Keep away from food, drink and animal feedstuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid contact with clothing. Avoid eye contact and repeated or prolonged skin contact. Avoid inhalation of vapour, mist or aerosols. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Gel
Colour:	Yellow
Odour:	Characteristic
Solubility:	Miscible with water
Specific gravity:	1.1
Vapour Pressure (20 °C):	Not available
Flash Point (°C):	Not available
Flammability Limits (%):	Not available
Autoignition Temperature (°C):	Not available
Decomposition Temperature(°C):	Not available
Melting Point/Range (°C):	Not available
Boiling Point/Range (°C):	Not available
Evaporation Rate:	Not available
pH:	< 2
Viscosity:	Not available
Total VOC (g/Litre):	Not available

10. STABILITY AND REACTIVITY

Reactivity:	See section 7
Chemical Stability:	Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Conditions to Avoid:	See section 7
Incompatible Materials:	See section 7
Hazardous Decomposition Products:	See section 5
Hazardous Reactions:	See section 7

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11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Inhaled:

Acidic corrosives produce respiratory tract irritation with coughing, choking and mucous membrane damage. Symptoms of exposure may include dizziness, headache, nausea and weakness.

Acute inhalation exposures to hydrogen fluoride (hydrofluoric acid) vapours produce severe eye, nose, and throat irritation.

Significant exposures by dermal or inhalation route may cause hypocalcaemia and hypomagnesaemia; cardiac arrhythmias may follow.

Skin Contact:

Skin contact with the material may produce severely toxic effects; systemic effects may result following absorption and these may be fatal. The skin is readily penetrated by the fluoride ion causing liquefaction necrosis of the soft tissues and decalcification and corrosion of bone. Healing is delayed and necrotic changes may continue to occur and spread beneath a layer of tough coagulated 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.

Open cuts, abraded or irritated skin should not be exposed to this material

Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds 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.

Ingestion:

Severely toxic effects may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 5 gram may be fatal or may produce serious damage to the health of the individual.

Ingestion of acidic corrosives may produce circumoral burns with a distinct discolouration of the mucous membranes of the mouth, throat and oesophagus. Immediate pain and difficulties in swallowing and speaking may also be evident. Oedema of the epiglottis may produce respiratory distress and possibly, asphyxia. Nausea, vomiting, diarrhoea and a pronounced thirst may occur.

Poisonings also cause major adverse effects on the brain and kidneys. Toxic effects may include headache, excessive salivation, rapid movements of the eyeball (nystagmus) and dilated pupils.

Eye Contact:

Irritation of the eyes may produce a heavy secretion of tears (lachrymation).

Direct eye contact with acid corrosives may produce pain, lachrymation, photophobia and burns. Mild burns of the epithelia generally recover rapidly and completely. Severe burns produce long-lasting and possible irreversible damage.

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Chronic:	Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed. Serious damage (clear functional disturbance or morphological change which may have toxicological significance) is likely to be caused by repeated or prolonged exposure. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.
Carcinogenicity:	Data not available.
Reproductivity:	Data not available.
Aspiration Hazard:	Data not available.

12. ECOLOGICAL INFORMATION

DO NOT discharge into sewer or waterways.

Harmful to aquatic organisms.

Persistence and Degradability: No data available

Bioaccumulation Potential: No data available

Mobility in Soil: No data available

13. DISPOSAL CONSIDERATIONS

Product/Packaging Disposal:	Containers may still present a chemical hazard/ danger when empty. Return to supplier for reuse/ recycling if possible. Otherwise: Where possible retain label warnings and SDS and observe all notices pertaining to the product. Recycle wherever possible. Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. Treat and neutralise at an approved treatment plant. Treatment should involve: Mixing or slurring in water; Neutralisation followed by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after admixture with suitable combustible material) Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.
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14. TRANSPORT INFORMATIONRoad and Rail Transport (ADG):

UN Number:	1790
UN Proper Shipping Name:	HYDROFLUORIC ACID, with not more than 60% hydrogen fluoride
Transport Hazard Class:	Class 8 Sub risk 6.1
Packing Group:	II
Environmental Hazard:	Not applicable
Special Precautions for User:	Special provisions - Not Applicable Limited quantity - 1 L

Air Transport (ICAO-IATA/DGR)

UN Number:	1790
UN Proper Shipping Name:	Hydrofluoric acid 60% or less hydrogen fluoride
Transport Hazard Class:	ICAO/IATA Class - 8 ICAO/IATA Sub risk - 6.1 ERG Code - 8P
Packing Group:	II
Environmental Hazard:	Not Applicable

Sea Transport (IMDG-Code / GGVSee)

UN Number:	1790
UN Proper Shipping Name:	Hydrofluoric acid 60% or less hydrogen fluoride
Transport Hazard Class:	IMDG Class - 8 IMDG Sub risk - 6.1
Packing Group:	II
Environmental Hazard:	Not Applicable



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15. REGULATORY INFORMATION

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP): Schedule 7

Prohibition/Licensing Requirements: N/A

This material/constituent(s) is covered by the following requirements: All components of this product are listed or exempt from the Australian Inventory of Industrial Chemicals (AIIC)

16. OTHER INFORMATION

Product is considered safe if used as intended.
Product is intended for professional dental use only.

This information was prepared in good faith from the best information available at the time of issue. It is based on the present level of research and to this extent we believe it is accurate. However, no guarantee of accuracy is made or implied and since conditions of use are beyond our control, all information relevant to usage is offered without warranty. The manufacturer will not be held responsible for any unauthorised use of this information or for any modified or altered versions.

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