

MATERIAL SAFETY DATA SHEET

CONCRETE ETCH

SECTION 1. Identification of the substance/mixture and of the company/undertaking.

1.1	Product identifier	:	Epoxy Products Concrete Etch
1.2	Relevant identified uses of the substance or mixture and uses advised against	:	Concrete Etchant
1.3	Details of the supplier of the safety data sheet	:	Epoxy Products Limited, Unit 7 Haviland Road, Ferndown Industrial Estate, Wimborne, Dorset. BH21 7RZ England Tel No. +44 (0) 1202 891899
	Email Address – Technical Information	:	sales@epoxyproducts.co.uk
	Telephone	:	+44 (0) 1202 891899
1.4	Emergency telephone number	:	+44 (0) 1202 891899

SECTION 2. Hazards Identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards Met. Corr. 1 - H290

Human health Not classified.

Environment Not classified.

Classification (1999/45/EEC) Not classified.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Human health Not classified but may cause temporary eye or skin irritation.

Environment The product is miscible with water and can spread in water systems. Although not classified as harmful to the environment the material should not be discharged to land or water systems, this may have an impact on the organisms in the local area. The product may produce a local pH change in water systems which can have an effect on aquatic organisms.

Physical and Chemical Hazards May produce an exothermic reaction with alkalis, oxidising agents or other acids. May corrode metals. May react violently with alkali and alkali earth metals. May produce hydrogen gas on reaction with metals.

2.2. Label elements

Label In Accordance With (EC) No. 1272/2008



Signal Word Warning

Hazard Statements

H290 May be corrosive to metals.

Precautionary Statements

P234 Keep only in original container.

P406 Store in corrosive resistant container.

P390 Absorb spillage to prevent material damage.

2.3. Other hazards

Not Classified as PBT/vPvB by current EU criteria.

SECTION 3: Composition/Information on Ingredients

3.1. Mixtures

Substance/Mixture : Mixture

Component	EINECS	CAS Number	Concentration %	Classification (CLP)	REACH REG
Hydrochloric Acid	231-595-7	7647-01-0	5 - 10	Skin Corr. 1B –H314 STOT SE 3 –H335	

First-aid measures

4.1. Description of first aid measures

General information

CAUTION! First aid personnel must be aware of own risk during rescue! Always consider any dangers in the vicinity before approaching to treat the casualty. First aid personnel must protect themselves with all necessary personal protective equipment during the assistance of casualties. When breathing is difficult, properly trained personnel may assist the casualty by administering oxygen. Check airway for any blockages. Place unconscious person on the side in the recovery position and ensure breathing can take place. Never give anything by mouth to an unconscious person. If breathing has stopped perform CPR. If medical assistance is needed take as much detail as possible about the incident and hazardous materials involved with the casualty.

Inhalation: Remove victim immediately from source of exposure. Provide rest, warmth and fresh air. Get medical attention if any discomfort continues.

Ingestion Do not induce vomiting. Rinse mouth thoroughly with water In case of ingestion of large amounts or if any discomfort continues obtain medical attention.

Skin contact As a general precaution remove contaminated clothing and wash the skin with plenty of water. If irritation or discomfort occurs obtain medical attention

Eye contact Promptly wash eyes with plenty of water or eye wash solution while lifting the eyelids .If possible remove any contact lenses and continue to wash. Get medical attention if any discomfort continues.

4.2. Most important symptoms and effects, both acute and delayed

General information The severity of the symptoms described will vary dependant of the concentration and the length of exposure.

Inhalation. High concentrations of vapours may irritate the respiratory system.

Ingestion	Small amounts will leave taste in mouth, larger amounts may cause nausea or vomiting. May irritate the mouth and throat. Larger amounts may irritate the digestive system
Skin contact	May irritate the skin.
Eye contact	May cause eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Have facilities in place to wash skin and eyes in case of exposure.

SECTION 5. Fire-fighting measures

5.1. Extinguishing media

Extinguishing media	The product is non-combustible. Use fire-extinguishing media appropriate for surrounding materials. Water spray, Foam, dry powder or carbon dioxide.
Unsuitable extinguishing media	Do not use water jet as this can spread the fire. Do not use carbon dioxide in spaces with insufficient ventilation.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products	Chlorine compounds. Hydrogen chloride (HCl).
Unusual Fire & Explosion Hazards	No hazards associated with the product. Product containers are likely to melt in the heat of a fire.
Specific hazards	In case of fire, toxic or irritating fumes or vapours may be formed.

5.3. Advice for firefighters

Special Fire Fighting Procedures	Prevent run-off from entering drains and watercourses.
Protective equipment for fire-fighters	Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

The following is given as general advice, precautions and procedures should reflect the extent of a spillage and the situation. Use protective clothing and equipment as described in section 8 of this datasheet. Avoid ingestion, inhalation of vapours and contact with skin and eyes. Provide adequate ventilation. Use suitable respiratory equipment if spillages occur in enclosed spaces and vapours are produced. Have emergency procedures in place for treating spillages, evacuating the area and informing the emergency services if necessary. Restrict access to the area until the spillage is treated, if large amounts of vapours are produced that will be hazardous to others, evacuate the area. When any other effects of spillages will affect the safety of others the area should be evacuated.

6.2. Environmental precautions

Although not classified as environmentally hazardous the mixture is acidic which can have an effect on pH. Avoid unauthorised discharge to the environment. Do not discharge into drains, water courses or onto the ground. Clean up any spillages immediately, prevent material from spreading and entering drains or sewage systems. If spillages to land cannot be treated safely or if contamination will occur the Environmental Agency must be alerted immediately. Large spillages or uncontrolled discharge to water systems must be alerted to the Environmental Agency or other regulatory body. If the substance has entered a foul drain or sewage system in significant quantity to cause a hazard the local Water Treatment Company must be informed.

6.3. Methods and material for containment and cleaning up

The method for cleaning spillages will be dependent upon the size of the spillage, unless amounts are very small and will be no risk to the environment it is advisable not to flush to drain due to the acidic pH. If in doubt, consult with the local authority regarding discharge to drain. Small Spillages: Absorb with inert, non-combustible material. Large Spillages: Dam and absorb spillages with sand, earth or other inert, non-combustible material. Fit drain covers where they are available if the spillage is likely to enter the drainage system. Collect spillage in containers, seal securely and deliver for disposal according to local regulations. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Wash spillage site well with water and detergent, be aware of the potential for surfaces to become slippery. Ventilate area and allow to dry before allowing access. Wash thoroughly after dealing with a spillage.

6.4. Reference to other sections

Refer to sections 8 and 13 for additional information.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Avoid spilling, skin and eye contact. Avoid inhalation of vapours and spray mists. Avoid ingestion of the product. Do not eat, drink or smoke when handling. Do not mix with incompatible substances or mixtures. Do not use in areas close to drainage systems unless measures are in place to prevent access of product. Wash at the end of each work shift and before using the toilet. Remove contaminated clothing/footwear/equipment before entering eating areas or other places that would expose others to the substance. Do not dispose of the substance to the environment through unauthorised means. Do not discharge to land or water including the drainage system. Ensure emergency procedures are in place to treat spillages and cope with other situations such as evacuation.

7.2. Conditions for safe storage, including any incompatibilities

Store in area with adequate ventilation and sufficient air movement to prevent any build up of vapours. Store in closed original container at temperatures between 15°C and 25°C. Store away from heat, direct sunlight and moisture. Store away from incompatible materials. Keep above the chemical's freezing point. Store in a stable situation to avoid spillages. It is advisable to store in a banded area or use other protective measures such as a sump pallet or storage tray. If the substance is transferred to other containers ensure the packaging material is compatible. Consult with the packaging manufacturer or supplier. Do not leave storage containers exposed to the atmosphere as this may result in loss of contents or contamination.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Name	STD	TWA - 8 Hrs	STEL - 15 Min	Notes
HYDROCHLORIC ACID ...%	WEL	1 ppm 2 mg/m ³	5 ppm 8 mg/m ³	

WEL = Workplace Exposure Limit.

Ingredient Comments

The following information refers to hydrogen chloride as a substance not the product as a mixture.

DNEL

Inhalation.	Short Term	Local Effects	15 mg/m ³
Inhalation.	Long Term	Local Effects	8 mg/m ³

8.2. Exposure controls

Engineering measures	Provide adequate ventilation, including appropriate local extraction, to ensure that the defined workplace exposure limit (WEL) is not exceeded.
Respiratory equipment	Wear suitable respiratory protection when vapours or mists are produced if the Workplace Exposure Limit is exceeded and there is insufficient ventilation or extraction. When vapours are generated during spill clean up operations and exposure of operators is likely then respiratory equipment should be worn. Use respirator fitted with a

cartridge suitable for inorganic acids including hydrochloric acid. When the concentration of acid vapours in the atmosphere is sufficient to cause skin irritation then wear a full face respirator. CAUTION: Air purifying respirators do not protect the user in oxygen deficient atmospheres, use air supplied system. Respiratory protection should conform to the following standards. BS EN 140: Half-face masks. BS EN 136: Full face masks. Powered air respirators should meet requirements of EN146 and EN12941. Airline fed respirators should meet the requirements of EN 270 and EN1835. Respiratory protection should be maintained in a proper condition and inspected at the frequency specified by current legislation.

Hand protection	Use full length gloves. Butyl rubber. Polyvinyl chloride (PVC). Nitrile. Viton rubber (fluor rubber). Gloves should carry the CE mark and conform to BS EN 374, chemicals and micro-organisms. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. When packages of the product are being handled during storage or transport it is advisable to wear protective gloves to prevent damage to the skin.
Eye protection	Wear approved chemical safety goggles conforming to EN 166.
Other Protection	Wear suitable protective clothing during transport, handling and storage operations connected with the product. Protective clothing should conform to the general requirements of EN 340:2003. Also consider EN 13034:2005; EN 14605:2005; EN 943:2002 dependent upon the situation resulting in exposure. Wear suitable protective footwear during handling of the product. When treating spillages it is recommended to wear protective boots, consult with the supplier as to the compatibility. Safety footwear should conform to standards EN 344 - 347. Wear plastic apron and full length gloves if handling large amounts. If there is a risk of splashing then wear a face shield. Have facilities in place to wash eyes in case of contact. If handling large amounts it is recommended to have a safety shower.
Hygiene measures	Remove clothing when contamination will result in exposure to the substance, segregate and wash before re-use. Do not eat, drink or smoke in the work area. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Remove contaminated clothing when entering eating areas or other places that could lead to contamination of others with the product.

Environmental Exposure Controls See section 6 for details.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Colourless.
Odour	Pungent.
Solubility	Miscible with water
Initial boiling point/ boiling range	Not determined.
Melting point (°C)	Not determined.
Relative density	Approx. 1.0 - 1.05 @ 20°C

SECTION 10. Stability and reactivity

10.1. Reactivity

Can react with alkalis, oxidising agents and other acids. Reaction with sulphides can produce hydrogen sulphide gas. Reaction with cyanides can produce hydrogen cyanide gas. Reaction with metals can produce hydrogen gas which can form explosive atmospheres. Will corrode metals, some plastics and rubber. Ensure any packaging used to contain the mixture is compatible.

10.2. Chemical stability

Stable when stored in sealed container at normal temperatures and in a suitable location.

10.3. Possibility of hazardous reactions

May react exothermically. May produce hydrogen cyanide or hydrogen sulphide. Reactions in a sealed container may result in pressure build up with possible rupture of the container.

Hazardous Polymerisation -Will not polymerise.

10.4. Conditions to avoid

Avoid direct sunlight and moisture. Avoid heat and freezing conditions. Avoid storage with oxidising agents. Avoid storage with incompatible materials. It is advisable to store the product within some form of containment to prevent spillages reaching drainage systems. Avoid storage in an unstable manner or in a situation that would result in exposure to the product. Do not allow the storage container to be left exposed to the atmosphere.

10.5. Incompatible materials

Materials To Avoid

Amines. Perchloric acid Epichlorohydrin Isocyanates Some plastics, rubber and coatings. Avoid contamination with other chemicals that will affect the composition of the product. Inorganic hydrides. Alkali metals. Alkali earth metals. Metals. Strong oxidising substances. Strong alkalis. Aldehydes. Aluminium. Fluorine Sulphides Ammonia. Ammonia compounds. Sulphuric acid. Cyanides

10.6. Hazardous decomposition products

None anticipated at normal temperatures. See section 5 for thermal decomposition products.

SECTION 11. Toxicological information

Toxicological information	The mixture has not been tested for toxicological properties. Information regards hydrogen chloride or its mixtures. The mixture is not classified for toxic effects.
General information	Effects will be dependent upon the concentration and length of time of exposure. Higher concentrations will produce more pronounced effects.
Inhalation	In high concentrations, vapours may irritate throat and respiratory system and cause coughing.
Ingestion	May irritate mouth, throat and gastrointestinal tract. Ingestion of large amounts may cause nausea and vomiting.
Skin contact	May irritate the skin.
Eye contact	May irritate the eyes.
Medical Symptoms	Irritation of the eyes, respiratory system and skin. Coughing and difficulties with breathing. Irritation of mouth, throat and oesophagus. Nausea, vomiting.

SECTION 12. Ecological information

Ecotoxicity The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms. The mixture has not been tested for ecotoxicological properties, the information refers to hydrogen chloride or its mixtures.

12.1. Toxicity

Acute Toxicity - Fish

LC50 96 hours pH 3.25 - 3.5 *Lepomis macrochirus* (Bluegill)

Freshwater, semi-static.

Acute Toxicity - Aquatic Invertebrates

EC50 48 hours pH 4.92 *Daphnia magna*

OECD Guideline 202. Static, freshwater.

Acute Toxicity - Aquatic Plants

EC50 72 hours pH 4.7

OECD Guideline 201 (Algae Growth Inhibition Test) performed on *Chlorella Vulgaris*. Static, freshwater.

Acute Toxicity - Microorganisms

EC50 3 hours pH 5.0 - 5.5 Activated sludge

OECD Guideline 209: Activated Sludge, Respiration Inhibition Test. Static, freshwater.

Chronic Toxicity - Fish Early life Stage

Not available.

No supplied or registered information

Short Term Toxicity - Embryo and Sac Fry Stages

Not available.

No supplied or registered information

Chronic Toxicity - Aquatic Invertebrates

Scientifically unjustified.

Acute Toxicity - Terrestrial

Not available.

No supplied or registered information

Toxicity to soil:

No registered or supplied information.

Toxicity to terrestrial plants:

No registered or supplied information.

12.2. Persistence and degradability

Degradability

The product is not biodegradable. Hydrochloric acid dissociates completely in water and soil to form chloride ions and hydroxonium ions.

Minerals in the soil will help to neutralise the acid. Hydrochloric acid is an inorganic compound with no nitrogen groups, hydroxide groups, double bonds, triple bonds or aromatic rings. It dissociates readily when dissolved in atmospheric moisture therefore an estimation of phototransformation is not practical. Hydrochloric acid is not hydrolysed.

Biodegradation

Scientifically unjustified.

Hydrochloric acid is not biodegradable as it dissociates in contact with water and soil water.

12.3. Bioaccumulative potential

Bioaccumulative potential

The product is not bioaccumulating. - Study scientifically unjustifiable.

Bioaccumulation factor

Not relevant

12.4. Mobility in soil

Mobility:

Minerals in the soil tend to neutralise acid contamination however larger or continuous emissions may lead to the product travelling into groundwater. As the product travels further into the soil the increased contact raises the pH to make it less acidic.

Adsorption/Desorption Coefficient - Scientifically unjustified.

12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

Reaction with hypochlorites can produce chlorine gas. Will affect drinking water supplies. May cause a local pH change in water systems which can affect aquatic organisms. May effect germination and growth rates of plants if soil contamination occurs.

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements. Empty containers containing small amounts of residue should be treated as hazardous waste and rinsed well and neutralised with copious amounts of cold water.

SECTION 14 Transport information

14.1. UN number

UN No. (ADR/RID/ADN) 1789

UN No. (IMDG) 1789

UN No. (ICAO) 1789

14.2. UN proper shipping name

Proper Shipping Name HYDROCHLORIC ACID

14.3. Transport hazard class(es)

ADR/RID/ANDClass 8

ADR/RID/ADNClass 8: Corrosive substances.

ADR Label No 8

IMDG Class 8

ICAO Class Division 8

14.4. Packing group

ADR/RID/ADN Packing group III

IMDG Packing group III

ICAO Packing group III

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant - No.

14.6. Special precautions for user

EMS F-A, S-B

Emergency Action Code 2R

Hazard No. (ADR) 80

Tunnel Restriction Code (E)

SECTION 15. Regulatory information

- 15.1 Safety, health and environment regulations/legislation specific for the substance or mixture
EU Regulation (EC) No. 1907/2006 (REACH) Annex XIV – List of substances to authorisation.
Substances of very high concern

Carcinogen	:	Not listed
Mutagen	:	Not listed
Toxic to reproduction	:	Not listed
PBT	:	Not listed
VPvB	:	Not listed

SECTION 16. Other Information

Date Issued	:	11.01.2016
Reference	:	D//07
Product Code	:	Epoxy Products Concrete Etch
Intended Use	:	Concrete Etchant

The information is based on our current knowledge and is intended to describe the product for the purpose of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.