REDROCK LTD.

Material Safety Data Sheet

1) PRODUCT NAME **REDSAFE ETCH PLUS**

General Description: Concrete cleaner and etching agent

Red Rock (2004) Ltd.
P.O.Box 12091
Birmingham B13 9WS
Fax 0121 246 4441
Tel: (0044) 0870 910 7799
Email: info@redrock-uk.co.uk

2) COMPOSITION / INFORMATION ON INGREDIENTS:

Ingredient	Content	CAS No	Health Class	Risk No.
Hydrochloric acid	10-25%.	7647-01-0	C	34,37
Citric Acid	5-10%	77-92-9	Xi	36/38
Alcohol Ethoxylate	5-10%	68439-45-2	Xn	22,36
Alkylamine Betaine	1- 5%	66455-29-6	Xi	36/38
Sodium Aryl Sulphonate	1- 5%	1300-72-7	Xi	36/37

Composition Comments
This product contains additional ingredients that are either unclassified or below the concentration requiring declaration under the CHIP regulations. The product is water based.
In the ingredient list above exposure limit values exist for one or more ingredients.
See Sect. 8 for details

3) HAZARDS IDENTIFICATION:

Irritating to the eyes, respiratory system and skin. De-fatting action to the skin.

4) FIRST AID MEASURES

INHALATION: Move the exposed person to fresh air at once. Wear protective clothing and breathing apparatus if necessary. When unconscious, loosen tight clothing and position in secured sideposition. Perform artificial respiration if breathing has stopped. Provide rest, warmth and fresh air. Get medical attention if ill effects persist or are severe.
INGESTION: Immediately rinse mouth and provide fresh air. Give the casualty small sips of water (up to a total of 100 ml) if he wants a drink but stop if he feels sick. Give milk instead of water if readily available. Do not make the casualty drink a lot of liquid at once as he may vomit which may be dangerous. Do not give victim anything to drink if he is unconscious. When unconscious, loosen tight clothing and position in secured sideposition. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Provide fresh air, warmth and rest, preferably in comfortable upright sitting position. Get medical attention.
SKIN: Remove contaminated clothing. Rinse the skin immediately with lots of water. Continue to rinse for at least 10 minutes. Get medical attention if irritation persists after washing.
EYES: Promptly wash eyes with plenty of water while lifting the eye lids. Make sure to remove any contact lenses from the eyes before rinsing. Continue to rinse for at least 10 minutes. Get medical attention if any discomfort continues.

5) FIRE FIGHTING MEASURES:
The product is non flammable.

EXTINGUISHING MEDIA: This product is non-flammable.
TO BE USED:
Use extinguishing media appropriate for surrounding fire.
NOT TO BE USED:
None specific.
SPECIAL FIRE FIGHTING PROCEDURES:
Use special protective clothing. Regular protection may not be safe.
HAZARDOUS DECOMPOSITION PRODUCTS:
On heating to total decomposition, the following materials may be produced.
Hydrogen chloride (HCl). Oxides of carbon. Oxides of nitrogen. Oxides ofsulphur. Sodium oxide.
PROTECTIVE MEASURES IN FIRE:
On heating to total decomposition, toxic gases may be produced, hence breathing apparatus should be worn in cases of fire.

6) ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS DURING SPILL:
Evacuate the area and keep unauthorised people away from the spillage. Ventilate area well or wear breathing apparatus. Wear any necessary protective clothing/equipment. See Section 8 for further details.

PRECAUTIONS TO PROTECT ENVIRONMENT:
Contain the spillage to prevent entry into drains or waterways. Notify the local authority if spillage of a large quantity into drains or waterways occurs.

SPILL CLEANUP METHODS: Small spillages may be washed away with plenty of water, taking care to avoid splashing. Larger spillages should be washed into the effluent treatment plant or absorbed with sand, earth or mineral granules etc. The contaminated absorbent should then be transferred to polythene containers and disposed of via a licensed waste disposal contractor. Wash residues away with plenty of water. Care should be taken to avoid splashing and generating excessive amounts of foam. Neutralisation may be carried out with sodium carbonate (soda ash), bicarbonate or hydroxide (caustic soda).

7) HANDLING AND STORAGE:

USAGE PRECAUTIONS: Avoid contact with the skin, eyes and clothing. Avoid inhalation of vapour. Avoid inhalation of spray or mist from the working solution. Avoid contact of the product with strong alkalis and carbonates. Avoid contact of the product with strong oxidizing agents. Always wear the appropriate personal protective equipment when using or handling this product. Eyewash facilities must be available when handling this product. Do not eat or drink while handling or using this product. Do not ingest the product. Wash hands after use.

STORAGE PRECAUTIONS: Store in a cool area. Keep away from strong alkalis and carbonates. Keep awa from oxidizing agents. Keep separate from food, feedstuffs, fertilizers and other sensitive material. Store an transport the product in its original container kept in an upright position. Keep containers closed when not in use. Containers of this product should be stored in a suitably designed or bunded area to minimise the risk environmental pollution. Store between -10°C and 40°C.

8) EXPOSURE CONTROLS/PERSONAL PROTECTION:

INGREDIENT NAME	CAS No	STD	LT EXP (8 hrs)	ST EXP (15 min)
HYDROCHLORIC ACID	7647-01-0	OES.	1 ppm	5 ppm
CITRIC ACID	77-92-9		No std.	No std.
ALCOHOL ETHOXYLATE (177060)	68439-45-2		No std.	No std.
ALKYLAMINE BETAINE (198207)	66455-29-6		No std.	No std.
SODIUM ARYL SULPHONATE (184062)	1300-72-7		No std.	No std.

INGREDIENT COMMENTS: OES = Occupational Exposure Standard (from EH40).
1st ingredient - The exposure limit values quoted for this ingredient are for hydrogen chloride as gas or aerosol mist.

PROTECTIVE EQUIPMENT: Mask/face protection. Eye goggles. Protective gloves.

VENTILATION: General and/or local exhaust ventilation should be provided to keep operator exposure to the concentrated chemical and working solution below any recommended limits specified for the product ingredients.

RESPIRATORS: Wear suitable respiratory protection if exposed to high levels of vapour. In most cases, a disposable mask or cartridge respirator suitable for acid gases would be satisfactory. The following comments may apply to the use of the working solution. Wear suitable respiratory protection if exposed to high levels of spray or mist. In most cases, a disposable mask suitable for non-toxic aqueous mists would be satisfactory. If the product is used at high concentrations, a mask that also provides protection against acid gases may be required.

PROTECTIVE GLOVES: Wear impermeable gloves complying with an approved standard (eg. BS 1651 or EN374). Suitable gloves would be those manufactured from PVC or natural rubber.

EYE PROTECTION: Wear eye/face protection complying with an approved standard (eg. BS 2092 Chemical Grade or EN166-3). In most conditions, this would consist of goggles or face visor.

OTHER PROTECTION: Wear chemical splash-resistant overalls and chemical and impact-resistant footwear. Eyewash stations (and possibly safety showers) should be readily accessible near where this product is handled and used. Monitoring may be required to determine the effectiveness of the ventilation controls and/or the necessity to use respiratory protective equipment.

9) PHYSICAL AND TECHNICAL SAFETY DATA

APPEARANCE: Mobile, single phase liquid.
COLOUR: Clear. Colourless.
ODOUR/TASTE: Strong. Irritating. Hydrochloric acid.
SOLUBILITY DESCRIPTION: Miscible with water. Immiscible with hydrocarbons and halogenated hydrocarbons.

BOILING POINT (°C):	100	**MELTING POINT (°C):**	<-10
SPECIFIC GRAVITY (Water=1):	1.13	**pH-VALUE,CONC:**	<1
pH-VALUE:	<1	**CONCENTRATION (%,M):**	1.0%

10) STABILITY AND REACTIVITY:

STABILITY: Under normal conditions of storage and use, this product will be stable.

CONDITIONS TO AVOID: No specific conditions to avoid known, other than those involving non-intentional contact with the materials specified in the section 'Materials to Avoid'

MATERIALS TO AVOID: This product will react with the following material(s) - alkaline materials and carbonates. The reaction may be vigorous or violent. Contact with carbonates liberates carbon dioxide, a heavy asphyxiant gas. The product will also react with the following material(s) - many metals. The reaction will evolve hydrogen, a light extremely flammable gas. It may also react with the following material(s) – strong oxidizing agents. This reaction is more likely to occur after loss of water from the product or being allowed to dry out.

HAZARDOUS DECOMPOSITION PRODUCTS:
On heating to total decomposition, the following materials may be produced.
Hydrogen chloride (HCl). Oxides of carbon. Oxides of nitrogen. Oxides of sulphur. Sodium oxide.

11) TOXICOLOGICAL INFORMATION:

No specific toxicological tests have been carried out on this product.

HEALTH HAZARDS, GENERAL: Irritating to eyes, respiratory system and skin. Inhalation of spray or mist from the working solution may irritate the respiratory system. May be harmful if large quantities are swallowed. This product has a defatting action on the skin.

INHALATION: Inhalation of vapour may cause the following symptoms. Irritation of the nasal tract and respiratory system. Mist or spray from the working solution may cause similar symptoms.

INGESTION: May cause the following symptoms. Abdominal pain. May be harmful, especially in significant quantities.

SKIN: Irritation or burning sensation. Product has a defatting effect on skin. Prolonged or frequent contact may lead to dryness and cracking.

EYES: Pain or irritation, watering, redness. Risk of serious damage to eye.

HEALTH WARNINGS:

ACUTE HEALTH EFFECTS:
A single exposure may lead to irritation of, or burns to, the following - the eyes, skin, mouth, throat, digestive system, nasal tract and respiratory system.

CHRONIC HEALTH EFFECTS:
Exposure to sublethal quantities over a prolonged period of time may lead to the following symptoms - skin dryness and cracking.

12) ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL DATA:

Chemical Oxygen Demand	275000mg oxygen/litre
(Chemical as supplied)	

ENVIRONMENTAL HAZARDS: Do not allow the product as supplied to enter local authority drains, waterways or sewers, or soil. Contact the local water authority for advice regarding dilute solutions and/or rinse waters. Agitation of high strength waste solutions may cause excessive foam. Typical oxygen demand value(s) for this product or its solution can be found in Ecotoxicological Data above.

DEGRADABILITY: No specific biodegradability tests have been carried out on this product.
This product contains the following ingredients/ingredient types that are classified as biodegradable/readily biodegradable.
Organic acid(s). Nonionic/anionic surfactant(s).
This product contains the following ingredients/ingredient types that are classified as slowly/poorly biodegradable.
Cationic or amphoteric surfactant(s).
This product contains the following ingredients/ingredient types that are classified as non biodegradable.
Generally, the inorganic constituents would not be expected to be biodegradable.
Incomplete data available on the remainder of the ingredients.

ACUTE FISH TOXICITY: No specific aquatic toxicity tests have been carried out on this product.
Incomplete information available on the toxicity of the product ingredients to aquatic organisms. Based on the information available for some of the ingredients, this product is expected to be as follows - harmful to fish (LC50 (96 hour)=10-100mg/l). High concentrations in receiving waters will injure aquatic life by the effect on pH.

13) DISPOSAL CONSIDERATIONS:

DISPOSAL METHODS: Prospective users of this product should contact their local water authority to ascertain their requirements for waste arising from the use of this type of material. In some cases, pH adjustment only (with eg. sodium carbonate/hydroxide or hydrochloric acid as appropriate), if necessary, may be acceptable prior to discharge to a foul sewer. Consideration should be given to the level of the following materials present in the effluent as these may require special treatment - oil and suspended solids. Alternatively, dispose of waste solutions via a licensed waste disposal contractor.
Bulk quantities of unused product and emptied containers should be recycled or disposed of via a licensed waste disposal contractor. This material and its container must be disposed of as hazardous waste.
Disposal of this product, solutions and any by-products should at all times comply with the requirements of the Environmental Protection Act and its subsidiary regulations and any regional local authority requirements.

14) TRANSPORT REGULATIONS:

LABEL FOR CONVEYANCE:
ROAD:
ADR CLASS No: 8 **ADR ITEM No:** 5°(c)
PROPER SHIPPING NAME I: HYDROCHLORIC ACID MIXTURE.

RAIL:
RAIL TRANSPORT CLASS No: 8

SEA:
UN SEA: 1789 **SEA TRANSPORT CLASS No:** 8
IMDG Page No: 8183 **SEA PACK GR:** III
MARINE POLLUTANT: No.

AIR:
UN AIR: 1789 **AIR TRANSPORT CLASS No:** 8
AIR PACK GR: III

15) REGULATORY INFORMATION:

LABEL FOR SUPPLY: IRRITANT

RISK PHRASES:	R-36/37/38	Irritating to eyes, respiratory system and skin.
SAFETY PHRASES:	S-24/25	Avoid contact with skin and eyes.
	S-26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
	S-36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
	S-60	This material and its container must be disposed of as hazardous waste.

UK REGULATORY REFERENCES: Health and Safety at Work Act 1974.
Control of Substances Hazardous to Health Regulations.
Chemicals (Hazard Information and Packaging for Supply) Regulations.
Environmental Protection Act.
Environmental Protection (Duty of Care) Regulations.
Control of Pollution (Special Waste) Regulations.
European Agreement Concerning The International Carriage of Dangerous Goods by Road (ADR).
Carriage of Dangerous Goods by Road and Rail (Classification, Packaging and Labelling) Regulations.

16) FURTHER INFORMATION

USER NOTES: This Safety Data Sheet has been compiled for the product as supplied. In use, it may be dissolved in/diluted with water or other solvent, mixed with other chemicals/products or used as supplied. The hazards of the working solution will be dependent on its concentration and temperature and will need to be combined with those of any other chemicals/products involved, if applicable. See the appropriate Technical Data Sheet for further information.

It should be noted that this Safety Data Sheet only outlines the hazards of the product specified and does not constitute a users workplace risk assessment as required by other health and safety legislation.

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our product from the point of view of safety requirements and is not intended to guarantee any particular properties.

RECOMMENDED USES AND RESTRICTIONS:
This product is intended to be used industrially/commercially for the application described in Section 1. It should not be used for domestic purposes or for any other industrial/commercial use without the prior approval of REDROCK.

INFORMATION SOURCES: Health & Safety Executive Guidance Note EH40 - Occupational Exposure Limits.
Raw material suppliers Safety Data Sheets.
Croner's Dangerous Chemicals Emergency First Aid Guide.

Registered Office:
Red Rock (2004) Ltd, Croft House, Station Rd. BARNOLDSWICK, Lancs, UK. BB18 5NA.
Registered number : 3981500 England and Wales.