Vickers Laboratories Ltd - Safety Data Sheet 4506

(in accordance with regulation (EU) 2015/830 and regulation (EC) 1272/2008)

Revision: 1.1 Revision date: 16 April 2021
Date printed: 12 August 2023

Section 1. Identification

1.1 Product Identifier 4506

Product Name ETCH SOLUTION 1

CAS Number Mixture
REACH Registration No A registration number is not available as the substance or its uses are exempt, the annual tonnage does not require a registration or the registration is envisaged for a later date.

1.2 Relevent identified uses of the substance or mixure & uses advised against

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

1.3 Supplier Vickers Laboratories Ltd

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(Have this document to hand)

Section 2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to regulation 1272/2008/EC

Skin corrosion/irritation, category 2	H315: Causes skin irritation.
Serious eye damage/irritation, category 1	H318: Causes serious eye damage.
Spec target organ tox - single, category 3	H335: May cause respiratory irritation.
Hazard to aquatic environment, category 1	H400: Very toxic to aquatic life.
Hazard to aquatic environment, category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to regulation 1272/2008/EC

Signal word Danger

Hazard Pictograms

Hazard Statements	Causes skin irritation. Causes serious eye damage. May cause respiratory irritation. Very toxic to aquatic life with long lasting effects.
Precautionary Statements	Wear protective gloves / protective clothing / eye protection. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing. Avoid release to the environment.

Section 3. Composition

3.2 Mixtures

Component	CAS No.	EEC No.	REACH No.	Conc w/w	CLP Classification (1272/2008/CE)
Hydrochloric acid	7647-01-0	231-595-7	01-2119484862-27-XXXX	<25%	Skin Corr. 1A,STOT SE 3 (I)
Cupric sulphate	7758-99-8	231-847-6	01-2119520566-40-XXXX	<10%	Acute Tox. 4 (O),Eye Dam. 1,Aquatic Acute 1,Aquatic Chronic 1

Section 4. First Aid

4.1 Description of first aid measures

Eyes	Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION.
Skin	Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. In severe cases or if exposure has been great, OBTAIN MEDICAL ATTENTION.
Inhalation	Remove from exposure.
Ingestion	Wash out the patients mouth thoroughly with water. OBTAIN MEDICAL ATTENTION URGENTLY.
Personal protection for first aiders	Wear protective gloves / eye protection.

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

No further relevant information available.

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

No further relevant information available.

Section 5. Fire Fighting

5.1 Extinguishing media

Extinguishing Media	Consider what other flammable materials are present and act accordingly.
Unsuitable Media	Nothing specified.

5.2 Special hazards arising from the substance or mixture

Hazards	Presents no specific fire danger.

5.3 Advice for firefighters

Advice for firefighters	Consider all other materials in the vicinity.

Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Protection	Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so.

6.2 Environmental precautions

Enviromental	Keep non-neutralised material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.

6.3 Methods and material for containment and cleaning up

Major Spillage	Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with copious amounts of water.
Minor Spillage	Neutralise spill with soda ash, lime, calcium carbonate or sodium bicarbonate. Wash area down with copious amounts of water.

6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

Section 7. Storage & Handling

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing.

Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.

7.2 Conditions for safe storage, including any incompatibilities

Well ventilated, cool, dry storage .

7.3 Specific end use(s)

See section 1.2.

Section 8. Workplace Exposure & Personal Protection

8.1 Control parameters

Component	CAS No	Concentration	Workplace Exposure Limits			
			Long Term (8hr TWA)		Short Term 15min period)	
Hydrochloric acid	7647-01-0	<25%	1.0 ppm	2.0 mg/m-3	5.0 ppm	8.0 mg/m-3
Cupric sulphate	7758-99-8	<10%	-	-	-	-

Exposure data source(s)	IOELV: Indicative Occupational Exposure Limit Value.

8.2 Exposure controls

Respiratory Protection	Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge respirator, or use self contained breathing apparatus.
Hand Protection	Use nitrile gloves or PVC gauntlets.
Eye Protection	Use tightly fitting chemical splash proof glasses or goggles.
Skin Protection	If skin contact or contamination of clothing is likely, protective clothing must be worn.
Special Hazards	No special precautions required.

Section 9. Physical & Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	Green solution.
Odour	Odourless.
pH	1 @ 20°C
Boiling Point	108.6°C
Melting Point	-55°C
Flash Point	Not applicable
Upper Flammable Limit	Not applicable

Lower Flammable Limit	Not applicable
Auto Ignition	Not applicable
Explosive Properties	No.
Oxidising Properties	No.
Vapour Pressure	Not applicable
Relative Density	1.0820
Water Solubility	Completely miscible in water.

9.2 Other information

No data available.

Section 10. Stability & Reactivity

10.1	Reactivity	No data available.
10.2	Chemical Stability	Stable under normal conditions
10.3	Possibility of hazardous reactions	No data available.
10.4	Conditions to Avoid	No specific conditions.
10.5	Incompatable Materials	Alkalis. Potassium permanganate. Reacts with most metals to produce extremely flammable hydrogen gas.
10.6	Hazardous Decomposition Products	Will decompose to emit toxic and irritant fumes of hydrogen chloride.

Section 11. Toxicological Information

11.1 Information on toxicological effects

Eyes	The liquid is irritating to the eyes but unlikely to cause serious injury.
Skin	The liquid will be an irritant on brief or occasional exposure. May cause burns on prolonged contact.
LD50 Skin	Not available
Ingestion	Ingestion of large amounts may produce severe mouth burns, and if swallowed extensive damage to the oesophagus. Symptoms may include salivation, thirst, difficulty in swallowing, pain, shock and vomiting.
LD50 Oral	Not available
Inhalation	Presents no significant health hazard by inhalation.
LD50 Inhalation	Not available
TCLo	Not available
Carcinogenicity	Not considered to be a carcinogen.
Mutagenicity	Not considered to be a mutagen.
Reproductive Effects	None identified.
Other Information	5-10ppm is the threshold for irritation with severe irritation occurring at 50-100 ppm.

Section 12. Ecological

12.1	Toxicity	Neutralised material presents no specific environmental hazard.
	LC50 Algal	Not available
	LC50 Crustacea	Not available
	LC50 Fish	Not available
12.2	Persistence and degradability	No data available.
12.3	Bioaccumulative potential	No data available.
12.4	Mobility in soil	No data available.
12.5	Results of PBT & vPvB assessment	Assessment not required.
12.6	Other adverse effects	None known at present.

Section 13. Disposal Considerations

13.1 Waste treatment methods

Disposal Methods	Dilute in a large excess of water and carefully neutralise with soda ash, then wash to drain with copious amounts of water.
Contaminated Packaging	Carefully neutralise with a weak sodium hydroxide solution then wash out thoroughly with water. Use a licensed waste disposer.

Section 14. Transport Information

14.1	**UN Number**	1760
14.2	**Proper Shipping Name**	Corrosive liquid, N.O.S.
14.3	**Transport classes**	
	UN classification	8
	Subsidiary hazard(s)	None
	Transport category	2
	ADR Hazard ID	80
	Tunnel Restriction Code	E
14.4	**Packing Group**	II
14.5	**Environment hazards**	See section 12.
14.6	**Special precautions for user**	No special precautions required.
14.7	**Transport in bulk**	Not transported in bulk.

Section 15. Regulatory Information

15.1 Safety, health and environment regulations specific for subtance/mixture.

Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)

Classification	Skin corrosion/irritation, category 2; Serious eye damage/irritation, category 1; Spec target organ tox - single, category 3; Hazard to aquatic environment, category 1; Hazard to aquatic environment, category 1
Signal word	Danger
Hazard Pictograms	
Hazard Statements	H315, H318, H335, H410 Causes skin irritation. Causes serious eye damage. May cause respiratory irritation. Very toxic to aquatic life with long lasting effects.
Precautionary Statements	P280, P301+P330+P331, P303+P361+P353, P305+P351+P338, P273 Wear protective gloves / protective clothing / eye protection. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing. Avoid release to the environment.

15.2 Chemical safety assessment

Assessment not required.

Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

Revision number: 1.1 (Supercedes revision 1.0)

Revision date: 16 April 2021

Reviewed by chemist: 04 May 2021

Printed date: 12 August 2023