

Tetra-Etch® Etchant	Doc. No. TE001	Revision 4
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Tetra-Etch® Etchant Material Safety Data Sheet

**Transportation Emergency, CARECHEM (24 HOUR)
(+44)(0) 1865 407333**

Non Emergency Enquiries to:-

**Tetra-Etch Products Ltd
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Whitburn West Lothian
Scotland EH47 0LQ
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E: enquiries@tetraetch.com**

Change Record

Revision	Date	Responsible Person	Description of Change
3	June 2015	Iain Smith	CLP Compliant
4	December 2017	Iain Smith	Update to Sections 3 and 8

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1. Identification

1.1 Trade Name

Tetra Etch® fluorocarbon etchant

A mixture of sodium, naphthalene and 1,2 – dimethoxyethane

1.2 Uses

Used to prepare the surfaces of fluoropolymers prior to bonding, marking and potting

1.3 Address

Tetra-Etch Products Ltd
Unit L, Burnhouse Ind Est
Whitburn
West Lothian
EH47 0LQ
UK

Tel: (+44) 1501 744843 Fax: (+44) 5603 436266 email: enquiries@tetraetch.com

1.4 Emergency telephone number (24 hours) +44 1865 407333

2. Hazard Identification

2.1 Hazard Classification

Hazard Class	Category	Hazard Statement
Flammable Liquid	2	H225
Acute Toxicity (Oral)	4	H302
Skin Corrosion/Irritation	1B	H314
Acute Toxicity (Inhalation)	4	H332
Carcinogenicity	2	H351
Toxic to Reproduction	1B	H360FD
Aquatic Toxicity (Chronic)	1	H410

2.2 Labelling



Signal word: Danger

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Hazard Statements

- Physical Hazards:** H225: Highly flammable liquid and vapour.
- Health Hazards:** H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.
H332: Harmful if inhaled.
H351: Suspected of causing cancer.
H360FD: Suspected of damaging fertility or the unborn child.
H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements

- Prevention:** P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233: Keep container tightly closed.
P240+P241+P242+P243: Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.
P260: Do not breathe mists/vapours/spray.
P264: Wash thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Additional Hazards due to Foreseeable Uses/Misuses

Mixture exhibits corrosive properties.
Inadequate ventilation may cause drowsiness due to exposure to solvent vapours

EUH19: May form explosive peroxides

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3. Composition

Type	Number	REACH Registration Number	Max % (wt)	Name	Classification according to Regulation (EC) 1278/2008 (CLP)
EU	203-794-9	01-2119485981-24	75	1,2 Dimethoxyethane	Flammable liquids (Category 2) H225 May form explosive peroxides. EUH019 Acute toxicity (Category 4) H332 Reproductive toxicity (Category 1B) H360FD Skin irritation (Category 2) H315
EU	202-049-5	01-2119561346-37	25	Naphthalene	Carcinogenicity (Category 2) H351 Acute toxicity, Oral (Category 4) H302 Acute aquatic toxicity (Category 1) H410 Chronic aquatic toxicity (Category 1) H410
EU	231-132-9	01-2119484805-27	5	Sodium metal	Substances, which in contact with water, emit flammable gases (Category 1), H260 Skin corrosion (Category 1B), H314

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4. First Aid Measures

4.1 First aid response:

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/shower.

P304+P340: IF INHALED: Remove person to fresh air and keep 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.

4.2 Special measures

May cause irritation or burns of the digestive tract. May be harmful if swallowed.
Inadequate ventilation may cause drowsiness due to exposure to solvent vapours.

4.3 Immediate medical attention

P310: Immediately call a POISON CENTER/doctor.

P308+P313: IF exposed or concerned: Get medical advice/attention

5. Fire Fighting Measures

5.1 Extinguishing media –

P370+P378: In case of fire: Use dry powder, preferably with a nitrogen propellant to extinguish

5.2 Special Hazards

Do not use water.

5.3 Advice for firefighters

Combustion products- CO₂; water
Use breathing apparatus.

6. Accidental Release

6.1 Personal protection

Wear apron or chemical resistant overalls, gloves and eye/face protection.
Use suitable organic vapour respirator.

6.2 Environmental Protection

Do not allow to enter drains or water courses.

6.3 Clean-up Methods

Contain and absorb with dry sand or mineral absorbent. Do not use water.
Transfer to polypropylene or polyethylene drum or polythene lined steel drum for disposal.
No smoking - use non sparking tools

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7. Handling & Storage

7.1 Precautions for Safe Handling

P280: Wear protective gloves/protective clothing/eye protection/face protection.

Wear butyl rubber gloves and goggles when opening container or using liquid

Open container carefully to release any built-up pressure

Follow procedures for flammable materials

Ensure adequate ventilation

Avoid contact with skin and eyes

Wash thoroughly after handling

7.2 Conditions for Safe Storage

P403 + P405 + P235: Store in a well-ventilated place. Store locked up. Keep cool

Store away from sources of ignition.

Store below 0°C

Keep container sealed.

Keep separate from oxidising materials.

7.3 Specific end uses

8. Exposure Controls/Personal Protection

General protective measures : Do not inhale vapours Avoid contact with eyes and skin.

Hygiene measures : Avoid contact of the substance. Remove soiled or soaked clothing immediately. After worktime and during work intervals the affected skin areas must be thoroughly cleaned.

Respiratory protection : Use respiratory protection in case of insufficient exhaust ventilation or prolonged exposure Full mask to standard DIN EN 136 Filter A (organic gases and vapours) to standard DIN EN 141 The use of filter apparatus presupposes that the environment atmosphere contains at least 17% oxygen by volume, and does not exceed the maximum gas concentration, usually 0.5% by volume. Relevant guidelines to be considered include EN 136/141/143/371/372 as well as other national regulations.

Hand protection : For long-term exposure: Butyl rubber gloves. Minimum breakthrough time / gloves : 480 min Minimum thickness / gloves 0,7 mm For short-term exposure (splash protection): Nitrile rubber gloves. Minimum breakthrough time / gloves : 10 min Minimum thickness / gloves 0,4 mm These types of protective gloves are offered by various manufacturers. Please note the manufacturers' detailed statements, especially about the minimum thickness and the minimum breakthrough time. Consider also the particular working conditions under which the gloves are being used.

Eye protection : safety glasses

Body protection : protective clothing

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9. Physical & Chemical Properties

Appearance	Green black liquid with strong odour of ether and naphthalene. Odour threshold <1 ppm.
pH	The product is a non-aqueous solution. In the presence of water, a pH of >12.5 is achieved.
B.P.	85 °C
Melting Point	N/A
Flash Point	BSENISO 13736 0.5 °C. auto ignition point 192 °C
Flammability	Highly Flammable
Explosive Range	LEL 1.8% UEL 10.4%
Vapour Pressure	48mm Hg @ 20 °C
S.G. (Density)	0.96 g/cm3
Solubility	Reacts with water to form alkaline solution
VOC Content	73% (700g/l)

10. Stability & Reactivity

10.1 Reactivity

No data available

10.2 Chemical Stability

No data available

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to Avoid

Product decomposes in the presence of moisture.
Keep away from sources of ignition

10.5 Incompatible Materials

Oxidising materials and strong acids.

10.6 Hazardous Products Formed

Reacts with water to form sodium hydroxide and naphthalene, small quantities of
hydrogen evolved.

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11. Toxicological Information

Acute effects

Inhalation of vapour causes dizziness, drowsiness and nausea. Can be absorbed through the skin.

Other acute effects - corrosive, skin and eye contact will cause severe irritation and caustic burns.

Chronic effects

Recent studies have shown that 1,2 dimethoxyethane can cause testicular atrophy, teratogenic effects and embryo toxicity in mice.

Some individuals may show sensitivity to naphthalene.

12. Ecological Information

Ecotoxicity- harmful to fish

Mobility- Not known

Persistence- Not known

Bioaccumulation- Not known

13. Disposal

P501: Dispose of contents and container in accordance with local and regional regulations.

Used containers may contain residual product and should be separated from sources of ignition or heat.

14. Transport

14.1 UN identification No.	UN2924
14.2 Proper Shipping Name	Flammable Liquid, Corrosive, NOS (Contains 1,2 dimethoxyethane)
14.3 Hazard Class	Class 3
14.4 Packing Group	Packing group II
14.5 Environmental Hazards	Not a marine pollutant
Transport Labels required	Flammable, Corrosive

15. Regulatory Info

This product is classified in accordance with EC Regulations EC/1272/2008

Germany WGK CAS#110-71-4; 1

USA TSCA Components are listed on the TSCA inventory

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16. Other Information

Signal word: Danger

Hazard Statements:

Physical Hazards

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Health Hazards

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Prevention:

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P260: Do not breathe mists/vapours/spray.
P264: Wash thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

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/shower.
P304+P340: IF INHALED: Remove person to fresh air and keep 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.
P310: Immediately call a POISON CENTER/doctor.
P308+P313: IF exposed or concerned: Get medical advice/attention.
P363: Wash contaminated clothing before reuse.
P370+P378: In case of fire: Use dry powder, preferably with a nitrogen propellant to extinguish.
P391: Collect spillage.

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Storage: P403 + P405 + P235: Store in a well-ventilated place. Store locked up. Keep cool.

Disposal: P501: Dispose of contents and container in accordance with local and regional regulations.

EUH19: May form explosive peroxides.

24 hour emergency contact – (+44)(0)1865 407333

Reference to product literature should be made prior to use.

Reasonable care has been taken in the preparation of this information.
Tetra-Etch Products Ltd believes the data to be reliable.
This data is supplied for illustration and information purposes only.