



Creative Engineers, Inc.

Sodium Naphthalene Etchants

C-Etch A : C-Etch B : C-Etch C

Ammonia Etch

Creative Engineers can provide you a complete turnkey package with chemical, equipment, training, and waste disposal.

Contact our engineers and let them handle the details while you focus on your core business.



Creative Engineers, Inc. (CEI) currently produces three standard types of sodium based etching solutions. C-Etch products are specially formulated sodium naphthalene complexes each with the ability to react with the surface coatings of most fluorinated polymers to allow them to be bonded to most materials. The reaction between the sodium solution and the polymer strips fluorine molecules from the surface allowing for the replacement of "bondable" molecules that can be used for adhesion.

C-Etch A and C-Etch B consist of a sodium naphthalene complex dissolved in a Glycol Diether. Specifically, CEI incorporates Ethylene Glycol Dimethyl Ether (Monoglyme) because of its affinity to complex sodium and naphthalene. With its high solubility limit for sodium naphthalene, Monoglyme proves to be an excellent choice for sodium rich etching solutions.

C-Etch C is a similar product but uses the less hazardous Diglyme as a solvent instead of Monoglyme. The etch produced is not as strong and is often referred to as a blond etch.

C-Etch products are manufactured at CEI's facility in York, Pennsylvania. All etchants are produced to order and shipped to our customers as fresh as possible for the best etch. CEI does maintain a small stock for those unavoidable emergencies and for in-house etching to insure we can be responsive to the customer's needs.

TURN KEY PACKAGE →

Typical Properties

C-Etch A:

Color: Green to Black

Odor: Sweet

Form: Liquid

Active Na Available: 1-2%wt.

C-Etch B:

Color: Black to Green

Odor: Sweet

Form: Liquid

Active Na Available: 2-3%wt.

C-Etch C: (diglyme)

Color: Black to Green

Odor: Sweet

Form: Liquid

Active Na Available: 1-2% wt.





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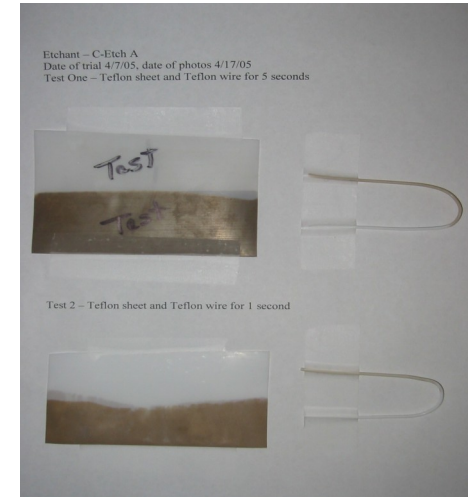
Etch Fluoropolymers in Seconds!

Teflon®	PFTA
Viton	PFA
Kynar	FEP
Rulon®	Duroid
Tedlar®	Kapton F®

Commonly Asked Questions

- Q: Can CEI do in-house etching at the York facility?
- A: Yes. CEI has extensive experience handling and using the etching products we supply. Our York facility is also able to do ammonia/sodium etching!
- Q: Can CEI provide other specific formulations of the etching product to meet customer requirements?
- A: Yes. Contact CEI today with your requirements and a small sample will be shipped to your site within 1 week!
- Q: Can the product be tested for remaining life?
- A: Yes, CEI has developed a simple to use test kit that gives an instant indication of whether the product can still be used or if fresh product should be added

- Q: Will the etching change the properties of my polymer?
- A: No. Chemical etching will only etch the surface of the polymer and all other properties will remain mostly unaffected. Etching does darken the surface of the polymer, usually changing to a brown or tan color depending on the etch chemical used.
- Q: What is the shelf life of C-Etch A and C-Etch B?
- A: The “Active” glymes used in C-Etch A and C-Etch B react with the sodium naphthalene complex to release the decomposition product methyl vinyl ether. Under proper storage conditions, C-Etch A and C-Etch B have useful life of 4-6 weeks. C-Etch C has an indefinite shelf life with proper storage as it is not as reactive.
- Q: Will C-Etch A, B, and C react with other plastics or metals?
- A: CEI etchants will react with all fluoropolymers and are not compatible with aluminum or tin. Other plastics (polypropylene, polyethylene, PVC) and most metals (SS, CS, silver, gold, copper) are non-reactive. Contact CEI with specific compatibility questions with C-Etch A, C-Etch B and C-Etch C.



C-Etch A Samples, PFA wire and sheet.

Creative Engineers, Inc. is a small employee owned company specializing in providing today's customers with the products and services they need to succeed. Visit us on the web at www.creativeengineers.com for more information about our products and services.

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