

PreEtch™

Two Component Vinyl Wash Pretreatment Primer

SELECTION DATA

DESCRIPTION:

PreEtch 994P is a spray applied two component vinyl wash primer, also known as a pretreatment primer and an acid etching primer. Wash primers are used on metals not amenable to abrasive blasting. **PreEtch** comes in two color formulations. One is **994P409** Green; Caltrans Specification 8010-31A-27 (AKA DOD-P-15328). The other is **994P309** Yellow; the Federal Government's preferred formulation for the same product – MIL-C-8514

Vinyl wash primers use phosphoric acid in combination with a low viscosity, rapid drying, vinyl (polyvinyl butyral) resin that has superior wetting and penetration. The combination literally bites into smooth metal. **PreEtch** provides a degree of adhesion that cannot be matched without abrasive blasting and epoxy priming.

USE:

PreEtch is used as an adhesion primer on any unpainted, metal surface that is not amenable to abrasive blasting, galvanized, copper or aluminum or sheet metal requiring a fine finish. The original use was aluminum aircraft; the largest IM/architectural use is galvanized metal buildings especially those in very humid, corrosive environments which will require a zinc primer such as TT-P-641 for optimum service life. They can also be used as a barrier coat over organic or inorganic zinc rich primers.

ADVANTAGES:

- **PreEtch** is intended to be used as a treatment on aircraft metals prior to the application of any primer.
- Optimum adhesion on nonferrous metals and select sheet metal.
- Very fast dry; recoatable with in 30 minutes .

LIMITATIONS:

- Not intended as a permanent protective coating; requires a top coat.
- Building films thicker than 0.5 mils dry will cause peeling.
- Unforgiving recoat window. Must be recoated within 4 hours.
- Relatively difficult application; recommended for experienced, professional applicators only.
- Very flammable.

PHYSICAL PROPERTIES

VOC: [as packaged & mixed] 727.2 g/l – (6.07 lbs./gal.)

APPEARANCE: [Gloss at 60°]

Matte flat 15 – 20

WEIGHT PER GALLON: [mixed] 7.6 lbs.

FLASH POINT: [both] 57° F.

PACKAGE VISCOSITY: 57 – 74 KU

SOLIDS: [mixed]

By Weight 18.8%

By Volume 9.7%

COVERAGE: [mixed]

Theoretical at 1 mil DFT 155 sq.ft./gal.

Theoretical at 0.3 mils DFT 465 sq.ft./gal.

Required Minimum DFT 0.2 mils

Maximum DFT 0.4 mils

DRY SCHEDULE: [at 50% RH and 0.4 mil DFT]

	45° F.	60° F.	75° F.	90° F.
Tack Free	45 mins;	30 mins;	15 mins;	10 mins;
Min. Recoat	90 mins;	60 mins;	30 mins;	20 mins;
Max. Recoat	4 hrs;	4 hrs;	4 hrs;	4 hrs;

COLOR AVAILABILITY:

994P is stocked in both a dull medium chrome yellow and O.D. Green.

ORDER CODE AND COLOR:

Individual products are identified by the product series number, followed by an identifier (P=primer) and ending in the color number. For example, 994P309 is **PreEtch** (994) primer (P) yellow oxide (309).

994P309 (MIL5) Yellow

994P409 (CAL7) Green

994B Acid Component

PACKAGING:

994P309 is available in two case "one gallon" kits.

Four – 1 gallon cans of Part A and four – 1 quart plastic bottles of Part B per case....35 lbs./case

994P409 is available *only* in a five gallon kit of four gallons of Part A in a five gallon can and a gallon of Part B in a plastic jug.

One – 5 gallon kit..... 53 lbs.

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TRIANGLE™



PreEtch™

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APPLICATION DATA

REQUIREMENTS FOR APPLICATION:

- Surface and ambient temps. must be above 45° F. and 5° F. above dew point during application.
- Surface must be completely free of all contaminants: all dirt, grease, oils, etc. Washing with a strong detergent/degreaser is recommended.
- Silicone protectants on galvanized must be 100% gone; washing will not affect them, any residual silicone will cause a paint failure. Such protectants are designed to weather away within a specified period with full sun exposure. The only alternative is abrasive blasting with softer media.
- Surface must be completely dry.
- NIOSH respirator, hood with eye and face protection, goggles is typical. Gloves recommended.

FILM DEVELOPMENT & THICKNESS:

PreEtch is applied in very thin films. It is applied in one coat to produce a dry film thickness of not more than 0.4 mils. Design surfaces are smooth and non porous. Actual application rates vary little from theoretical unless there are many corners, wind or irregular components with resultant misses and overspray. Recommend 390 sq.ft./gal. as a good general estimating figure.

MIXING:

PreEtch has an 4 hour pot life. Mix only as much as can be used within 4 hours. Pre-stir the resin component until it has an uniform consistency. Then add 994B acid component to the resin component while stirring the two components together. Never reverse the order or pour the two together. Always mix in exact 4:1 ratio by volume. Stir until uniform; *then reduce*.

Note: The acid component is not a thinner. It is a necessary activator and must be used exactly as directed.

THINNING:

PreEtch is not VOC compliant as packaged. Its use is based on a special use exemption. The additional reduction does not significantly alter VOC level or the exemptions known to Triangle. Check with local AQMD for current regulation. For spray application **994P** is reduced 100% by volume, after mixing with 994B acid component . The thinner should have the following composition depending on weather conditions:

Normal weather: (35 – 70% RH), 9 parts ethyl or isopropyl alcohol and 1 part N-butyl alcohol.

Dry weather: (below 35% RH), 10 parts either ethyl or isopropyl alcohol and 20 parts demineralized water.;

Damp weather: (above 70% RH), 1 part Ethyl alcohol only, 1 part N-butyl alcohol and no water.

Use the least amount of butyl alcohol that will eliminate blushing. Increase the proportion of butyl alcohol only if blushing still persists. The greater the butyl alcohol content, the longer the necessary drying time.

APPLICATION:

PreEtch is designed for application by conventional spray which is the only way to properly develop the thin films required. Because of the thin film and low viscosity, small "stain" type fluid nozzles and air caps are required. **PreEtch** is typically applied in one crossing pattern.

Conventional: Binks 18 or 2001 guns, with a .020" fluid nozzle, and an air cap sized to available air.

Use 7–15 psi fluid pressure, 30–50 air pressure.

HVLP: Binks BBR with #89 tip or equivalent (.020" fluid nozzle).

Apply the overcoat as soon as possible after the coating resists removal with a finger nail. Any mixed **994P** left over after 4 hours must be discarded as it has lost its effectiveness.

CLEANUP SOLVENT: Ethyl alcohol

SAFETY AND HANDLING

FLASH POINT: [setaflash] 57° F. – (14° C.)

SHIPPING DESCRIPTION: [CFR 49]

Ground/Air/Vessel: Paint, 3, UN1263, PG II

Required Label: FLAMMABLE LIQUID

Required Marking: PAINT UN1263

IMDG PACKAGING:

FLAMMABLE LIQUID, class 3.2, UN1263, II

IMDG STOWAGE: Category B

UNIFORM FIRE CODE: [CFR 29] CLASS I-B

STORAGE TEMPERATURE: 100° F. max.

SHELF LIFE: [warranted] 1 Year

"HMIS" RATINGS: H - 2; F - 3; R - 0; PP - H

(03/02/00)

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