

3M

Scotch-Weld™

Structural Adhesive Primer

EC-1290

Technical Data

April, 2002

Introduction

Scotch-Weld™ Structural Adhesive Primer EC-1290 is a sprayable primer for Scotch-Weld™ films. It is especially suggested for use with 3M™ Scotch-Weld™ Structural Adhesive Films AF-6, AF-10 and AF-13. Specific data can be found under the test result section of the Scotch-Weld AF-6, AF-10 and AF-13 technical data sheet.

Scotch-Weld EC-1290 when properly applied, offers the following advantages:

- Simplified production scheduling by protecting the cleaned surfaces until the bonding operations can be completed.
- Improved resistance to environmental exposures.
- Improved adhesion at elevated temperatures.

Description

Color:	Clear to Light Amber
Base:	Synthetic Rubber
Solvent:	Blend of Ketones
Viscosity:	18-26 cps (No. 1 Spindle 20 rpm at 78°F [25.5°C])
Solids Content:	10% ± 1%
Flash Point:	77°F (25°C) (COC)

Contains photochemically reactive solvent; Southern California A.P.C.D. Rule 102 (Jan. 9, 1976).

Application

A thoroughly cleaned, dry, grease-free surface is essential for maximum performance. Cleaning methods which will produce a break-free water film on metal surfaces are generally satisfactory.

Surface preparations should be fully evaluated with the adhesive, especially if resistance to severe environments are anticipated.

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Surface Preparation **Aluminum Surface Preparation (3M Company Optimized FPL Etch)**

1. Vapor Degrease – Perchloroethylene condensing vapors for 5-10 minutes.
2. Alkaline Degrease – Oakite 164 solution (9-11 oz./gallon water) at 190°F ± 10°F (88°C ± -12°C) for 10-20 minutes. Rinse immediately in large quantities of cold running water.
3. Acid Etch – Place panels in the following solution for 10 minutes at 150 ± 5°F (66 ± -15°C).

Caution: Use adequate respiratory, eye and skin protection when using etch solutions.

Sodium Dichromate (Na ₂ Cr ₂ O ₇ ·2H ₂ O)	4.1 - 4.9 oz./gallon
Sulfuric Acid, 66° Be	38.5 - 41.5 oz./gallon
2024T-3 aluminum (dissolved)	0.2 oz./gallon minimum
Tap Water	Balance

4. Rinse – Rinse panels in clear running water.
5. Dry – Air dry 15 minutes; force dry 10 minutes at 150 ± 10°F (66 ± -12°C).
6. It is advisable to coat the freshly cleaned surface with adhesive within (4) hours after surface preparation.

Primer Application

Scotch-Weld EC-1290 is satisfactorily applied by brush coating or spraying. Primer must be thoroughly stirred just prior to application.

The following spray equipment is suggested to obtain optimum results.

Spray Gun	DeVilbiss JGA
Air Cap	30
Tip	AV-601-E
Needle	E
Line Pressure	20-30 psi
Pot Pressure	3-5 psi
Fan Setting	Open Wide
Spray Pattern	Single Cross Coat
Primer Thickness	.0002 - .0004 inches

Primer Dry/Cure

The following cures for Scotch-Weld EC-1290 are suggested for use with 3M™ Scotch-Weld™ Structural Adhesive Films AF-6, AF-10, and AF-13.

Air Dry – 30 minutes at 75°F - 85°F (24°C - 29°C).

Force Dry – Bake in a circulating air oven. Two cycles have proved satisfactory.

- a. Primed surface held at 180°F ± 5°F (82°C ± -15°C) for 30 ± 10 minutes.
- b. Primed surface held at 250°F ± 5°F (121°C ± -15°C) for 30 ± 10 minutes.

The primed surface, after cooling to ambient temperatures, is ready for adhesive bonding. The primed surface should be protected from contamination introduced by dust, fingerprints, oil, etc.

If extended periods of storage is contemplated, wrap the parts in unplasticized Kraft paper. If the primed surface is contaminated with dust, it may be cleaned prior to bonding by wiping with clean, unsized cheese-cloth.

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Surface Preparation (continued)

Primer Cleanup

Excess primer and equipment may be cleaned up, prior to curing, with ketone* type solvents.

***Note:** When using solvents, extinguish all ignition sources and follow the manufacturer's precautions and directions for use.

Storage

Avoid heat and dampness in storage. Store new shipments behind older lots. Refrigerated storage at 40°F ± 5°F (4°C ± -15°C) is suggested for EC-1290.

Caution: Primer should be permitted to thoroughly warm to room temperature before being used in order to prevent moisture condensation.

Precautionary Information

Refer to Product Label and Material Safety Data Sheet for health and safety information before using this product. For additional health and safety information, call 1-800-364-3577 or (651) 737-6501.

For Additional Information

For additional information call 1-800-235-2376. For Technical Service assistance, call (651) 736-5954. Address correspondence to 3M Aerospace Lab, Technical Service, 3M Center, Building 209-2S-32, St. Paul, MN 55144-1000.

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ISO 9002

This Engineered Adhesives Division product was manufactured under a 3M quality system registered to ISO 9002 standards.



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