

3M

Scotch-Weld™

Structural Adhesive Primer

EC-1660 (5%)

Technical Data

May, 2002

Introduction

3M™ Scotch-Weld™ Structural Adhesive Primer EC-1660 (5%) is a primer for film adhesives in those applications where it is desired to obtain improved adhesion, or improved resistance to environmental exposure. Scotch-Weld EC-1660 (5%) is especially suggested for use with 3M™ Scotch-Weld™ Structural Adhesive Films AF 30 and AF 32.

Primer EC-1660 (5%) offers the following advantages:

- Ensures complete wetting of film adhesive to adherend surfaces.
- Simplifies production scheduling by protecting the cleaned surfaces until the bonding operations can be completed.
- Imports corrosion protection to metal

Description

Color:	Green
Base:	Synthetic resin-elastomer
Solvent:	Methyl isobutyl ketone (MIBK), cyclohexanone and toluene
Viscosity:	10-30 cps (Brookfield RVF, 20 rpm, No.1 Spindle @ 77 ± 2°F [25 ± -17°C])
Solids Content:	4-5% (3-5 gram sample at 160°F [71°C] for 24 hours)
Flash Point:	63°F (17°C) (Closed Cup)

Contains photochemically reactive solvent; Southern California APCD Rule 102 (Jan. 9, 1976).

Application

A thoroughly cleaned, dry, grease free surface is essential for maximum performance. Cleaning methods which will produce a breakfree water film on metal surfaces are generally satisfactory. Surface preparations should be fully evaluated with the adhesive, especially if resistance to specific environments are anticipated.

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Surface Preparation Suggested Cleaning Procedure for Aluminum

1. Vapor Degrease – Perchloroethylene condensing vapors for 5-10 minutes.
2. Alkaline Degrease – Oakite 164 solution (9-11 oz./gallon of water) at 180-200°F (82-93°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 ± 2°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 ± 5°C).
6. It is advisable to coat the freshly cleaned surfaces with 3M™ Scotch-Weld™ Structural Adhesive Primer EC-1660 (5%) within 4 hours after surface preparation.
7. Care should be taken to avoid contaminating the cleaned aluminum by any substance which will hinder the wetting action of Primer EC-1660 (5%).

Primer Application

The following procedure is suggested to obtain optimum results: Stir well before using. Brush coat to maximum of .0001 inches (dry) or use the following spray procedure.

Spray gun	Binks No. 62, Siphon Feed
Air Cap	66S
Fluid Tip and Needle	66-365
Line Pressure	20-25 psi
Cup Pressure	O, (Siphon Feed)
Fan Adjustment	Wide Open
Fluid Adjustment	One turn open
Distance from Panel	6-9 inches
Primer Thickness	.0001 inch

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 @ 40 ± 5°F (4 ± 2°C) is suggested for Primer EC-1660 (5%). Rotate stock on a "first in-first out" basis.

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

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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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