



# Structural Bonding Using a Waterbased, Corrosion Inhibiting Primer


## SOLUTION PROFILE - 3M™ Scotch-Weld™ Structural Adhesive Primer EW-5000

**Process/Shop:** Metal bonding during the manufacture, maintenance, or repair of aircraft parts.

**Key Issues:** The need for a low volatile organic compound (VOC) structural bonding primer, which has comparable performance and handling to traditional solvent-based primer.

**Application Attribute:** 3M™ Scotch-Weld™ Structural Adhesive Primer EW-5000 is an aerospace primer used for structural metal bonding applications with epoxy film adhesives. This sprayable, brushable, waterbased, low VOC, heat curing, corrosion inhibiting primer can provide protection against corrosive environments. EW-5000 is designed to provide ambient temperature drying with shop handleability prior to the heat cycle.



PRODUCT SOLUTION	Product	3M ID	3M UPC
	1 Quart Metal Can (12 per case)	62-3963-6545-4	21200 56687 5
	5 Gallon Plastic Pail	62-3963-8545-2	21200 56686 8
	1 Gallon Metal Pail	62-3963-6548-8	48011 56806 5

KEY BENEFITS	
	<p><b>South Coast Compliant:</b> EW-5000 is compliant with South Coast Air Quality Management District (SCAQMD) Rule 1124 which mandates VOC levels to be less than 250g per liter of water.</p>
	<p><b>Product Versatility:</b> Can be utilized in both 250°F and 350°F curing applications.</p>
	<p><b>Shop Handling:</b> Can be applied using existing application methods, including brushing and spraying, using HVLP spray guns as well as conventional spray guns. The product is designed to be compatible with conventional spray equipment. Can be sprayed in consecutive passes without flash off. Product handling with no flake off.</p>
	<p><b>Improved Productivity:</b> Three times the solid content of traditional solvent-based primer and 1 ½ times transfer efficiency over solvent-based primer resulting in an estimated four-five times productivity gain versus traditional solvent-based primers.</p>
	<p><b>Minimizes Pollution in the Work Environment:</b> Due to EW-5000's formulation, it does not flake off prior to the bake cycle providing a cleaner work environment. Some waterbased primers contain chromate powders that flake off in the air and on the floor and can be tracked outside the spray area, which can be hazardous.</p>

KEY ADVANTAGES	
	Less than 5 minutes to flash off into an integrated non-tacky film.
	Will air dry in less than 30 minutes.
	Thickness can be measured pre-bake with a thickness gauge.
	Improved coverage due to greater solid content.
	Compatible with automated spray equipment.
	Spray to target thickness (0.18 to 0.25 mil) in 2-3 passes (1-1.5 box coats).

# STRUCTURAL BONDING USING A WATERBASED, CORROSION INHIBITING PRIMER

## RELATED GOVERNMENT REGULATORY, INDUSTRY SPECIFICATIONS AND EXPERIENCE:

<b>Boeing BMS 5-89</b>	3M™ Scotch-Weld™ Structural Adhesive Primer EW-5000 is qualified with Boeing BMS 5-89 and BMS 5-137 specifications. BMS 5-89 is a specification for 250°F cure primers. The corresponding film adhesive primer specification is BMS 5-101. BMS 5-137 is a specification for 350°F cure primers and film adhesives.
<b>Boeing BMS 5-137</b>	
<b>SCAQMD Rule 1124</b>	Compliant with South Coast Air Quality Management District (SCAQMD) Rule 1124 which mandates VOC levels to be less than 250g per liter of water.

### For Additional Information

In the U.S., call toll free 1-800-235-2376 or fax 1-800-435-3082 or 651-737-2171. For U.S. Military, call 1-866-556-5714. If you are outside of the U.S., please contact your nearest 3M office.

### Important Notices

3M MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of application. Please remember that many factors can affect the use and performance of a 3M product in a particular application. The materials to be bonded with the product, the surface preparation of those materials, the product selected for use, the conditions in which the product is used, and the time and environmental conditions in which the product is expected to perform are among the many factors that can affect the use and performance of a 3M product. Given the variety of factors that can affect the use and performance of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

### Limitation of Remedies And Liability

If the 3M product is proved to be defective, THE EXCLUSIVE REMEDY, AT 3M'S OPTION, SHALL BE TO REFUND THE PURCHASE PRICE OF OR TO REPAIR OR REPLACE THE DEFECTIVE 3M PRODUCT. 3M shall not otherwise be liable for loss or damages, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including, but not limited to, contract, negligence, warranty, or strict liability.

### For Additional Product Safety and Health Info.

See Material Safety Data Sheet.



## Aerospace and Aircraft Maintenance Division

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