

**APPLICATION INSTRUCTION BULLETIN**  
***FUSIONCLAD® PRIMER***

Form No. AIB 2008-03  
Version 2, September 2008

**SCOPE**

These instructions apply to FusionClad® Primer, a polymer-based primer with the following attributes:

- ✓ Water dispersible advanced acrylic technology
- ✓ Fast dry allows easy handling and early application of topcoats
- ✓ Provides over 1000 psi bond strength to steel with minimal surface preparation
- ✓ Low VOCs (minimal solvents) and low odour
- ✓ Clean up with soap and water
- ✓ Easy paint-like application by airless spray, roller or brush

As part of a complete coating system with Madison FerroGrip™ Surface Conditioner and FusionClad® TC (or FusionClad® TC Ultra ), FusionClad® Primer is suitable for protecting virtually any steel structure targeted for, or currently used in, normal atmospheric (i.e., aboveground) exposure. Use in the shop or in the field for coating steel structures, sheet metal, equipment, piping, furniture and storage tanks. The FusionClad® system also works well on other substrates such as wood, concrete and plastic. An anti-microbial version is available.

Please note that FusionClad® Primer is not designed for immersion service, embedded structures or structures subject to ponding water. For these conditions, please consult your Madison representative.

**STORAGE AND HANDLING OF PRODUCT**

Store material in an enclosed area, out of direct sunlight and in a ventilated, dry area at or near room temperature. **DO NOT FREEZE.** Care should be taken in handling of coating containers to prevent puncture, unnecessary opening or other action that may lead to product contamination. The recommended shelf life of the material is 12 months, but, when stored as above, may remain acceptable for up to 2 years. Should the material be stored beyond 12 months, a Madison Representative should be consulted to determine usability.



## APPLICATION EQUIPMENT

The most common method of application is airless spray. However, the product may also be applied with a high quality, low lint, short nap (3/8" or less) roller or a good paint brush.

<b>Airless Spray Requirements:</b>	Pump: Graco Bulldog® 33:1 or King® 45:1 pump or equivalent. Gun: Graco Silver Plus® or equivalent Tip: .017"to.021" reverse-a-clean tip with a medium-to-wide fan pattern is ideal. Atomization Pressure: 2000-2500 psi
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## SURFACE PREPARATION

FusionClad® Primer is designed to be applied over steel surfaces conditioned with FerroGrip™. See separate Application Instruction Bulletin for FerroGrip™. The surface must be clean (no dirt, oil, grease or other contaminants), dry and dust free. Do not apply in wet or highly humid conditions or at temperatures below 10°C (50°F).



## MATERIAL PREPARATION

FusionClad® Primer is a single component, self curing product which contains pigments and other additives which may settle with time. It should be mixed thoroughly using a power mixer (electric drill with paint mixing attachment) at low speed, increasing until the product is uniform in color and consistency. Be careful not to introduce excessive air into the product. In colder surroundings, for ease of mixing and application, warm product to room temperature (65-70°F) prior to use. Thinning the product is not recommended; if it is absolutely necessary for some reason, use not more than 10% clean tap water.

## APPLICATION PROCEDURES

**Airless Spray:** Apply like paint. Apply a stripe of coating to welds and sharp edges first before coating the structure as a whole. Use light passes of the spray with a 50% overlap to build up an even, smooth coat of 6-8 wet mils (3-4 dry mils). Too much coating per pass will result in excessive sagging and or pinholing. If necessary, the structure may be warmed under radiant heat to speed up drying. Use as is. if thinning is absolutely necessary, use no more than 10% clean tap water. Contact a Madison Representative for assistance.

**Roller and Brush:** Using a roller saturated with FusionClad® Primer, roll the product on at 6-8 wet mils. Use low pressure on the roller as excessive pressure will magnify roller marks and create an uneven finish. Compared to spray application, brush or roller application may require an extra coat to achieve above film thickness and uniformity of appearance. In hot or dry environments, some brush or roller marks may remain in the finished film; this is unavoidable, but remember that this product is primarily for protection, not aesthetics.

A second coat of Primer is not typically required; however if desired (for example if the initial thickness is too low), apply within 48 hours. If recoat window is missed, a light sanding is required (120 to 150 grit sandpaper) in order to provide a surface suitable for bonding.

Primed structures are dry to touch in approximately 30 minutes and are sufficiently dry for handling in 4-6 hrs. At the early stages of curing, the coating is sensitive to rain, dew and high humidity. Plan schedule to avoid these situations during the initial 16-24 hours of the curing cycle. Structures should be top coated with either FusionClad® TC or FusionClad® TC Ultra within 48 hrs. If recoat window is missed, a light sanding is required (again, 120 to 150 grit sandpaper) in order to provide a surface suitable for bonding.

**NOTE: Setting and curing times are temperature dependent.  
At higher temperatures (above 75°F) these times are shortened somewhat.  
Conversely, they will be extended somewhat at cooler temperatures.**

## **CLEAN UP**

Clean airless spray equipment, brushes and rollers immediately after use with warm soapy water, followed by a water rinse. Do not leave water in spray equipment as it can lead to corrosion. After cleaning, flush with mineral spirits to remove water and prevent rusting of equipment.

## **HEALTH AND SAFETY**

Product is intended for industrial and professional use only. Product is non-flammable and does not contain any ingredients considered hazardous under normal use. It is recommended for both indoor and outdoor use. Indoors, provide the amount of ventilation normally supplied when using water-borne paints. In the unlikely event of respiratory irritation, ventilate area or discontinue use. If spilled on skin, remove immediately with warm, soapy water. If swallowed, do not induce vomiting as this will cause additional throat irritation. Contact physician re treatment for ingestion of water-borne paints.

For general guidance with regard to the use of coatings and industrial paints generally, please refer to:

SSPC-PA3  
SSPC-PS17.00

Guide to Safety in Paint Application  
Section 8 - Safety

## COATING INSPECTION

The finished coating should be a smooth, flat to satin finish and free of blisters, pinholes, craters, fisheyes, uncured areas, discoloration and thin areas. A minor amount of sagging and dimpling (less than 5%) on a coating does not cause for rejection.

## REPAIRS OR TOUCH-UPS

FusionClad<sup>®</sup> Primer can itself be used for touch-up. Remove any damaged or unsound coating. Sand about one inch wide past the damaged area and remove all dust and grit.



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