



FUSIONCLAD[®] TC ULTRA

TECHNICAL DATA

“EASY-PREP” WATERBORNE INDUSTRIAL STEEL COATING

THE PRODUCT AND ITS USES

The FusionClad[®] family of coatings makes it possible to achieve industrial-grade protection for steel without the necessity of blasting or other elaborate surface preparation. After applying FusionClad[®] Primer as directed, the applicator then applies FusionClad[®] TC Ultra topcoat to complete the coating system. Alternatively, the applicator may use FusionClad[®] TC topcoat for less demanding applications.

FusionClad[®] TC Ultra is a two component (1:10 ratio) waterborne and water-reducible polyurethane topcoat that combines low odor, low VOCs (volatile organic compounds) and excellent performance for both interior and exterior applications. It is quick drying, making it ideal for production throughput. Apply by brush, roller or spray. FusionClad[®] TC Ultra cures to a semi-gloss, enamel-like finish. With superior abrasion resistance, impact resistance and UV stability, it is ideal for situations where toughness, longevity and near-automotive aesthetics are important factors. For additional details, refer to table below and information overleaf.

The FusionClad[®] System is suitable for protecting virtually any steel structure targeted for, or currently used in, atmospheric (i.e., aboveground) exposure. Apply FusionClad[®] products in the shop or in the field for coating steel structures, equipment, sheet metal, piping, furniture and storage tanks. This product contains a permanent anti-microbial additive.

Note: for embedded, immersion or continually wet service, your Madison representative will recommend a system rated for “severe service”.

TECHNICAL INFORMATION

PROPERTY	TEST DESCRIPTION	RESULTS
Application Temperatures	N/A	5°C(40°F) to 50°C(120°F)
Viscosity		Paint-Like
Pot Life (Working Time)	@20°C (70°F)	2 to 5 hours
Initial Setting Time	@20°C (70°F)	60 minutes
Curing Time Before Handling	@20°C (70°F)	2 to 3 hours
Recoat Time ¹	@20°C (70°F)	Up to 24 hours
Solids Content	ASTM D-1259	45 to 50%
Volatile Organic Compounds (VOCs)	ASTM D-2369	Less than 100 grams/litre
Theoretical Coverage	N/A	700 ft ² /US gal/mil
Adhesion to Steel	ASTM D-4541	Greater than 1000 p.s.i.
Impact Resistance	ASTM D-2794	100 inch pounds
Ultraviolet Resistance	ASTM G-154	Excellent
Colors		Wide color choice; Consult Madison Sales Representative
Finish		Semi-gloss

¹ However, recoat window varies depending on ambient and substrate temperature and coating thickness.

NOTE: All statements, technical information and recommendations contained herein are typical of results obtained under laboratory conditions and are not intended to be used as contract specifications. For specification guidelines please contact Madison Chemical. The information contained herein is believed to be accurate as of the date of publication. Madison reserves the right to change product specifications without notice.

APPLICATION INSTRUCTIONS

CONTACT MADISON FOR DETAILED [APPLICATION INSTRUCTION BULLETIN](#) (also available online).

A. SURFACE PREPARATION

FusionClad® TC Ultra is designed to be applied over steel surfaces conditioned with Madison FerroGrip™ and primed with FusionClad® Primer. Do not apply in wet or highly humid conditions or at temperatures below 10°C (50°F).

B. APPLICATION OF COATING

- 1) The correct mixture is 1 part 'A' and 10 parts 'B' by volume. Stir individual components, then add together the 'A' side to the 'B' side and thoroughly mix until homogeneous mixture is obtained. A power mixer running at low to medium speed is the preferred method. FusionClad® TC Ultra may be diluted with clean tap water, but only when necessary.
- 2) FusionClad® TC Ultra can be applied by brush, roller or single component airless spray equipment.
- 3) This product should only be applied at a maximum thickness of 2.5-3 dry mils (5-6 wet mils) at a time for ultimate surface appearance. If higher than 3-4 dry mils is to be applied, it must be done in multiple coats.
- 4) Mix only the amount of product that will be used within 4 hours. Do not attempt to reseal mixed product as product will continue to cure, creating a potentially dangerous pressure.
- 5) Usable pot life decreases at high temperatures. Mix smaller batches during hot weather.
- 6) Use a good quality brush and roller (low pile) designed for water dispersible paints.
- 7) Use a new roller and brush every time. Alternatively, ensure that the used brush or roller is washed in warm water immediately after initial use and wrapped in a plastic bag to maintain moisture; remove excess moisture before subsequent use. Brush and roller application may require an extra coat to achieve uniformity of appearance.

C. CLEAN-UP AND STORAGE

Clean spills and spatters, including hands and tools, immediately after use, with soap and warm water. See application instructions for details. Store at or near room temperature. DO NOT FREEZE. Use product within 12 months of receiving

HEALTH AND SAFETY

This polyurethane product is intended for industrial and professional use only. It contains no monomeric isocyanate but may, in rare cases, cause respiratory distress in some people. Provide ample ventilation. Product is non-flammable. If swallowed, DO NOT induce vomiting as this will cause additional throat irritation; contact physician. If splashed on skin, remove coating with soap and warm water. If splashed in eyes, wash liberally with clean water and contact physician; temporary irritation of eyes may last several days. Although product contains no known carcinogens or mutagens, prudence dictates that applicators use rubber gloves, safety goggles and protective clothing. Resins are inert when cured. See MSDS for more information. Review [Application Instruction Bulletin](#) for additional safety information.

LIMITED TWO YEAR WARRANTY

Madison will replace any product which, in service for which it is suitable, fails to meet specifications within two years of sale and which is proven to be defective when applied according to instructions by a Madison Approved Applicator or Certified OEM Applicator. Madison accepts no responsibility or liability for any other loss, claim, damage, injury or expense, direct or consequential, in contract or negligence. This product replacement warranty is in lieu of any other right, warranty, guarantee or condition, statutory or otherwise, expressed or implied, whether as to fitness for a particular purpose or as to merchantable quality or otherwise.

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