



# GEMTHANE ZINC RICH PRIMER

## TECHNICAL DATA

## SINGLE COMPONENT PRIMER

### THE PRODUCT AND ITS USES

GemThane Zinc Rich Primer is a single component, pre-catalyzed zinc rich coating system specifically designed for use as a primer on ferrous surfaces.

GemThane Zinc Rich Primer contains a unique polyurethane binder which cures at almost any ambient temperature and does not become brittle like other zinc rich coatings. It works sacrificially to protect the substrate in the same manner as hot dip galvanizing.

Advantages are:

- Safe to Use — cures to a non-toxic protective skin
- Flexible — does not become brittle like other zinc rich coatings
- Applicator friendly — less sensitive to adequacy of surface preparation
- Versatile — will cure at any ambient temperature
- Easy to use — single component, self curing
- Fast drying — dry to touch in 20 to 30 minutes
- Reduced application time — apply by brush, roller or spray

### TECHNICAL INFORMATION

PROPERTY	TEST DESCRIPTION	RESULTS
Application Temperatures	N/A	-10°C(15°F) to 50°C(120°F)
Viscosity	Brookfield Viscometer	Paint-like after agitation
Initial Setting Time	@ 20°C/70°F	30-90 minutes
Curing Time Before Handling	@ 20°C/70°F	2 hours
Ultimate Cure	@ 20°C/70°F	7 days
Recoat Time*	@ 20°C/70°F	Up to 48 hours
Solids Content	ASTM D-1259	67%
Volatile Organic Compounds (VOCs)	ASTM D-2369	320 grams/litre
Theoretical Coverage	N/A	25 m <sup>2</sup> /litre/25 microns (1075 ft <sup>2</sup> /US gallon/mil)
Adhesion to Steel	ASTM D-4541 (SSPC-SP5)	Greater than 500 p.s.i.
Hardness	ASTM D-2240 Shore D	70 to 80
Flexibility	ASTM D-412	180° at .003" over 1/4" mandril
Impact Resistance	ASTM D-2794 (5 mils)	Greater than 100 in. lbs.
Ultraviolet Resistance	ASTM G-154	Good; will darken slightly over time
Temperature Resistance	ASTM D-870, ASTM D-2485	-40°C(-40°F) to 90°C(195°F)

\*However, recoat window varies depending on the spray equipment temperature setting, the ambient conditions, product temperature/thickness, and the temperature of the substrate being coated.

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.

## APPLICATION INSTRUCTIONS

FOR DETAILED INSTRUCTIONS ON FIELD APPLICATION OF COATINGS, CONTACT YOUR MADISON REPRESENTATIVE.

### A. SURFACE PREPARATION

- 1) Ensure that surface is clean, dry and uncontaminated. The temperature of the substrate must be at least 5°F (3°C) above the dew point and the relative humidity should not exceed 85%.
- 2) On RUSTY metal and old GALVANIZED metal, use scraper and wire brush to remove oxidation, loose rust and old coatings. Grease should be removed with tri-sodium phosphate (TSP), detergent and hot water, applied with high pressure power washer. Rinse and let dry completely.
- 3) On ALUMINUM, GALVANIZED METAL and SHEET METAL, prepare a test area. Power wash may be necessary if surface is oily or contaminated.

### B. APPLICATION OF COATING

- 1) Stir thoroughly. Initial viscosity is pudding-like and thorough power agitation is essential.
- 2) GemThane Zinc Rich Primer may be applied by any conventional means - roller, brush or a single component airless spray. Once stirred, the product has a paint-like viscosity. When spraying, start with a tip in the .020" range and a medium fan. For thinning use only GemThane VR-1 Viscosity Reducer. Cure-to-touch time is approximately 20 minutes and cure-to-handle time is about 2 hours depending on the temperature. Apply about 3 wet mils (2 dry mils). Topcoat with any high performance corrosion resistant coating.
- 3) Recoat within 48 hours. Otherwise sand lightly to ensure optimum adhesion.

### C. CLEAN-UP AND STORAGE

- 1) Keep container tightly sealed and store upside down. Remove from container only the amount of GemThane Zinc Rich Primer needed and reseal the container immediately as GemThane Zinc Rich Primer will begin to polymerize (set) when exposed to ambient humidity. Avoid dropping or subjecting the material to strong force. For clean-up, use VR-1, M.E.K. or a 50:50 blend of M.E.K. and Xylol. Other solvents may react with GemThane Zinc Rich Primer.
- 2) Store between 50°F (10°C) and 80°F (27°C). DO NOT FREEZE. Use product within 6 months of receiving.

## HEALTH AND SAFETY

**Coatings that contain zinc might build up gas over time. To avoid any sudden burst of gas, open the container carefully, thus allowing the gas to escape slowly. Avoid dropping or subjecting the material to strong force.** GemThane Zinc Rich Primer is intended for industrial use only. It contains no monomeric isocyanate but may nevertheless cause respiratory distress in some people. Provide ample ventilation. Wear a fresh air respirator when using in confined areas or when spraying. Flammable; avoid sparks or open flames. If swallowed, do NOT induce vomiting as this will cause additional irritation; call physician. If splashed on skin, remove immediately with rubbing alcohol and then wash with soap and water. If splashed in eyes, wash liberally with clean water and contact a physician; temporary irritation of eyes may last several days. Not known to cause cancer in humans but treat unreacted product as possible carcinogen. Thus, applicators should wear rubber gloves, safety goggles and protective clothing. See MSDS for more 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.

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.

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