



## GALVACLAD LIQUID ZINC

### TECHNICAL DATA

### POLYURETHANE COATING FOR GALVANIZED METAL

#### THE PRODUCT AND ITS USES

GalvaClad™ Liquid Zinc delivers the next generation of zinc rich primer formulated to protect new and old galvanized structures, in a user-friendly format. It is a high build product which offers protection equivalent to traditional zinc rich primers, combined with ease of use and the unique ability to perform at any level of surface preparation. GalvaClad™ Liquid Zinc combines the best of several corrosion protection technologies working synergistically together: aluminum and micaceous iron oxide (MIOX) to provide barrier protection; the sacrificial protection of zinc; and corrosion inhibitors. GalvaClad™ Liquid Zinc is formulated to achieve maximum bonding to galvanized metal. It is the only heavy duty primer which bodes well where the galvanizing is acid etched rather than blasted.

For field applications, such as repair or recoating, power tool cleaning (e.g. grinding and sanding) will provide a satisfactory surface for bonding. For in plant applications, use GalvaPrep™ surface etching compound. GalvaClad™ Liquid Zinc will cure at ambient temperatures down to -15°C (5°F). GalvaClad™ Liquid Zinc forms a monolithic film at very low thicknesses (3-4 dry mils) but can be easily applied to higher thicknesses without mud-cracking. The initial silver color will turn somewhat amber, then age to a silver matte patina.

#### TECHNICAL INFORMATION

PROPERTY	TEST DESCRIPTION	RESULTS
Application Temperatures	N/A	-15°C(5°F) to 65°C(150°F)
Initial Setting Time	@ 20°C(70°F)	within 30 min. to 2 hrs. depending on catalyst
Recoat Time*	@ 20°C(70°F)	recoat within 7 days topcoat with an aliphatic topcoat within 90 days
Pot life	N/A	15 min. to 2 hrs. depending on catalyst
Solids Content by wt.	ASTM D-1259	70%
Solids Content by vol.		68%
Volatile Organic Compounds (VOCs)	ASTM D-2369	280 grams/litre
Theoretical Coverage	N/A	1122 ft <sup>2</sup> /gal/mil; 27 m <sup>2</sup> /litre/25 microns
Adhesion	ASTM D-4541 (SSPC-SP5)	1,500 - 3000 p.s.i. Depending on Surface Preparation
Hardness	ASTM D-2240	50 to 60 Shore "D"
Impact Resistance	ASTM D-2794 (@ 6 mils)	200+/-10 in. lbs.
Flexibility	ASTM D-522	Pass (1/2 inch)
Resistance to Cathodic Disbondment	CSA Z-245 (65°C, 48 hours, 20 mils)	< 15 mm
Temperature Resistance	ASTM D-870, D-2485	-40°C (-40°F) to +90°C (195°F)
Colors		Silver metallic only

\*However, recoat window varies depending on ambient and substrate temperatures 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.

## APPLICATION INSTRUCTIONS

CONTACT MADISON FOR DETAILED APPLICATION INSTRUCTIONS.

### A. SURFACE PREPARATION

- 1) Ensure that the surface is clean, dry and free of any traces of oil, grease, dust, dirt and foreign contaminants. Proceed only if the substrate temperature is at least 5°F (3°C) above the dew point temperature, and use caution if the relative humidity is above 85%. Ensure all weld splatter and other surface irregularities are removed and repaired.
- 2) For field applications, such as repair or recoating, power tool cleaning (e.g. grinding and sanding) will provide a satisfactory surface for bonding. Ensure that all dust and grit is completely removed prior to applying GalvaClad™ Liquid Zinc.
- 3) For in plant applications, acid etching is effective. Use GalvaPrep™ surface etching compound (see GalvaPrep™ application instructions for details), prior to applying GalvaClad™ Liquid Zinc. Coat the substrate within 8 hours of preparation. Alternatively, grit blast the substrate to a commercial level (SSPC-SP 6 or NACE No.3).

### B. APPLICATION OF COATING

- 1) Before application, slowly but thoroughly stir GalvaClad™ Liquid Zinc until homogeneous. Add approximately 5% of Madison C-10 Catalyst (1-1 1/2 hrs. pot life) and stir slowly into GalvaClad™ Liquid Zinc for 3 to 5 minutes. Catalysts for different set time and pot life are available at Madison. If thinning is necessary, use only Madison VR-1 Spray Grade Reducer™ or VR-2 Brush Grade Reducer™. C-7 Catalyst (medium potency) and C-4 Catalyst (fast acting) will allow thicker film build but pot life will be shorter (about 45 and 15 minutes respectively).
- 2) Coat a test area, cure for 24 hours and check adhesion. If adequate for intended service, proceed to apply GalvaClad™ Liquid Zinc by brush, roller or airless spray. Recoating must occur within the recoat window (see table on page 1). If recoat time is exceeded, sand surface until gloss has disappeared over entire coated area, clean the surface, and then apply the second coat.
- 3) Inspect visually to make sure it is pinhole free. See Application Instructions.
- 4) Allow coating to reach ultimate cure time before putting into service.
- 5) When the product is used as a primer and will be topcoated with a Madison aliphatic coating, the recommended DFT is 3-5 dry mils. Apply the topcoat within 30 days, otherwise sand lightly and thoroughly with 80 grit sandpaper. When used alone as a corrosion protective coating the minimum application thickness is 6 mils dry film. This is better achieved in two thin coats about an hour apart rather than one heavy coat. See Application Instructions if you wish to apply a thicker coat. Contact your Madison Representative for additional information.

### C. CLEAN-UP AND STORAGE

- 1) This material will react with humidity and moisture. Keep containers tightly sealed. Avoid dropping or subjecting the material to strong force. For clean-up, use Madison VR-1 Reducer™, VR-2 Reducer™, M.E.K. or a 50:50 blend of M.E.K. and Xylene. Other solvents may react with product.
- 2) Store between 10°C (50°F) and 27°C (80°F). DO NOT FREEZE. Use product within 6 months of receiving.

### HEALTH AND SAFETY

GalvaClad™ Liquid Zinc is intended for industrial use only. Coatings that contain aluminum might build-up pressure in the can over time. To avoid any sudden burst of gas, open the container carefully thus allowing the gas to escape slowly. Avoid sparks and open flames. Provide sufficient ventilation when working on this product. It contains no monomeric isocyanates but may nevertheless cause respiratory distress in some people. Air supplied respirators are necessary for sprayers and for assistants in any confined spray area. For spray booths and other non-confined areas, a cartridge Type C mask with NIOSH N95 filters is required. Wear rubber gloves, safety goggles and protective clothing. If swallowed, DO NOT induce vomiting as this will cause additional throat irritation; contact 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 physician; temporary irritation of eyes may last several days. In case of fire, use self-contained breathing apparatus. See MSDS for more information. The finished product is completely inert.

### 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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