SHERWIN-WILLIAMS®
Protective & Marine Coatings

ZINC CLAD® M501
ZINC RICH PRIMER

Revised 06/2012 Issue 1

PRODUCT INFORMATION

PRODUCT DESCRIPTION

ZINC CLAD M501 is a 2-pack epoxy zinc rich anti-corrosive primer.

Resistance to:

- Moisture - Good
- Abrasion - Good
- Weather - Excellent (subject to zinc salts)

PRODUCT CHARACTERISTICS

Color: Grey

Volume Solids: 61 ± 3% (ASTM-D2697-03)

VOC:
- 311 gms/litre determined practically in accordance with UK Regulations PG6/23
- 379 gms/litre calculated from formulation to satisfy EC Solvent Emissions Directive
- 159 gms/kilo content by weight from formulation, to satisfy EC SED

Mix Ratio: 4 parts base to 1 part additive by volume

Recommended Application Methods:
- Airless Spray
- Brush (for small areas and touch up only)

Typical Thicknesses

	Minimum
Dry microns (mils)	**60** (2.5)
Wet microns (mils)	**98** (4)
Theoretical Coverage m²/L (sq ft/gal)	**9.84*** (400)

** This figure makes no allowance for surface profile, uneven application, overspray or losses in containers and equipment. Film thickness will vary depending on actual use and specification.*

Average Drying Times @ 98 microns (4 mils) **wet:**

	@ 5°C/41°F	@ 15°C/59°F	@ 23°C/74°F	@ 35°C/95°F
To touch:	25 mins	25 mins	20 mins	15 mins
To handle:	16 hours	14 hours	12 hours	10 hour
To recoat	6 hours	5 hours	4 hours	3 hour

For overcoating information, refer to Recommended Topcoats section. Drying time is temperature, humidity, and film thickness dependent.

Pot Life:	10 hours	8 hours	4 hours

Shelf Life:	18 months from date of manufacture or 'Use By' date where specified
Flash Point:	Base: 24°C/75°F Additive: 24°C/75°F
Thinner / Clean Up:	Sherwin-Williams Cleanser/ Thinner No. 5

ENDORSEMENTS

- Meets the performance requirements of ISO20340 (2009) as part of a three coat system
- Conforms to composition and performance requirements of Norsok M501 Rev.5 (2004) System 1

PRACTICAL APPLICATION RATES
MICRONS PER COAT (MILS)

Airless Spray:
Dry: 60* (2.5)
Wet: 98 (4)

* Maximum sag tolerance typically 100µm (4.0 mils) dry by airless spray.

APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Airless Spray:
Nozzle Size: .....0.38mm (15 thou)
Fan Angle: .....20-30°
Operating Pressure: .....115kg/cm² (1600 psi)

The airless spray details given above are intended as a guide only. Details such as fluid hose length and diameter, paint temperature and job shape and size all have an effect on the spray tip and operating pressure chosen. However, the operating pressure should be the lowest possible consistent with satisfactory atomisation. As conditions will vary from job to job, it is the applicators' responsibility to ensure that the equipment in use has been set up to give the best results.

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RECOMMENDED USES

Anti-corrosive protection of steel surfaces prepared by abrasive blast cleaning.

May be used as a repair primer for galvanized surfaces.

RECOMMENDED TOPCOATS

Indefinitely overcoatable with epoxy systems provided a minimum of 60 microns (2.5 mils) dft is obtained.

Do not overcoat with paints containing saponifiable resins such as oleo-resinous or alkyd based paints unless a non-saponifiable resin based barrier coat has been applied first.

ADDITIONAL NOTES

Drying times, curing times and pot life should be considered as a guide only.

The curing reaction of epoxies commences immediately the two components are mixed, and since the reaction is dependent on temperature, the curing time and pot life will be approximately halved by a 10°C/50°F increase in temperature and doubled by a 10°C/50°F decrease in temperature.

Exposure to Weathering
If Zinc Clad M501 is exposed to the weather, there is a risk of the formation of zinc salts on the surface, which must be removed by flash blasting or washing down prior to overcoating, otherwise intercoat adhesion may be adversely affected.
The rate of zinc salt formation will vary from one location to another. Under severe conditions e.g. marine coastal, offshore or heavy industrial areas, it is strongly recommended that overcoating takes place within 7 days.

Epoxy Coatings - Tropical Use
Epoxy paints at the time of mixing should not exceed a temperature of 35°C/95°F. At this temperature the pot life will be approximately halved. Use of these products outside of the pot life may result in inferior adhesion properties even if the materials appear fit for application. Thinning the mixed product will not alleviate this problem. The maximum air and substrate temperature for application is 50°C/122°F providing conditions allow satisfactory application and film formation. If the air and substrate temperatures exceed 50°C/122°F and epoxy coatings are applied under these conditions, paint film defects such as dry spray, bubbling and pinholing etc. can occur within the coating.

Numerical values quoted for physical data may vary slightly from batch to batch.

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Sherwin-Williams Thinner No.5. Clean tools immediately after use with Sherwin-Williams Thinner No.5. Follow manufacturer's safety recommendations when using any solvent.

SURFACE PREPARATION

Blast clean to Sa.2½ BS EN ISO 8501-1:2007 (SSPC-SP10/ NACE2) Average surface profile in the range 50 - 75 microns (2.3 mills).

Ensure surfaces to be coated are clean, dry and free from all surface contamination.

For repair of galvanizing, for small areas, abrade the surface to a minimum standard of St.3 BS EN ISO 8501-1:2007 (SSPC-SP3) feathering off the edges of intact galvanizing surrounding such areas, and then brush apply the primer. For large areas it is recommended that the surface is flash blasted.

APPLICATION CONDITIONS

Epoxy paints should preferably be applied at temperatures in excess of 10ºC/50°F. In conditions of high relative humidity, ie 80-85% good ventilation conditions are essential. Substrate temperature should be at least 3ºC/37°F above the dew point and always above 0°C/32°F.

At application temperatures below 10°C/50°F, drying and curing times will be significantly extended, and spraying characteristics may be impaired.

Application at ambient air temperatures below 5°C/41°F is not recommended.

In order to achieve optimum water and chemical resistance, temperature needs to be maintained above 10ºC/50°F during curing.

ORDERING INFORMATION

Packaging: A two component material supplied in separate containers to be mixed prior to use.

Pack Size: **10 litre** (2.6 gal) and **5 litre** (1.3 gal) units when mixed

Weight: **2.64 kg/litre** (26.5 lb/gal)

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.