Protective & Marine Coatings
PRODUCT DATA SHEET

ZINC CLAD® R
EPOXY ZINC RICH PRIMER

Revised 06/2024 Issue 02

PRODUCT DESCRIPTION

A 2-pack zinc rich epoxy primer.
Low solvent content according to Protective Coatings Directive of German Paint Industry Association (VdL-RL 04).
- Excellent corrosion protection
- Excellent mechanical resistance
- Extremely high resistance against water and condensation
- Fast drying and curing characteristics

RECOMMENDED USE

Can be used as a zinc rich primer coat in combination with Macropoxy® or Dura-Plate® high performance coatings and Acrolon® topcoats for the protection of steel surfaces. May be used as a repair primer for galvanized surfaces. At a dry film thickness of 20 µm Zinc Clad® R can also be used as weldable shop primer.

PRODUCT TECHNICAL DATA

Volume Solids: 67 ± 2% (ISO 3233-3)

Weight Solids: 89 ± 2%

VOC: 308 g/l determined practically in accordance with Protective Coatings Directive of German Paint Industry Association (VdL-RL 04).
322 g/l calculated from formulation to satisfy EC Solvent Emissions Directive.
115 g/kg calculated from formulation to satisfy EC Solvent Emissions Directive (UK).

Colours: Zinc grey, material no. 687.03
Tinted red, material no. 687.04

Flash Point: Base: 26°C, Hardener: 31°C.

Cleaner/Thinner: Cleaner 26 (for cleaning)
Thinner K for thinning with max. 3% to adapt the viscosity.
If used as a weldable shop primer add approx. 12% w/w Thinner K.
Thinning will affect VOC compliance, sag tolerance and dry film thicknesses.

Pack Size: A two component material supplied in separate containers to be mixed prior to use:
26 kg (8.9 litre) and 15 kg (5.1 litre) units when mixed.
Volume will vary with colours and density.

Mixing Ratio: 94 parts base to 6 parts hardener by weight.
4.4 parts base to 1 part hardener by volume.

Density: 2.9 kg/l (may vary with colours).

Shelf Life: 1 year from date of manufacture, stored in originally sealed containers in a cool and dry environment.

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

Typical Thickness:

Recommended Spreading Rate Per Coat

	Typical		Maximum Sag
Dry	60 µm	80 µm	150 µm
Wet	90 µm	119 µm	224 µm
Theoretical Consumption*	0.260 kg/m² 0.090 l/m²	0.346 kg/m² 0.119 l/m²	
Theoretical Coverage*	3.85 m²/kg 11.17 m²/l	2.89 m²/kg 8.38 m²/l	

* 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.
Apart from small areas the dry film thickness of Zinc Clad® R Plus should not exceed 150 µm per layer.

Pot Life:

+ 10°C	+ 20°C	+ 30°C
12 hours	8 hours	5 hours

Pot life is dependent on temperature and volume.

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AVERAGE DRYING TIMES

For 20 µm Dry Film Thickness:

	+ 5°C	+ 10°C	+ 20°C	+ 40°C
Dry to handle (Drying Stage 6*)	1.5 hours	1.5 hours	45 min	30 min
To Recoat	1.5 hours	1.5 hours	45 min	30 min

For 80 µm Dry Film Thickness:

	+ 5°C	+ 10°C	+ 20°C	+ 40°C
Dry to handle (Drying Stage 6*)	3 hours	2.5 hours	2 hours	1.5 hours
To Recoat	3 hours	2.5 hours	2 hours	1.5 hours

*ISO 9117

Maximum recoat time is 1 year. Prior to further applications all contamination must be removed. In the case of extended recoating times consult Sherwin Williams customer service.

Final cure: 1-2 days, depending on film thickness and temperature.

These figures are given as a guide only. Factors such as air movement, film thickness and humidity must also be considered.

APPROVALS & ENDORSEMENTS

- Approved according to German standard 'TL KOR-Stahlbauten, Blatt 87'
- Approved according to Austrian standard RVS 15.05.11 and RVS 08.09.02.

SURFACE PREPARATION

Ensure surfaces to be coated are clean, dry and free from all surface contamination such as oil, grease, dirt and corrosion products to achieve satisfactory adhesion.

For contaminated surfaces we recommend to clean with Cleaner Wash.

Steel surfaces shall be blast-cleaned to Sa 2½ according to ISO 8501-1 (ISO 12944-4)

MIXING

Stir component A very thoroughly using a mechanical paint mixer (start slowly, then increase up to approx. 300 rpm). Add component B carefully and mix both components very thoroughly (including sides and bottom of the container). Mix for at least 3 minutes until a homogeneous mixture is achieved. We recommend to fill the mixed material into a clean container and mix again shortly as described above to avoid incorrect mixing. During mixing and handling of the materials always wear protective goggles, suitable gloves and other protective clothing.

APPLICATION CONDITIONS

Substrate temperature shall be above + 5°C and at least 3°C above the dew point.
Material temperature shall be above + 5°C.
Relative air humidity shall be below 85%.

APPLICATION EQUIPMENT

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

Airless Spray
Unit: Efficient airless equipment
Tip Size: 0.38 – 0.53 mm (0.015 – 0.021 inch)
Fan Angle: 40° - 80°
Operating Pressure: min. 180 bar (2600 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 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.
If in doubt consult Sherwin-Williams customer service.

Conventional Spray
Atomising Pressure: 3 - 4 bar (43 - 60 psi)
Tip Size: 1.7 – 2.5 mm (0.06 – 0.10 inch)

Brush
Brush application is suitable for small areas and touch up only.

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RECOMMENDED SYSTEMS

Steel
1 x Zinc Clad® R
Without topcoat:
2 x Zinc Clad® R

Weldable shop primer:
1 x Zinc Clad® R, dry film thickness 20 µm.

Compatible with a wide range of Sherwin-Williams Macropoxy® and Dura-Plate® coatings and Acrolon® topcoats.

Overcoatable with epoxy and polyurethane coatings provided the surface to be coated is clean, dry and free from contamination.

ADDITIONAL NOTES

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

Epoxy Coatings - Tropical Use:
Epoxy coatings at the time of mixing should not exceed a temperature of 35ºC. 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. If the air and substrate temperatures exceed 40ºC and epoxy coatings are applied under these conditions, paint film defects such as dry spray, bubbling and pinholing etc. can occur within the coating.

Chemical resistance:
Resistant to weathering, water and mechanical wear.

Temperature resistance:
Dry heat up to + 150°C, short term up to + 180°C.
Increased humid ambient temperature up to approx. + 50°C.
In case of higher temperatures consult Sherwin-Williams customer service.

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

HEALTH & SAFETY

Consult Product Health and Safety Data Sheet for information on safe storage, handling and application of this product.

WARRANTY

Whilst all statements made about our products (whether in this data sheet or otherwise) are correct and accurate to the best of our knowledge, we have no control over the quality or the condition of the substrate, the application conditions or the many other factors affecting your use and application of our product.

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