BERGER PROTECTON
PROTECTIVE COATINGS DIVISION

EpiluxHB ZR Primer

Organic Zinc Rich Primer

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Product Description

A low VOC, Epoxy Zinc Primer specially designed with a high quantum of metallic Zinc for superior cathodic protection. This primer over blasted metal will be excellent if exposed with suitable top coats to saline and highly corrosive environment.

Usage Areas

Suitable for application as a priming coat on tank exteriors, pipelines, structural steel of off-shore, refineries, petrochemicals, fertilizers, power generating plant, mining facilities, and bulk handling equipment.

Product Data

Composition	Epoxy resin/ Metallic Zinc cued with Polyamide
Volume Solids	61±2%
VOC	342 g/ltr
Mixing Ratio	Base : Catalyst :: 3:1 (V/V)
Application Method	Brush, Airless or Conventional spray
Recommended DFT	75-100 µ per coat
Recommended WFT	123-164 µ per coat
Theoretical Spreading Rate	6.1-8.1 m^2/ltr /coat
Colour	Grey
Gloss	Matt

Practical Coverage : Dependent on-site condition and transfer losses due to substrate design, profile, wind, heights, application method, painter's skill etc.

Pot Life

10°C	15°C	25°C	40°C
13 hrs	12 hrs	8 hrs	6 hrs

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Typical Coating Systems

Systems compatibility can be provided on request to the Technical Service Team

Coats	Generic Systems	Compatible Products
Primer	Zinc rich Primer	EpiluxHB ZR Primer
Mid Coat	Epoxy based intermediate (MIO, TiO^2), Flurothane undercoat	Epilux 485 High Build MIO Coating, Epilux HB Epoxy INT CTG
Top Coat	Epoxy, Polyurethane, Polysiloxane, Flurothane	Luxathane Polyurethane Finish, Epilux 4 HB Epoxy Coating

Conforms to

Performance requirements of SSPC Paint 20 Type II and ISO 12944 with a 80% Zinc on dry film by weight.

Pack size

	UOM	Part A	Part B	Total
Volume	Lt/Kg	15 ltr	5 ltr	20 ltr

Storage

The paints must be in its sealed original containers and be kept under cover in a dry place with ambient conditions inside closed room until use. The curing agent is sensitive to moisture and hence relative humidity within the room should be maintained preferably at ≤55%. Stacking should not be more than 3 drums/ cartons one above other. DO NOT expose to direct rain/ sunlight. Any deviation to the defined storage condition shall have a negative effect on the shelf life.

Shelf life

Up to 12 months as long as the sealed original containers are kept under cover in a dry place under normal temperature conditions until use.

Note :

1. Storage life @23°C will be extended up to 24 months. Storage at elevated temperatures may reduce shelf life; and hence never exceed maximum room temperature of 40°C. Storage life, thereafter, subject to re-inspection; consult tech-service.
2. It may be noted that higher volume solid material will tend to soft settling on long term storage, and it can made to a normal homogeneous consistency by use of a slow speed 200-400 rpm power stirrer particularly in the PART A (BASE) container; and this soft settling is not considered as a failure of keeping properties.

Flash Point

Part A	Part B	Mixed Paint
22°C	22°C	22°C

Health & Safety

Please refer to the separate Safety Data Sheet available with detailed information.

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APPLICATION GUIDELINE

Substrate		Mild Steel, Zinc Primed Steel, Galvanised Steel
Surface preparation		**Carbon Steel & Mild Steel :** Round off all rough welds, sharp edges and remove weld spatter. Rinse surface thoroughly with clean water to remove acids or alkali contaminants as well as to remove grease, oil and other contaminants in accordance with SSPC SP1. Make full use of mechanical tools along with manual chipping and wire brushing to remove loose rust to SSPC SP2 or SP3 for Rust Grade C or D in new steel or in E for coated steel; else for Rust Grade A, B, G, H abrasive blasting is required as per SSPC SP 10 for application of the primer. **Stainless Steel and Galvanized Surfaces :** Remove grease, oil and other contaminants in accordance with SSPC SP1 and roughen the surface using manual and power tool as per SSPC SP2/ SP3Thoroughly dust down all surfaces. The surface should be clean and dry before application of primer coat and the subsequent coats. Excessive burnishing of steel has to be avoided while working with power tools.
Atmospheric Condition	Ventilation	Suitable air engineering systems, which will ensure reduction of air contaminants and that to further help regulate the temperature and humidity of the working environment.
	Dew Point	Ensure surface temperature to be more than 3°C over the dew point temperature.
	Humidity	Do not apply when relative humidity rises above 85%.
Mixing		Stir the base thoroughly and then mix base to a homogenous liquid and then add recommended part of catalyst to uniform consistency. NOTE : DO NOT ADD THINNER beyond recommendation as it will reduce mixed VS calling for revised WFT calculations as well as challenges on flow properties.
Thinner		Thinner 844

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Application

Stir the base thoroughly and then mix base to a homogenous liquid and then add recommended part of catalyst to uniform consistency.
NOTE : DO NOT ADD THINNER beyond recommendation as it will reduce mixed VS calling for revised WFT calculations as well as challenges on flow properties.

Brush : Apply without thinning.

Conventional Spray : Normally no thinning is required. However, addition of Thinner 844 upto 5% is recommended for ease of application.Use any standard equipment at an atomising pressure of 3.5 - 4.2 Kg/cm².

Airless Spray : Apply without thinning. Use any standard equipment having pump ratio 30:1,
Tip Size : 0.38 - 0.48 mm. Tip pressure 110 - 160 Kg/cm²
Tip Pressure : 110 - 160 Kg/cm²

*Do not apply on hot/ cold surfaces. Always apply within the window of 10-50°C.

Work Stoppage

Ensure to use the mixed paint within pot life as there are no methods to increase working pot life. Keep the working tools and tips free of drying and clogging. Always use fresh material and never add-up to previous mixed paints.

Clean Up

Clean all equipment immediately after use with thinner 844. It is good working practices to flush orclean all the spray equipment periodically.All the surplus materials and empty containers should be disposed of in accordance with appropriateregional regulations

Drying Time

Temperature	Touch dry	Handle dry	Hard dry
10°C	50 min	3.5 hrs	8 hrs
23°C	40 min	2 hrs	6.5 hrs
30°C	30 min	1.5 hrs	5.5 hrs
40°C	20 min	1 hr	3.5 hrs

Over Coating Intervals

	@23°C	@30°C
MIN	6.5 hrs	5.5 hrs
MAX	14 hrs	14 hrs

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Curing Time	7 days NOTE : Drying and Curing times are determined under controlled temperatures and at relative humidity below 85%, for the NDFT of the product.
Inspection	Refer SSPC PA2 guidelines for measurement of DFT. Do not conduct any destructive test like peel off/ pull off & high voltage Holiday test unless and otherwise mandatory in the specification. Consult Technical Service team for preparation of QAP (Quality Assurance plan).
Repair Methodology	Clean off loose paints, debris, contaminants and ensure spot repair with available tools as practiced in hand/ power tool cleaning using wire brush/buffing, emery/feathering to smoothen the edges of impaired areas. Use appropriate touch up primer followed by recommended coating system, allowing due over coating interval time to area of 2-3 inches in excess of the spot repaired portion.
Product Characteristics	• In order to ensure good anti-corrosive performance, it is important to achieve a minimum system dry thickness of 75 microns. • When applying by brush or roller, it may be necessary to apply multiple coats to achieve the total specified system dry film thickness. • Where it is to be used as a primer for a coating system to be subjected to water immersion, it is important to ensure that a minimum dry film thickness of 75 microns is applied in order to provide adequate corrosion protection. • Over-application will extend both the minimum overcoating periods and handling times and may be detrimental to long term overcoating properties. • Excessive film thickness may lead to splitting of the film when overcoated with high build systems. • In the event of Primer being allowed to weather before being topcoated, it is important to ensure that all zinc salts are removed prior to paint application, and recommended topcoats are applied.
Disclaimer	The information contained within this Data Sheet is based on information believed to be reliable at the time of its preparation. The Company will not be liable for loss or damage howsoever caused including liability for negligence, which may be suffered by the user of the data contained herein. It is the users' responsibility to conduct all necessary tests to confirm the suitability of any product or system for their intended use. No guarantee of results is implied since conditions of use are beyond our control.