BERGER PROTECTON
PROTECTIVE COATINGS DIVISION

BR Thermolite Aluminium

Two Pack System suitably cured

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Product Description

An inorganic co-polymer with aluminium flakes meant for protection of steel surfaces subjected to wet and dry heat cycles as well in cryogenic conditions up to -196°C. The coating is unique as it serves the dual purpose of heat and corrosion resistance and is suitable for application in both new construction and maintenance stages.

Usage Areas

A direct to metal coating, recommended for use on structural steel, pipelines, exhaust pipes, smoke stack etc., as a corrosion under insulation coating under operational temperatures up to 600°C dry heat on abrasive blast cleaned substrates of Carbon Steel, Mild Steel and Stainless Steel and upto 400°C for manual cleaned substrates.

Product Data

Composition	Inorganic Co-polymer Coating with Aluminium Pigments
Volume Solids	60 ± 2 %
Mixing Ratio	Base : Catalyst :: 19 : 1 by volume.
Application Method	Brush or Spray
Recommended DFT	75 - 125 µ per coat
Recommended WFT	125 - 208 µ per coat
Theoretical Spreading Rate	4.8 - 8.0 m^2/ltr/coat
Colour	Aluminum
Gloss	Egg Shell Metallic

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
24 hrs	11 hrs	10 hrs	8 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	Inorganic Zinc Sillicate, Inorganic Aluminium Coating	Zinc Anode 304 MZ, BR Thermolite Aluminium
Mid Coat	-	-
Top Coat	Inorganic Aluminium Coating	BR Thermolite Aluminium**

*** Optional and Not Recommended unless specified*

Pack size

	UOM	Part A	Part B	Total
Volume	Lt/Kg	20 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 6 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 18 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 paint container; and this soft settling is not considered as a failure of keeping properties.

Flash Point

Part A	Part B	Mixed Paint
25°C	25°C	25°C

Health & Safety

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

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APPLICATION GUIDELINE

Substrate	Mild Steel, Stainless Steel	
Surface preparation	**Steel** : Remove grease, oil and other contaminants preferably by using a degreasing solvent as per SSPC SP1. Abrasive blast clean to a minimum SSPC SP 10 with a surface profile not exceeding 65 microns. Use non-metallic abrasives for SS surfaces to achieve profile. The surface should be clean and dry before application of the primer coat. In cases where abarasive blasting is not feasible in maintenance then prepare the surface to SSPC SP 3 or SP11 using power tool cleaning after thouroughly water jet washing and drying with maximum of light flash rusting as per standards NACE NO. 5 or SSPC SP 12- WJ2 and NV2 as referred in SSPC vis-5 pictorial standard.	
Atmospheric Condition	Ventilation	Suitable air engineering systems, which will ensure reduction of air contaminants and thatto 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%.
Thinner	Thinner 844	
Application	Stir the base thoroughly and then mix ninteen parts base and one part catalyst by volume to uniform consistency. Mature for 10 mins stir again before & during application. **Brush / Roller :** Apply without thinning and by multiple coats to get required thickness for difficult to reach areas. **Conventional Spray :** Apply with not more than 2-5% Thinner 844. Use any standard equipment at an atomising pressure of 4.2 - 4.9 Kg/cm^2 using a handgun with 66 fluid tip, 70 thou orifice. **Airless Spray :** Add maximum upto 5% Thinner 844 if required. Use any standard equipment having pump ratio 30:1. **Tip size :** 0.28 - 0.38 mm; **Tip Pressure :** 110 - 160 kg / cm^2.	

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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 or clean all the spray equipment periodically.All the surplus materials and empty containers should be disposed of in accordance with appropriate regional regulations.

Drying Time

Temperature	Touch dry	Handle dry	Hard dry
10°C	40 min	4 hrs	24 hrs
23°C	25 min	3 hrs 30 min	18 hrs
30°C	15 min	2 hrs 30 min	16 hrs
40°C	10 min	2 hrs	12 hrs

Over Coating Intervals	18 - 24 hours [ensure surface sanding and avoid contamination]
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).

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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	• It provides good resistance to salt exposure in both splash and outdoor environments. • The weatherability is excellent when the coating is properly cured. • The material exhibits good flexibility, allowing it to withstand minor movements or surface stresses. • The abrasion resistance is moderate, providing reasonable protection against surface wear. • It demonstrates good temperature resistance, withstanding dry heat between 400°C and 600°C. • The coating also performs well under cryogenic conditions, maintaining integrity down to –196°C.
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.