

## TECHNICAL DATA

# PROCOAT-AL

## EPOXY HIGH BUILD ALUMINIUM MASTIC COATING

### Product Description

**PROCOAT-XL** is two-component high solid high build epoxy mastic coating. This self-priming coating exhibits superior adhesion to bare, rusted or previously painted steel. This flexible coating has exceptional combination of corrosion, abrasion, chemical and impact resistance, plus impermeability to gases and vapours not possessed by any other coating.

### Features and Benefits

- Easy to apply and can be applied via airless spray, conventional spray, brush or roller.
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- Can be used as primer, intermediate or topcoat.
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- **PROCOAT-AL** is filled with metal flakes which orient themselves in the film. As PROCOAT-AL cures, chemical reaction between hardener, epoxy resin and metal flakes cause the metal flakes to form into a plate-like structure. It is the plate-like structure of the metal flakes that retards the passage of corrosive elements through the film by lengthening the path they must travel. Corrosive molecules must take the circuitous route around the layers of the metal flakes. Also, the high film build increases the distance corrosives must travel to reach the substrate
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- The tremendous **PROCOAT-AL** advantage over conventional coatings is that it penetrates right through existing rust down to the steel substrate because of its excellent wetting ability. Most conventional coatings do not have this ability. Failure to penetrate through rust not only prevents good adhesion to the substrate and therefore, encourages undercutting by penetration of water and chemical vapours along the coating film but also allows moisture and air to remain entrapped in the porous rust film
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- The binder in **PROCOAT-AL** is shielded against degradation by ultra-violet light from the sun and other sources because metal flakes are opaque. That means that chalking and other signs of UV attack are controlled at a much slower rate than with conventional coating
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The metal flakes have unique reflective property. This reflective property not only prevents UV attack on the binder system, but also reflects away a high percentage of energy reducing the surface temperature of the coating compared to many types of conventional



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- coatings. The lower surface temperature, of course, results in an increase in service life and a decrease in rate of breakdown
- It does not soften existing coatings as most conventional coatings do because it is a high solid coating. It can be applied over many types of coatings like alkyds, without crazing, lifting or exhibiting poor adhesion. Although some coatings will possess few of the above mentioned properties, **PROCOAT-AL** is unique in its inclusion of **all** of the above to set up an unequalled corrosion defense system
- Formulated with lead and chromate-free rust inhibitive pigments to provide maximum protection against severe weather, moisture and general chemical attack
- Provides excellent protection against fumes, splash and moisture condensation
- Can be used for the repair of aged inorganic zinc coatings.
- Excellent resistance to splash and spillage of dilute acids, alkalis, certain chemicals and solvents
- Has excellent resistance to radiation and has decontamination properties.
- Ideal for high humidity, moisture, marine atmospheres, heavy rains, high temperature, damp conditions, very dusty and fungus prone conditions

### **Recommended uses:**

*PROCOAT-AL is recommended for applications over rusty (tightly adherent) steel and for previously painted steel where surface preparation by blasting is either impractical or cost-restrictive. It also used for exterior/interior use where one coat high build barrier type protection is required for the properly prepared metal substrates such as steel, aluminium or hot dipped galvanized steel and for properly prepared masonry.*

Highway Bridges	Piping
Exteriors of Tanks & Silos	Fencing and Railings
Galvanized Steel	Oil Refineries
Food & Beverage Plants	Water Towers
Industrial Process Facilities	Lighting Columns & Steel Furniture
Marine Installations	Electricity Transmission Towers
Off-shore Platforms	Fertilizer Plants



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### Resistance Guide:

#### **Immersion Resistance**

Fresh water, Sea Water, Salt Water, Demineralized and Distilled Water.

#### **Resistance to spillage and splash - not immersion**

Aliphatic solvents, gasoline, kerosene, fuel oil : **Severe**

Weak solutions of acids and alkalis : **Severe**

Aromatic Solvents, formaldehyde : **Severe**

Glycol ethers, alcohols, chlorinated solvents : **Moderate**

Fats & oils, lubricating oils, cutting oils : **Severe**

Fresh and Sea Water : **Severe**

#### **Concrete:**

New concrete surfaces should be allowed to cure for a minimum period of 30 days before application. New or old concrete surfaces should be grey or grey-white color and free from pits, pockets and holes. If possible, Prepare the surface with abrasive blasting or power tools. Surface imperfections should be filled. No cement dust or sand should be dislodged. In absence of blasting, etch the surface with 10-15% muriatic acid diluted in water. Allow this acid solution to remain on the surface for 10-15 minutes or until the bubbling stops. Thoroughly rinse the floor with water to remove all traces of acid. Allow the floor to dry completely before painting.

Concrete surface requiring a primer should be primed . . After the initial coat has dried for 24 hours, apply 2-3 full coats of **PROCOAT -AL** coating unreduced.

#### **Top-coating:**

**PROCOAT-AL** is self-priming and does not require top-coating to achieve barrier properties, but it may be top-coated where aesthetics or special conditions are desired. It may be top-coated with epoxy, polyurethane, chlorinated rubber, vinyl and acrylic latex coatings.

#### **Recommended Systems:**

##### **Steel : Moderate Service**

Total DFT 150 microns

1 coat PROCOAT-AL @ 150 microns per coat

Note: Where obvious metal loss has occurred and /or pitted substrate occurs, a second coat of PROCOAT-AL is recommended.

##### **Steel : Severe Service**

Total DFT 300 microns

1 coat PROCOAT-AL @ 150 microns per coat

1 coat PROCOAT-AL @150 microns per coat

**Steel : Immersion Service** Total DFT 300 microns 1 coat PRO-COAT-AL @ 150 microns per coat 1 coat PRO-COAT-AL @150 microns per coat



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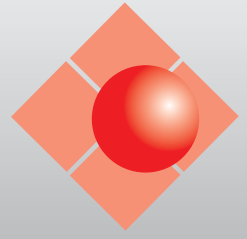
### **Application:**

Application of the coating by airless or conventional spray is highly recommended. It may be brushed also. Clean spray equipment and brush with thinner. Strong solvents in the material may soften old residual paint and cause blocking of the equipment during spraying. Clean between extended periods of down time.

Mix base and hardener components thoroughly before blending. Thoroughly mix equal parts by volume of base and hardener and mix well before application.

### **TECHNICAL DATA**

Name/Description	<b>PROCOAT-AL</b>
Type	Two pack cold cured
Composition	Modified Epoxy with Special Curing Agent / aluminium flakes and pigments.
Colour	Aluminium OR red aluminium
Finish	Semi Glossy
Volume Solids (mixed)	88± 3%
Mixing Ratio	Base : Hardener 1 : 1 by volume
Pot Life @ 50% R. H. @ 30°C - unreduced -reduced	1-2 hours 3-4 hours
Dry film thickness per coat -by brush -by spray	125 - 175 microns 150 - 225 microns
Coverage-(theoretical-no loss)	5.87 m <sup>2</sup> /litre @ 150 microns



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Serviceability @ 30° C - Dry to touch - Hard Dry - Re-coat  - Full Cure	4 - 8 hours Overnight 16 hours minimum and 7 days maximum. If maximum re-coat time exceeds, brush blast before applying topcoat. 7 days
Dry heat resistance	120° C
Application Temperature -minimum -maximum	10° C 35° C
Relative Humidity	85%
Resistance to corrosion under conditions of condensation @ 38°C for 1500 hours. (ASTM - D 2247)	No Failure
Resistance to Salt Spray for 1000 hours (ASTM - B 117)	No Failure
Outdoor Durability	2 years minimum except for slight chalking & darkening
Flexibility & Adhesion	Satisfactory
Flash Point	23° C
Solvent/Thinner	Consult technical dept.ORGANIX
Precaution	Flammable. Keep away from heat and open flame. Maintain good ventilation and avoid breathing vapours.
Packing	5 us gallon(14.7litre in 20 litre pail+2.7 litre in 3 litre can)
Shelf Life	6 months

