

# XST

## Product Summary

- Aqueous, single component, inorganic ceramic anticorrosive coating offering temperature resistance of +550°C
- Thin film application in 2 or 3 coats
- Resists salt spray
- Outstanding resistance to thermal shock
- Dries at ambient temperature and cures in service.
- Self priming
- UV resistant
- Resists thermal cycling.

DuraPol XST is an advanced coating system having a high temperature anticorrosion capability. Excellent adhesion when applied on metallic and refractory surfaces. This coating is not recommended for immersion service.

## Application Areas

External surface of exhaust vents, stacks, turbines, generators and any structures operating at high temperature.

## Physical Properties

**Continuous Temperature Resistance:** 550°C  
**Intermittent Temperature Resistance:** 600°C

**Temperature Cycling:** Ambient to 500°C  
5 cycles - no damage

**Salt Spray Test :** ASTM 117  
Tested on heat aged samples  
1000 hours - no damage

**Adhesive Strength:** ASTM D4541  
8.3 MPa (cohesive failure)  
**Chemical Resistance:**  
Water, Algae, oil, grease, weak acids and alkalis

## Coating Data

**Finish:** Smooth and semi gloss  
**Colours Available:** Grey, Black and White  
**Solids Content:** 55% by weight  
**Viscosity:** 2000 cPoise  
**Typical Wet Film Thickness (WFT):**  
130 microns  
**Typical Dry Film Thickness (DFT):**  
50 microns  
**Number of Coats:** 2 -3  
**Overcoating Time:** 1.0 hour  
**Practical Coverage:**  
2.00 m<sup>2</sup>/kg @ 50 microns DFT  
**Pot Life at 20°C:** Unlimited  
**Tack Free/ Drying Time (20°C):** 60 minutes  
**Storage Life:** 6 months at 5-30°C  
**Packaging:** 5kg and 10 kg kits  
**Specific Gravity:** 1.65 gms/cm<sup>3</sup>

## Surface Preparation

For optimum results the surface should be grit blasted to remove rust and any old coating system before washing with high-pressure water jetting to remove any surface chemical contamination and soluble salts. Allow the substrate to dry and then grit blast the surface using angular grit to obtain a blast profile no higher than 25-35 microns (Swedish Standard SA 2.5). Remove residual dust and grit. Once the surface is prepared it should be coated immediately.

## Mixing of DuraPol XST

Thorough mixing will give optimum product performance. Ensure product is below 30°C before mixing and always keep material in the shade before, during and after mixing. Coating has unlimited potlife. Can be thinned with up to 5% water.

## Application Equipment

### Brush Grade:

Soft natural bristle brush, 3 inches wide and bristles no more than 2 inches long. If the brush is new then condition by vigorously bending and pulling bristles to remove all loose ones. This is an important step to avoid bristles contaminating the coating during application.

### Spray:

Single component 45:1 airless spray unit with 13 - 16 thou reversible fluid tip giving 65° spray fan angle. Minimum output fluid pressure at spray tip must be at least 1500 psi. Alternatively any standard air assisted paint spraying equipment may be used.

## Application of DuraPol XST

Before coating ensure that the ambient and metal surface temperature is at least 10°C. The ambient temperature must be at least 3°C above the dew point with a relative humidity below 80%. If the temperature of the substrate is below 10°C then external heating may be required to increase the ambient temperature. Do not apply coating in windy conditions but if time constraints force application in such conditions then enclose equipment to be coated in plastic sheeting. Apply a light mist coat of DuraPol XST to fill the grit blasted profile up to the peaks. Allow at least 60 minutes to dry before applying around 130 microns WFT which when dry will give a DFT of 50 microns. Check regularly the wet film thickness using a wet film thickness gauge. After coating the brush or spray equipment should be cleaned with water.

## Dry Coating QC

A quantitative measure of the dry coating thickness can be obtained using an inductance type electronic dry film thickness tester. Coating should be repaired if applied 25% below specification. Pinholes, misses and thin areas of coating should be identified for repair using a distinctive marker pen. Repair by roughening the defect as well as coating surrounding it so that adhesion of the repair to the defect and surrounding coating is maximised.

## Cure Schedule

Coating is touch dry after ~ 60 minutes at 20°C. If the coating is likely to be exposed to moisture before it is in-service heat cured then it must be covered with plastic sheeting. Cure in-service by heating at 45°C per hour to around 250°C and hold at this temperature for 1 hour before taking to maximum operating temperature. Once coating is heat cured it can be exposed to moisture.

## Typical DFT Specifications

- Exterior coating of high temperature equipment:  
2-3 coats @ 50 microns total DFT

## Limitations

Not recommended for immersion service.  
Do not apply above recommended DFT.