

HTW GlassFlake

Product Summary

- 100% solids heavy duty anticorrosion coating based on advanced glass flake technology
- Excellent resistance to seawater and other mildly corrosive acid/alkaline environments
- Self-priming single or multiple coat system bonding tenaciously to wet steel and concrete
- Excellent anti-fouling properties
- Excellent resistance to cavitation
- High abrasion resistance
- Improves pump efficiency

DuraPol HTW provides a smooth and glossy finish that is impervious to aqueous environments at ambient temperature. The coating can be applied onto damp/wet steel and concrete surfaces. Primary protection is against seawater service with added benefit of resistance to turbulent flow, cavitation and particulate impact and abrasion.

Application Areas

Subsea structures, piles, buried flow lines, splash zone surfaces, seawater intake valves, cooling water pipes/spools/valves, girth welds and bow thrust channels. Any substrate exposed to wastewater and fast flowing seawater at ambient and elevated temperatures.

Physical Properties

Abrasion Resistance: ASTM D 4060
12 mg weight loss (Tabor CS-17/1kg/1000 cycles)

Adhesive Strength: ASTM D4541
190 kg cm⁻² (cohesive failure)

Elongation to break: BS 6319, Part 7: 1985
5.0 %

Tensile Strength: BS 6319, Part 7, 1985
300 kg cm⁻²

Compressive Strength: BS6319, Part 2, 1983
870 kg cm⁻³

Impact resistance: ASTM G14
Forward: 18 Joules
Reverse: 7 Joules

Temperature Resistance: NACE TM0174
80°C Immersed
150°C Non Immersed

Typical Chemical Resistance (full immersion)

30% Sulphuric acid
20% Hydrochloric acid
20% Glacial acetic
50% Phosphoric acid
10% Nitric Acid
15% Sodium Hypochlorite
MEK, Toluene, Xylene, Acetone, Ammonia

Coating Data

Finish: Gloss
Colours Available: Black
Solids Content: 100%
Mixed Viscosity: 50,000 +/- 5000 cPoise
Typical Dry Film thickness: 500 - 2000 microns
Number of Coats: 1-2
Practical Coverage at 500 microns DFT:
1.00 m²/kg
Pot Life at 20°C: 85 minutes
Tack Free/ Drying Time: 240 minutes at 20°C
Storage Life: 36 months minimum in unopened containers
Packaging: 2.5, 5, 10 and 20 kg kit s
Specific Gravity: 1.3 gms/cm³ (Base + Hardener)

Surface Preparation

Proper surface preparation is critical to long term performance of this product. For optimum results the surface should be grit blasted to remove surface corrosion or the old coating system and then washed using high-pressure water jetting to remove any surface chemical contamination and soluble salts. Allow surface to dry and reblast to cleanliness of at least Sa2.5 with a minimum 75 micron blast profile. Remove residual dust and grit using a vacuum. Once the surface is prepared it should be coated immediately. Avoid re-contamination of prepared surface from nearby sources.

Mixing of DuraPol HTW

Thorough mixing will give optimum product performance. Ensure the base and hardener is above 20°C before mixing. Any material on the lids must be added to the base tin. Add hardener to the base and mix using a power mixer (electric or air operated) for further 2 - 3 minutes simultaneously scraping the inside wall of the can with a firm spatula or pallet knife so that all material is properly mixed. Mixed material remains usable for a time approximately equal to the pot life i.e. 85 minutes at 20°C, 65 minutes at 30°C and 55 minutes at 40°C. Do not mix more material than can be used within the pot life period.

Application Equipment

Stiff brush with natural bristles that are 3 inches wide and 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.

Application of DuraPol HTW

Before coating ensure that the surface temperature is at least 15°C and that the air temperature is 3°C above the dew point with a relative humidity below 95%. If the temperature of the substrate is below 15°C then external heating may be required to increase the ambient temperature and so warm the substrate. Temperature must be maintained above 15°C for the first 24 hours of cure. Stripe coat corners, edges and welds. Apply DuraPol HTW (Brush Grade) by initially brushing firmly into the substrate to achieve surface wet out before building to specified film thickness in specified number of coats. Check regularly the wet film thickness using a wet film thickness gauge especially on concrete substrates where DFT measurements are not possible. If a second coat is required this can be applied after the previous coat is tack free. After coating clean the brush immediately with MEK or acetone based thinners.

Dry Coating QC

24 hours after application of the final coat check the continuity of the applied coating using a high voltage holiday detector an operating voltage of 50V for every 25 microns of coating applied. 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 it is 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 area and additionally roughening a 2 inch radius of sound coating surrounding the defect for overlap of the repair. The prepared area is cleaned with xylene before application of DuraPol HTW repair.

Cure Schedule

Coating is touch dry after ~ 240 minutes at 20°C. Unless stated otherwise allow a minimum period of 3 - 4 days to reach full cure before exposing to the environment.

Recommended System

- Internals of equipment exposed to seawater/chemicals:

2 coats @ 1000 - 2000 microns total DFT.

- Externals of equipment exposed to seawater/chemicals:

1 or 2 coats @ 500 - 600 microns total DFT.

- Externals of equipment exposed to flowing seawater / entrained solids:

1 or 2 coats @ 1000 - 1500 microns total DFT.