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Test Report: Evaluation of **Epochem** RS500 and RL500 Coating Systems Applied in Wet Conditions

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Epo-chem RL500PF: Applied to Wet Aged Alkyd (Test Panels: 021729A).

Dfts ranging from: 108 - 141 µm

| Test | | Result | | | |
|---|---|---------------------|--------------------------------------|--|--|
| Application & Appearance | Application: Intermittent 'skidding' of the brush over the wet surface. Presence of water adversely affected the paint substance finish (see appearance). | | | | |
| | Appearance: Generally satisfactory, but with elongated areas of water-affected paintwork (locally thin film). | | | | |
| Cross-cut adhesion test, BS3900: Part E6: 1992 | Classification 0 result, triplicate determination with 3mm spacing. | | | | |
| Pull-off adhesion, ASTM D4541 | All three tests gave pull-off adhesion values greater than 1000 psi. | | | | |
| Resistance to impact, BS3900: Part E7 | No defects evident in the coating system, including cracking, flaking or detachment from the substrate. | | | | |
| Resistance to humidity, BS3900: Part F2: 1973 | Panels inspected after 2000 hours exposure. No signs of softening, swelling, blistering or underfilm corrosion were evident. | | | | |
| Resistance to Salt Spray, BS3900: Part F12: 1997 | After 2000 hours exposure, rusting and rust staining was recorded at the parallel scratches, but no undercutting present. No breakdown was noted on the remainder of the panel. | | | | |
| Resistance to UV/Condensation, BS3900: Part F16: 1997 | No signs of cracking, flaking, blistering or loss of substrate adhesion were evident after 1000 or 2000 hours, however, slight chalking was evident after 1000 and 2000 hours exposure. Changes in colour (CMC(2:1) colour difference equation) and gloss are detailed below: | | | | |
| | Exposure Period | Colour Change ΔE | Change in gloss 60° Head | | |
| | 1000 hours 2000 hours | 2.04 3.15 | -2 G.U. (3 to 1) -2 G.U. (3 to 1) | | |



Epo-chem RS500PF: Applied to Wet Aged Alkyd (Test Panels: 021733A).

Dfts ranging from: 130 - 152µm

| Test | Result | | | |
|---|---|-------------------------------------|---|--|
| Application & Appearance | Application: Intermittent 'skidding' of the brush over the wet surface. | | | |
| | Appearance: Generally satisfactory, but with elongated areas of water-affected paintwork (locally thin film). | | | |
| Cross-cut adhesion test, BS3900: Part E6: 1992 | Classification 0 result, triplicate determination with 3mm spacing. | | | |
| Pull-off adhesion, ASTM D4541 | All three tests gave pull-off adhesion values greater than 1000 psi. | | | |
| Resistance to impact, BS3900: Part E7 | No defects evident in the coating system, including cracking, flaking or detachment from the substrate. | | | |
| Resistance to humidity, BS3900: Part F2: 1973 | Panels inspected after 2000 hours exposure. No signs of softening, swelling, blistering or underfilm corrosion were evident. | | | |
| Resistance to Salt Spray, BS3900: Part F12: 1997 | After 2000 hours exposure, rusting and rust staining was recorded at the parallel scratches, also undercutting was present due to failure of the original alkyd. | | | |
| Resistance to UV/Condensation, BS3900: Part F16: 1997 | No signs of cracking, flaking, blistering or loss of substrate adhesion were evident after 1000 or 2000 hours, however, significant chalking was evident after 1000 hours exposure. Changes in colour (CMC(2:1) colour difference equation) and gloss are detailed below: | | | |
| | Exposure Period 1000 hours 2000 hours | Colour Change ΔE 9.36 7.42 | Change in gloss 60° Head -63 G.U. (65 to 2) -64 G.U. (65 to 1) | |