POWDER COATINGS - RESEARCH & DEVELOPMENT

AASS Testing of the Supplied Powder Coated Components

TSR 140362

Account Manager Frank Mula

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Customer GERSHWIN P/L

Aim To determine the corrosion resistance performance of the supplied parts in Acetic Acid Salt Spray for approximately 1000 hours.

Method **Refer to AS3715: 2002**
AS 2331.3.2 – 2001 Method 3.2: Corrosion and related property tests – Acetic Acid Salt Spray test (AASS)
AS 1580: 2004 Method 408.4: Adhesion (cross-cut)

Component/s 1 x **Protec** window assembly

Pre-treatment **Chrome-free**

Powder **Duralloy Pearl White Gloss** 272-81880

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Test	Description	Specification	Result	Pass/Fail
Initial Film Properties	Film Build	Range: 50 – 100 µm Recommended : 80 µm	49 – 65 microns	Pass
	Initial Adhesion	Classification 1 max.	0	Pass
	Solvent Resistance/Cure	Slight softening &/or marking	Slight marking only	Pass

Results **At 1002 hours listed**

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Test	Description	Specification	Result	Pass/Fail
Corrosion Resistance **1002 hrs** Acetic Acid Salt Spray	Adhesion	Classification 1 max.	0	Pass
	Blistering – general area	Size (S) 2, Density (D) 2 max.	0	Pass
	Blistering – scribed area	Size (S) 2, Density (D) 2 max.	0	Pass
	Corrosion – general area	No visible corrosion	No visible corrosion	Pass
	Corrosion - filiform Mean Creep from scribe	Note severity & distance from scribe &/or panel edge Mean Creep - 2 mm max.	Minor filiform corrosion – on one scribe only 0	Pass

NB: Filiform on back bottom RHS corner and a few small spots on other corners

Conclusion: Initial film properties tested indicate that the frames and extrusion pieces passed for adhesion, solvent resistance/cure and film builds (some regions on the frames had quite low film builds which should be noted).
After approximately 1000 hours exposure the all the samples have passed to the Standard for Acetic Acid Salt Spray exposure with only minor filiform and some isolated blisters developing.

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Appendix: Photographs – AASS Protec window assembly