



AASS Testing of the Supplied Powder Coated Components

TSR 140362

Account Manager Frank Mula

Date 28th October 2014

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 2 x **Extrusion** pieces

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	67 – 120 microns	Pass
	Initial Adhesion	Classification 1 max.	0	Pass
	Solvent Resistance/Cure	Slight softening &/or marking	Slight marking only	Pass

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Test	Description	Specification	Result	Pass/Fail
Initial Film Properties	Film Build	Range: 50 – 100 µm Recommended : 80 µm	49 – 92 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	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
1002 hrs	Corrosion – general area	No visible corrosion	No visible corrosion	Pass
Acetic Acid Salt Spray	Corrosion - filiform Mean Creep from scribe	Note severity & distance from scribe &/or panel edge Mean Creep - 2 mm max.	9 spots of filiform corrosion–average <1.5mm	Pass
			0	

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Test	Description	Specification	Result	Pass/Fail
Corrosion Resistance	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
1002 hrs	Corrosion – general area	No visible corrosion	No visible corrosion	Pass
Acetic Acid Salt Spray	Corrosion - filiform Mean Creep from scribe	Note severity & distance from scribe &/or panel edge Mean Creep - 2 mm max.	11 spots of filiform corrosion – average ~1mm	Pass
			0	

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.

Brigid Fahey

Technical Officer – Powder Coatings R&D

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Appendix: Photographs – AASS Extrusion pieces

