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Submitted by: Zobel Chemie GmbH
Weinsheimer Strasse 59
Worms, Germany 67547

Date: August 18, 2011

Attn: Dr. Udo Gumsheimer

Report No: 43503-1A (615)

REPORT

Sample:

Painted PVC Extrusions
Paint: Zobel Chemie GmbH Zowo-plast 1450 (Light Blue)
Production Date: unknown
Cure: Room Temperature
Pre-treatment: Zowo-plast Cleaner
Drawing: unknown

PROCEDURE

Submitted sample was tested **for informational purposes** according to AAMA 615-05 "Voluntary Specifications, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Plastic Profiles," with the following results:

RESULTS

<u>Test/Method</u>	<u>Sample</u>	<u>AAMA 615-05 Specification Requirements</u>
6.1 Color Uniformity	Standard	Standard
6.2 Specular Gloss	93.0	As Reported
6.3 Dry Film Hardness	Pass F	F Minimum Hardness & No Film Rupture
6.4 Film Adhesion		
6.4.1.1 Dry	Pass	No Loss of Adhesion
6.4.1.2 Wet	Pass	No Loss of Adhesion
6.4.1.3 Boil	Pass	No Loss of Adhesion
6.5 Direct Impact	Pass	No Removal of Film from Substrate
6.6 Abrasion Resistance	Pass (56L = 40 ACV)	ACV 40 Minimum

<u>Test/Method</u>	<u>Sample</u>	<u>AAMA 615-05 Specification Requirements</u>
6.7 Chemical Resistance		
6.7.1 Muriatic Acid	Pass	No Blisters or Visible Change
6.7.2 Mortar	Pass	No Blisters or Visible Change
6.7.3 Nitric Acid	Pass ($\Delta E = 0.62$)	Not More Than 5 ΔE (Under) Unit of Color Change
6.7.4 Detergent Resistance	Pass	No Film Adhesion Loss or Visible Change
6.7.5 Window Cleaner Resistance	Pass	No Blistering, Visible Change or Loss of Adhesion
6.8 Humidity	Pass (No Blisters)	No Greater Than Few & No. 8 Blisters
6.10 Cold Crack Cycle	Pass	No Cracking, Loss of Adhesion, Color Change, or Other Detrimental Effects
6.11 Oven Aging	Pass	F Hardness and no Loss of Adhesion
6.12 Heat Build Up, °F (°C)		Report HBU Values Obtained in ASTM D4803 in Horizontal & Vertical Positions (°F and °C)
Horizontal	53.3 (29.1)	
Vertical	43.0 (23.9)	

Date Testing Started: 1/14/11

Date Testing Completed: 8/18/11

Date Test Report Expires: N/A

Sampled By: N/A

The test results indicate that sample **for informational purposes** is in compliance with the performance requirements of AAMA 615-05 for Superior Performing Organic Coatings on Plastic Profiles. Section 6.9 weathering is to be tested during AAMA certification program of coated plastics.

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Kevan W. Jones, Vice President

Analyst: GF
KWJ:js