

# Laboratory Report

# AmCoat Industries, Inc. Rhino Shield Coatings

11/11/04

CON 04-173 Project

## ASTM D 6083-97a

Physical Property	ASTM Test	Requirement	Rhino Shield	
			DFC-W	APS
<b>I Colloidal properties</b>				
Viscosity (KU)	D 562	85-141	105.3	99.9
Viscosity (Brookfield LVT #4 @ 6 rpm)	D 2196	12-85 poise		
Volume solids (% calculated)	D 2697	>50		
Weight solids (%)	D 1644	>60	57.1	35.7
<b>II Mechanical properties of the film</b>				
Tensile-elongation testing conditions: (1/2" sample width, 1" jaw separation, 1"/minute speed of pull)				
<b>A. After 14 days drying in standard lab conditions</b>				
Tensile strength <sup>1</sup> @ 73°F	D 2370	>=200 lb/in <sup>2</sup>	377	65
Elongation <sup>1</sup> at break @ 73°F	D 2370	>=100 %	398	2642
<b>B. After 1000 hours aging in a Xenon Arc Weatherometer</b>				
Elongation <sup>1</sup> at break @ 73°F	D 2370	>=100 %	139	2279
Accelerated weathering (cracking & Checking)	D 4798	Nil	Nil	Nil
<b>III Other properties of the film</b>				
Wet Adhesion <sup>2</sup> -Polyurethane foam	C 794/ D 903	>2 lb/in	0.11	0.89
Wet Adhesion <sup>2</sup> -Galvanized	C 794/ D 903	>2 lb/in	3.40	3.92
Tear Resistance <sup>1</sup> (Die C)	D 624	>60 lbf/in	133.0	29.1
Permeance <sup>2</sup> - Inverted	D 1653A	<50 perms	32.7	3.2
Permeance- Upright	D 1653A	NR	24.3	3.9
Water swelling <sup>1</sup>	D 471	<20 weight %	11.9	37.6
Fungi resistance	G 21	Zero	ND	ND
<b>IV Other non-required test results</b>				
Dry Adhesion <sup>2</sup> -Polyurethane foam	C 794/ D 903	NR	1.40	3.20
Dry Adhesion <sup>2</sup> -Galvanized	C 794/ D 903	NR	10.42	4.40

NT = Not tested

NR = Not required

<sup>1</sup> Only three specimens tested

<sup>2</sup> Only two specimens tested.

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