



**POLYCOAT
PRODUCTS**
A Division of American Polymers Corp.

TEST DATA: Poly-I-Gard® 246SF Vehicular Deck System

Summary of Test Report Conducted by Ramtech Laboratories on the Poly-I-Gard® 246SF Decking System

1. Weathering Test: ASTM G-23, Atlas Twin Arc Weatherometer Type DH 2000 hours (equivalent to approximately 6 years of natural weathering).

Visual Examinations: No signs of chalking, crazing, cracking, blistering, delaminating, spalling, softening or any other deleterious effects.

ASTM-D 751, Five specimens weathered and five specimens aged per AC39 Sec. IV A & B. Stretch rate 12 ± 0.5 in./min.

<u>With Aggregate</u>	<u>Tensile Strength(lb./in.)</u>	<u>Elongation(%)</u>
Control	21.3	89
Weathered	12	131

% Change Weathered	43.6	32
Aged	23	111
% Change Aged	7.3	15.2

<u>Without Aggregate</u>	<u>Tensile Strength(lb./in.)</u>	<u>Elongation(%)</u>
Control	41.8	169
Weathered	29	154
% Change Weathered	30.6	8.9
Aged	50	133
% Change Aged	16.4	21.3

2. Aging Test: ASTM D-412, Stretch rate 20 ± 0.5 in./min. Procedure D & E. Six cycles of each procedure. Material tested without aggregate

Visual Examination after Aging Test: No sign of chalking, crazing, cracking, blistering, delamination, or any other deleterious effects.

	<u>Tensile Strength(psi)</u>		<u>Elongation (%)</u>	
	<u>ASTM D-412</u>	<u>ASTM D-412</u>	<u>ASTM D-412</u>	<u>ASTM D-412</u>
Control	2573	254		
Weathered	3666	280		
% Change Weathered	+42.5	+10.2		
Aged	3982	308		
% Change Aged	+54.8	+21.5		

Bond Strength (psi), ASTM C-297:

<u>Polyprime 21</u>	<u>Metal</u>	<u>Concrete</u>
Control	414	458
Aged	401	436
% Change	3.2	5.0
Mode of Failure	Adhesion failure of concrete	Cohesive failure
<u>Polyprime 2140</u>	<u>Metal</u>	<u>Concrete</u>
Control	406	389
Aged	395	391
% Change	2.7	0.6
Mode of Failure	Adhesion failure of concrete	Cohesive failure

3. Percolation Test: ICC-ES Evaluation Svc., Inc. AC 39 Sect. IV-G Loss due to Percolation after the 1000 cycles abrasion test (% of original head, max. allowed 1%): 0%

4. Absorption Test: ASTM D 570, 24 hour immersion in distilled water. Weight % of water absorption (max. allowed 5%): 1.86%

5. Water Vapor Transmission (WVT) Test: ASTM E-96 Desiccant Method: WVT: 0.000000249 grams/Pa · sec · m²; WVT: 4.350 grains/ft² · hr · in. Hg

6. Abrasion Test: ASTM D-1242 Method A as modified by ICC-ES Evaluation Svc., Inc. AC 39 Sect. IV-F (1000 cycles, 1000 grams, No. 80 TP Aluminum Oxide Grit). Thickness lost (max. allowed 20 mils): 0.009 in.

7. Concentrated Load Test: AC 39, Sec. IV L. One inch diameter steel plate with rounded corners.

<u>Load [lbs]</u>	100	200	300
<u>Deflection [inches]</u>	0.020	0.028	0.037

8. Impact Resistance: A two pound steel ball dropped eight feet onto the decking system. Test was performed three time with an average indentation of 0.027 in.

9. Crack Resistance (Crack Bridging): Top coat showed signs of cracking while bottom coat maintained its integrity.

10. Chemical Resistance Tests: ASTM D-2299 Determine Relative Stain Resistance of Plastics by immersing specimens in 18 reagents @ 122°F (50°C) for 16 hours.

<u>Reagent:</u>	<u>Non-Abraded</u>	<u>Abraded</u>
Heavy duty detergent sol.	1	1
Muriatic acid	2	2
Ammonia solution - 5%	1	1
Anti-Freeze	1	1
Kerosene	1	1
Salt Solution - 10%	1	1
Chlorine Solution - 10%	1	1
Paint thinner	1	1
Turpentine	1	1
Sulfuric Acid - 3%	1	1
Transformer Oil	1	1
Sulfuric Acid - conc.	3	3
Diesel fuel	1	1
Hydraulic Fluids	1	1
Gasoline - Regular	1	1
Toluene	1	1
Lubricating oil	1	1
Soap Solution	1	1

NUMBER CODE: 1. Unaffected 2. Superficially Affected 3. Considerably Affected

Note: a) Of the 18 reagents used in the chemical resistance test, only sulfuric acid concentrate caused a deterioration of the decking system.

b) Wearing surface revealed no cracking, crazing, delamination, or any other deleterious effects.

c) The test specimens which were coded "No. 2 or 3" could not be restored to their original surface condition by normal cleaning methods.

11. Low Temperature Flexibility: AC 39 Sec. K. 5°F. No cracking or crazing upon visual examination under 5x magnification in the bent condition.

12. Fire Resistance Test Series Class "A": U.B.C. Standard 32-7, ASTM E-108, U.L.790, N.F.P.A. No. 256, Spread of Flame Test (2 decks) on concrete surfaces.

B) Spread of Flame Test (2 decks):

	<u>Base (in.)</u>	<u>Length (in.)</u>
Deck 1	15	18
Deck 2	15	27
Max. Flame Spread Allowed	40	72

Poly-I-Gard® 246 SF vehicular deck system will satisfactorily withstand the Flame Spread portion of the test for Class A Rating in UBC STD #32-7, ASTM E108, UL 790 and NFPA No. 256, when constructed, installed and tested as described herein.

Please read all information in the general guidelines, product data sheets, guide specifications and material safety data sheets (MSDS) before applying material. Published technical data and instructions are subject to change without notice. Contact your local Polycoat Products representative or visit our website for current technical data and instructions.

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