



APPROVALS AND TESTING

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> |
| 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>Metal</u> | <u>Concrete</u> |
|-----------------|------------------------------|------------------|
| | <u>Polyprime 21</u> | |
| Control | 414 | 458 |
| Aged | 401 | 436 |
| % Change | 3.2 | 5.0 |
| Mode of Failure | Adhesion failure of concrete | Cohesive failure |

| | <u>Metal</u> | <u>Concrete</u> |
|-----------------|------------------------------|------------------|
| | <u>Polyprime 2140</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.

Limited Warranty:

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.

Polycoat Products warrants its products to be free of manufacturing defects and that they will meet Polycoat Products current published physical properties. Polycoat Products warrants that its products, when properly installed by a state licensed waterproofing contractor according to Polycoat Products guide specifications and product data sheets over a sound, properly prepared substrate, will not allow water migration for a period of one (1) year. Seller's and manufacturer's sole responsibility shall be to replace that portion of the product of this manufacturer which proves to be defective. There are no other warranties by Polycoat Products of any nature whatsoever expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product. Polycoat Products shall not be liable for damages of any sort, including remote or consequential damages resulting from any claimed breach of any warranty whether expressed or implied. Polycoat Products shall not be responsible for use of this product in a manner to infringe on any patent held by others. In addition, no warranty or guarantee is being issued with respect to appearance, color, fading, chalking, staining, shrinkage, peeling, normal wear and tear or improper application by the applicator. Damage caused by abuse, neglect and lack of proper maintenance, acts of nature and/or physical movement of the substrate or structural defects are also excluded from the limited warranty. Polycoat Products reserves the right to conduct performance tests on any material claimed to be defective prior to any repairs by owner, general contractor, or applicator.

Disclaimer:

All guidelines, recommendations, statements, and technical data contained herein are based on information and tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. It is the users responsibility to satisfy himself, by his own information and test, to determine suitability of the product for his own intended use, application and job situation and user assumes all risk and liability resulting from his use of the product. We do not suggest or guarantee that any hazard listed herein are the only ones which may exist. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements, whether in writing or oral, other than those contained herein shall not be binding upon the manufacturer, unless in writing and signed by a corporate officer of the manufacturer. Technical and application information is provided for the purpose of establishing a general profile of the material and proper application procedures. Test performance results were obtained in a controlled environment and Polycoat Products makes no claim that these tests or any other tests, accurately represent all environments.