

## Product Test Listings (04/01/13)

| ASTM TESTING: |  |  |  |
|---------------|--|--|--|
| B 117         | 15,000 Hour Salt Spray (Fog)   |  |  |
|               | - Salt Spray Fog Testing   |  |  |
|               | - Salt Spray Fog Testing<br>- RUST GRIP® over Steel  |  |  |
| D-257-99      | D-C Resistance of Insulating Materials   |  |  |
| D-231-99      | - Surface Resistivity = 5.237E+15  |  |  |
|               | - Volume Resistivity = 5.263E+15   |  |  |
|               | - Volume Resistivity = 3.203E 1 13   |  |  |
| D 522         | Mandrel Bend   |  |  |
| D 322         | - Penetration through 18 layers of Lead Base Paint   |  |  |
|               | - Rated 5A = Excellent   |  |  |
|               |  |  |  |
| D 610         | Percentage of surface rusted = rating 9  |  |  |
| D 714         | No blistering = rating 10  |  |  |
| D 1654        | No loss of adhesion = rating 10  |  |  |
| DG 20-88      | Chemical resistance = excellent  |  |  |
|               |  |  |  |
| D 3359        | Adhesion and Penetration   |  |  |
|               | - Penetration through 18 layers of Lead Base Paint   |  |  |
|               | - Rated 5A = Excellent   |  |  |
| D 4060        | Tabor Abrasion Resistance  |  |  |
| 2 .000        | - 1000 Cycles with a CS 17 Wheel, 1000 gram Load   |  |  |
|               | - 18 milligram loss per 1000 Cycles, rated Excellent   |  |  |
| D 4541        |  |  |  |
| D 4541        | Standard Method for Pull-Off Strength  |  |  |
|               | - Pull-Off Strength = 1467   |  |  |
| D 6904        | Resistance to Wind-Driven Rain for   |  |  |
|               | Exterior Coatings Applied to Masonry   |  |  |
|               |  |  |  |
| D 7088        | Resistance to Hydrostatic Pressure for Coatings Used in  |  |  |
|               | Below Grade Applications Applied to Masonry  |  |  |
| E-108-00      | Spread of Flame Tests on Pitched Roofs   |  |  |
|               | - Class "A" Non-combustible  |  |  |
|               |  |  |  |
| E 903-96      | Spectral Reflectance   |  |  |
|               | - Average of 3 Tests = 44.6% Solar Reflectance   |  |  |
|               | 55.5% Solar Absorption   |  |  |
| E 1795        | ·  |  |  |
| E 1795        | Encapsulation of Leaded Paint in Buildings   |  |  |
|               | - Direct Impact Resistance (ASTM D 2794)<br>- Adhesion (ASTM D 3359, D 4541)                   |  |  |
|               | - Dry Abrasion Resistance (ASTM D 4060)  |  |  |
|               | - Water Vapor Transmission (ASTM D 4000)   |  |  |
|               |  |  |  |
|               | - Flexibility – Mandrel Bend (ASTM D 522)<br>- Distilled Water Resistance – Immersion 24 hours |  |  |
|               | 010" Tinplated Steel (ASTM D 1308, D 3359)   |  |  |
|               |  |  |  |
|               | - ¼" Steel or Aluminum (ASTM D 1308, D 4541) - Chemical Resistance – 24 Hours- 12 Reagents     |  |  |
|               | - Spot Test on Glass (ASTM D 1308)   |  |  |
|               |  |  |  |
|               | - Surface Burning Characteristics (E 84)   |  |  |
|               | - Volatile Organic Content (VOC)   |  |  |
|               | - (ASTM D 2369, D 4017, D 3960, D 1475)<br>- Weathering (1000 hours)                           |  |  |
|               | - Aging (interior and exterior)  |  |  |
|               | - Aging (interior and exterior)<br>- Scrub Resistance (ASTM D 2486)                            |  |  |
|               | - Scrub Resistance (ASTM D 2466)<br>- Black Plastic – No Break thru after 12 cycles)           |  |  |
|               |  |  |  |
|               | - Mildew Resistance (ASTM D 3273, 3274)<br>- Paint / Repair Ability (ASTM D 3359)              |  |  |
|               | - Tensile Properties (6780psi after 3 weeks)   |  |  |
|               |  |  |  |
|               | - Visco-Elastic Properties (ASTM D 2370)   |  |  |

| ASTM TESTING CONTINUED |  |
|------------------------|--|
| F 963                  | Compliance with maximum soluble limits of - Antimony, arsenic, barium, cadmium, chromium - Lead, mercury, and selenium |
| G 20                   | Chemical Exposure - 5% Ammonia - 5% Urea - 1500 Hour Salt Fog  |
| G 85                   | Prohesion (Louisiana DOT) - 1500 Hour Salt Fog - Rated 9 (out of a possible 10 rating)                                 |

| IMO (International | esting for ABS (American Bureau of Shipping),<br>IO (International Maritime Organization) and<br>.S. Coast Guard Approval. |  |  |
|--------------------|--|--|--|
| IMO A 653 (16)     | Flame Spread [A 653 (16)   |  |  |
| MSC 41             | Smoke Toxicity<br>- ASTM B117, D163, D522, D3359, & E1795  |  |  |

## Rame-Hart Static Contact Angle (Young's Equation):

Static contact angle of Rust Grip<sup>®</sup> is lower than water demonstrating that Rust Grip<sup>®</sup> has exceptional wettability, adhesiveness, and high solid surface free energy for greater penetration into the substrate.

| China Center for Technical Testing: |   |  |  |
|-------------------------------------|---|--|--|
| National Measurem                   | National Measurement M0729              |  |  |
| GB/T 1771-91                        | - Resistance to Salt Fog (2000 hours)   |  |  |
| GB/T 1866-88                        | - Manuel Aging (2000 hours)             |  |  |
| GB/T 10834-88                       | - Resistance to Salt Water (1000 hours) |  |  |
| GB/T 5219-85                        | - Adhesion (pulling apart method)       |  |  |

## Window Recycling Test for Encapsulation of Lead Based Paint:.

Testing was done for encapsulating existing lead based paint on windows for HUD

- Window coated with RUST GRIP®.
- Coated surface showed no wear, friction burn, or lead-based paint exposure
- Window was cycled a total of 29,700 times before test concluded.

## **Maximum Temperature Exposure Test:**

Thermal analysis testing was performed on RUST GRIP® to determine maximum temperature exposure during application and operation

-Maximum temperature is 600 degrees F (315 degrees C)

Complete Test Results Are Available Upon Request