



Laboratory & Field Tests/Certifications/Registrations (02/07/13)

1. US Federal Authorized Vendor & Contractor Approval

Permits SPI Military Group to sell directly to US Government Agencies and Military



2. ASTM (American Society for Testing and Materials):

ASTM B177 - Salt spray (fog) corrosion tests, 450h exposure (Passed)

ASTM C177 - Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus (Passed)

ASTM C236 - Standard Test Method for Steady-State Thermal Performance of Building Assemblies by Means of a Guarded Hot Box - Testing for measuring R-values (Passed)

ASTM C411 - Standard Test Method for Hot-Surface Performance of High-Temperature Thermal Insulation (Passed)

ASTM C1371 - Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers (Passed)

ASTM C1549 - Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer (Passed)

ASTM D412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-Tension - Tensile strength - 444 psi, modulus of elasticity 13,248 psi (Passed)

ASTM D522 - Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings (resistance to cracking on metal or rubber type materials / 1"(25mm) bend / 1/4"(96mm) bend) (Passed)

ASTM D1653 - Standard Test Methods for Water Vapor Transmission of Organic Coating Films (Passed 3%)

ASTM D1654 - Standard Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments Salt spray (fog/weathering) 450 Hour Salt Spray (Fog) (Passed - 2000 hours)

ASTM D3273-82T - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber (Passed)

ASTM D3274 - Standard Test Method for Evaluating Degree of Surface Disfigurement of Paint Films by Microbial (Fungal or Algal) Growth or Soil and Dirt Accumulation (Rating degree of fungal growth or soil and dirt accumulation on paint film) (Passed - Excellent (8 out of 9))

ASTM Listing (Con't)

ASTM D3359 - Standard Test Method for Measuring Adhesion by Tape Test (Rated: 5B)

ASTM D4060 - Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser (Passed)

ASTM D4541 - Adhesion 115.2 psi, not suitable for film <5

ASTM D6904 - Standard Practice for Resistance to Wind-Driven Rain for Exterior Coatings Applied to Masonry (3000 cycles)

ASTM D7088 - Standard Practice for Resistance to Hydrostatic Pressure for Coatings Used in Below Grade Applications Applied to Masonry (Passed)

ASTM E84-89a - Standard Test Method for Surface Burning Characteristics of Building Materials (Flame Index "0" / Smoke Index "0" - Class "A" Rating) (Passed - "0" development)

ASTM E90 - Standard test method for laboratory measurement of airborne sound transmission loss of building partitions (Passed)

ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials water vapor transmission (Perm Rating - 8.8 avg)

ASTM E108 - Standard Test Method for Fire Tests of Roof Coverings (Passed)

ASTM E413 - Standard Classification for Determination of Sound Transmission Class (STC 40 to 50 based on sound frequency)

ASTM E514 - Standard Test Method for Water Penetration and Leakage Through Masonry Resistance to Wind Driven Rain (Passed)

ASTM E903-96 - Standard Test Method for Solar Absorbance, Reflectance, and Transmittance of Materials Using Integrating Spheres (Passed)

ASTM E903-96 - 4 Year Retest (Passed)

ASTM E1269 - Standard Test Method for Determining Specific Heat Capacity by Differential Scanning Calorimetry - TPRL (Passed)

ASTM E1461-92 - Standard Test Method for Thermal Diffusivity of Solids by the Flash Method (Passed)

ASTM E1737 - Test Method for J-Integral Characterization of Fracture Toughness Flexibility (Passed)

ASTM G53 - exposure to UV, elevated temps & humidity (Passed)

3. NASA (National Aeronautics and Space Administration):

NHB 8060.1B/C Test 1- Flammability testing ("0" Burn, Class "A" rating) (Passed)

NHB 8060.1C, Test 7 - Toxic Off gassing ("K" no Toxic off gassing / "K" Rating for toxicity) (Passed)

4. ICC (International Code Council):

Council that formally consolidates approvals for:
BOCA (Building Officials Code Administrators)
Section 723.2 Exposed installations, Thermal insulation
Section 723.3 Concealed installations, Thermal insulation

ICC (International Code Council) (Con't):

Section 803.2 Classification, Interior Finish
1998 International Mechanical Code
Section 604.3 Coverings and Linings, Insulation
ICBO (International Conference of Building Officials)
* SBCCI (Southern Building Code Congress International)
Passed ASTM E 84 For Flame Spread
Passed ASTM C 411 for High Temp for Surface Performance
Section 803.2 Classification, Interior finish
Passed ASTM C177 for Thermal Conductivity

5. ASHRAE (The American Society of Heating, Refrigerating and Air-Conditioning Engineers):

90.1 CODE COMPLIANCE ("U" value used to measure "area-weighted average", insulated walls or roofs

6. ENERGY CONSERVATION ASSISTANCE PROGRAM:

Standard Method for Comparing Utility Loads in Standard Constructed Buildings (full reports available upon request):

* FLORIDA: ECAP REPORT

* DENVER: ECAP REPORT - *"This is the second time we have had the pleasure to test your product, it is rare that a single product will show such Repeatable Results in two totally different environments, South Florida and Denver Colorado, a true testimonial to your products ENERGY STAR rating."*

* TEXAS: Container ECAP Report Houston - *"This is the third time we have had the pleasure to test SuperTherm® product, it is rare that a single product will show such Repeatable Results in three totally different environments, South Florida and Denver Colorado and LaPorte, Texas a true testimonial to your products ENERGY STAR rating."*

7. ENERGY STAR PROGRAM:

Approved and accepted as an energy star partner for saving energy

ASTM E 903-96 Reflectivity = 80%

Only 1% Reduction in Reflectivity over 3 Years (3% over 10 years)

ASTM C 1371 and C 1549 Solar Reflectance and Thermal Emittance

8. LEED (Leadership in Energy & Environmental Design):

Qualifies under Sustainable Sites Credit 7.1 Heat Island Effect - non roof (1 point)

Qualifies under Sustainable Sites Credit 7.2 Heat Island Effect - roof (1 point)

Qualifies under Energy and Atmosphere Credit 1 Optimize Energy Performance ie. reduce thermal bridging (1-10 point)

Indoor Environmental Quality Credit 4.2 Low Emitting Materials - paint (1 point)

Innovation & Design Process Credit 1.1 Innovation in Design (5 point)

Under Category **CORE AND SHELL** in the latest 2009 LEED program:

SS Credit 7.2 Heat Island Effect: Roof - 1 point for having a SRI > 78

EA Credit 1: Optimize Energy Performance 1-21 Points SUPER THERM - 17 points.

MBDC Cradle to Cradle **GOLD CERTIFICATION**

9. DNV Certification (Det Norske Veritas):

Passed DNV Audit and DNV Compliant

Approved for worldwide salt water and Maritime use

Complies with DNV's Interpretation of SOLAS 1974 Convention as Amended

Low Flame Spread material, not generating excessive quantities of smoke nor toxic products in fire

DNV rules for Classifications of Ships & Mobile Offshore Units

10. FACTORY MUTUAL:

Factory Mutual Approved & Tested for Roofing & Other Applications

Superior Products International II, Inc. is an active member of the NRCA. (National Roofing Contractors Association)

11. JISC (Japanese Industrial Standards Corporation):

JIS A 5759 Reflectivity of sunlight on window or coating film (Passed)
Reflective ratio 92.2 - Long Wave Radiation ratio 99.5 (Infrared) (Passed)
15 Year Re Test Solar Reflectance JIS R 3106 (Passed)

12. USDA (United States Department of Agriculture):

Approved for use around foods – no offgassing
Environmentally safe and safe for use around animals
Letter of Written Certification as Accepted by USDA

13. China Center for Technical Testing of Non-Metallic Materials for Ship Building, China Ship-Building Corp.:

National Bureau for the Inspection of Technologies (97)
Measurement Approval (National) No. (M0729) (Passed - 2000 hrs)
GB/T 1771-91 - Resistance to Salt Fog (2000 hours) (Passed)
GB/T 1866-88 - Manual Aging (2000 hours) (Passed)
GB/T 10834-88 - Resistance to Salt Water (1000 hours) (Passed)
GB/T 5219-85 - Adhesion (pulling apart method) (4.07MPa)
GB/T 1733-93 - Boiling Water Immersion (8 Hours)

14. IMO (International Marine Organization):

IMO A. 653 (16) - Flame Spread Test for Bulkhead, Wall, and Ceiling Linings (Passed)

15. MARINE SAFETY COUNCIL:

MSC.41 (64) - Toxic Gas Generation, Used Colorimetric Gas Detector Tubes, Met All Toxic Gas Requirements (Passed)

16. Sound Proofing Barrier:

Sound Reduction: STC (Sound Transmission Coefficient)-Rated 48-51 per ASTM E 90.

Stoughton Trailer Ultra Sound testing shows a 68% Reduction

Sound testing performed by Hot-Cold Air and Fire Control by Pat Saulson, PhD.

Sound reduced an average of 50.2% by using SuperTherm® on the interior walls of a house.

17. VOC – 24 grams/ litre

18. GREEN LABEL

"Certified" means that an examination of samples of a Product or investigation has been performed by the Council to determine compliance with the Guidelines and that permission has been granted in accordance with this Agreement for the User to represent its Product as Certified.

19. RUSSIAN ACADEMY OF SCIENCES:

Research of Super Therm® Reflection in Visible or Infrared Bands Demonstrating the actual ability of Super Therm when accounting for the way Super Therm throws off heat or light waves which is not in a straight line, but scatters the wave or heat due to the ceramic filled surface. This is also why the surface does not heat up. The ceramics are throwing off heat and not loading it, therefore, the surface is not becoming hot like a white car hood.

