

HP SPARTACOTE™, LLC

ASTM International Certified Test Results



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REPORT OF TEST RESULTS FOR SPARTA-FLEX™ COATING SYSTEM

Customer: HP Spartacote, LLC

Report Date: February 5, 2007

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 - ASTM D 638
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Property Profile and Abrasion Resistance Test Results:

Tensile Strength: ASTM D 638: 4,500 to 5,000 psi
Impact Resistance: Direct/Reverse 160/160

Falling Sand Abrasion Resistance ASTM D 968:
Clear.....30 liters sand/1 dry mil
Pigmented.....38 liters sand/1 dry mil

Mandrel Bend, ASTM D 522: Passes, no cracking, 1/8" mandrel bend

Adhesion Tests:

The tests performed were conducted in accordance with ASTM D 3359-90 Standard Test Methods for Measuring Adhesion by Tape Test.

These tests were conducted on standardized steel panels, concrete panels, PVC plastic, plywood, and ceramic tile.

These panels were coated with Sparta-Flex coating system at one coat applied at 2-3 mils dry film thickness and two coats applied at 6.0-7.0 mils dry film thickness.

Panels were allowed to age for 7 days prior to testing.

These tests were conducted by two methods. Test Method A consisted of an X-Cut Tape Test. In this test, two cuts were made by a sharp razor blade that intercepted. The small angle of the interception was between 30 and 45°. Using a three inch piece of tape applied firmly to the middle of the cut, determination was made regarding the degree of adhesion by rapidly removing the tape and observing the amount of coating removed with the tape.

Test Method B consisted on a Cross-Cut Tape Test. In this test, 3/4 inch cuts are made perpendicular to each other. For the 2 mil coatings, 11 cuts are made in each direction. For the 6-7 mil coatings, 6 cuts are made in each direction. A three inch piece of tape was firmly applied to the cut areas and rapidly pulled off. Determination of the degree of adhesion is made by the amount of coating removed.

All tests conducted on the various substrates and at both thicknesses met the Classification 5B. Classification 5B means that there was no flaking and the total coating remained intact to the substrate.

Chemical Resistance Tests:

The tests performed were conducted in accordance with ASTM D 1308-02 Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes.

These tests were conducted on standardized steel panels at 75° F. and 50% Relative Humidity. The Sparta-Flex coating system was applied in two coats at 6.0-7.0 dry film thickness. Panels were allowed to age for 7 days prior to testing.

The tests consisted of placing the specified chemical directly on the panel, covering the chemical with a watch glass and allowing to remain on a horizontal panel for 24 hours prior to evaluation.

Results

Chemical:	No Effect	Not Recommended
50% Sodium Hydroxide	◆	
20% Ammonia	◆	
Vinegar	◆	
50% Ethyl Alcohol (Smirnoff 100 Proof)	◆	
5% Trisodium Phosphate	◆	
10% Sulfuric Acid	◆	
10% Muriatic Acid	◆	
5% Nitric Acid	◆	
10% Ammonium Hydroxide	◆	
Lysol	◆	
Lighter Fluid	◆	
Gasoline	◆	
25% Citric Acid	◆	
Spic and Span Cleaner	◆	
Chlorinated Pool Water (pH 6.5)	◆	
Methyl Ethyl Ketone		◆
Skydrol B	◆	
Brake Fluid	◆	
Windex	◆	
Krud Kutter	◆	
409 All Purpose Cleaner	◆	
Pine Oil Cleaner	◆	
Commercial Paint Remover		◆
Motor Oil	◆	
Mustard	◆	
Catsup	◆	
A-1 Steak Sauce	◆	
Liquid Ivory Soap	◆	
25% Lactic Acid	◆	
Red Wine	◆	
Beer (Bud Light)	◆	
Butter	◆	

Chemical Resistance Tests (cont.):

Chemical:	Results	
	No Effect	Not Recommended
Canola Oil	◆	
20% Tannic Acid	◆	
Coffee	◆	
Tea	◆	
Cocoa	◆	
Pepsi Cola	◆	
Pantene Shampoo	◆	
Baby Oil	◆	
Swine Urine	◆	
Swine Feces	◆	
Sewage Waste	◆	
Distilled Water	◆	
Keri Oil	◆	
Magic Shave	◆	
Infusium	◆	
Jamician Dream	◆	
Diesel Fuel	◆	
Regular Paint Thinner (Aliphatic Hydrocarbon)	◆	
Pickle Juice	◆	
Colgate Toothpaste	◆	
Tommy Aftershave	◆	
Missoni Missoni Parfum	◆	

This is to certify that the above represent true and accurate results of testing conducted at our laboratory under my direction.



Wilmer Rowe
Chief Chemist