

PERFORMANCE GUIDE

WHUVB

Revised: 7/10

2.6 mil White UV BOPP/ MP690 / 3.2 mil SCK

Description	Applications and End Uses																				
<p>Product WHUVB - 2.6 mil matte top-coated, white UV resistant BOPP with a durable and aggressive permanent acrylic adhesive and a 3.2 SCK liner.</p> <p><i>Recognized for UL969 component labels. This product is UL Recognized for indoor and outdoor applications. For specific recognition, consult UL file MH12627.</i></p> <p><i>BS 5609 Compliant. This product conforms to BS 5609: 1986 Section 2 – 'Marine and Laboratory Performance of Label Base Materials'.</i></p>	<p>Designed for use in nameplate, durable equipment and drum and battery label applications. Excellent flexo and thermal transfer printability with most resin and wax/resin ribbons.</p>																				
<p>Face 2.6 mil UV resistant, white BOPP, topcoated for superior printability via flexo and thermal transfer. Features up to two year outdoor weather resistance.</p> <p>Physical Properties Without Adhesive</p> <table border="1"> <tr> <td>Caliper, inches</td> <td>0.0026 (2.6 mils)</td> <td>ASTM D-2103</td> </tr> <tr> <td>Tensile, lbs./in.</td> <td>40 MD 36 CD</td> <td>TAPPI-494</td> </tr> </table>	Caliper, inches	0.0026 (2.6 mils)	ASTM D-2103	Tensile, lbs./in.	40 MD 36 CD	TAPPI-494															
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<p>Adhesive MP690 is a high performance, high tack, durable, permanent acrylic emulsion with excellent ultimate adhesion and mandrel hold. It is extremely chemical and solvent resistant and has very good adhesion to various high and low energy substrates.</p> <p>Physical Properties of Adhesive</p> <table border="1"> <tr> <td>Thickness, inches</td> <td>0.001 +/- 10%</td> <td></td> </tr> <tr> <td>Peel Adhesion, lbs./in.</td> <td>3.8</td> <td>CTM-8 (30 min. applied) Reference: PSTC-101A</td> </tr> <tr> <td colspan="3"><i>Temperature Ranges</i></td> </tr> <tr> <td>Minimum Application</td> <td>+50°F (10°C)</td> <td>CTM #45 Curwood</td> </tr> <tr> <td>Service Ranges</td> <td>-40°F to +257°F (-40°C to +125°C)</td> <td>Polyester Film Dry Surface</td> </tr> <tr> <td>Loop Tack – Stainless Steel, lbs./in.</td> <td>3.8</td> <td>PSTC11</td> </tr> </table>	Thickness, inches	0.001 +/- 10%		Peel Adhesion, lbs./in.	3.8	CTM-8 (30 min. applied) Reference: PSTC-101A	<i>Temperature Ranges</i>			Minimum Application	+50°F (10°C)	CTM #45 Curwood	Service Ranges	-40°F to +257°F (-40°C to +125°C)	Polyester Film Dry Surface	Loop Tack – Stainless Steel, lbs./in.	3.8	PSTC11			
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<p>Liner A semi-bleached, super-calendared kraft liner. Excellent for die cutting and stripping. The liner is coated with a release system designed for label dispensing. Primarily for roll-to-roll applications where a more demanding liner is needed.</p> <table border="1"> <tr> <td>Caliper, inches</td> <td>0.0032 +/- 10%</td> <td>TAPPI T-411</td> </tr> <tr> <td>Basis Weight, lbs. (24" x 36"/500 sheets)</td> <td>50 +/- 10%</td> <td>TAPPI T-410</td> </tr> </table>	Caliper, inches	0.0032 +/- 10%	TAPPI T-411	Basis Weight, lbs. (24" x 36"/500 sheets)	50 +/- 10%	TAPPI T-410															
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<p>Shelf Life One year when stored at 72° F and 50% R.H.</p>																					

This product complies with CONEG regulations.

All Roll Label products meet the requirements of the Clean Air Act of 1990.

*** NOTE: Thermal transfer printing quality and bar code scannability are dependent upon the interworking of several elements; the ribbon, the printhead and the facstock. Please test all applications. Contact your UL label supplier for guidelines regarding printer and ribbon compatibility.**

Performance Data

Typical peel value of 2 mil PET face applied to tested surface in lbs./in.

Surface	Initial	72 hours @ Room Temp.	72 hours @ 120° F.	24 hours @ 90° F. / 90% RH
Stainless Steel	3.0	5.9	6.8	1.5
Aluminum	3.2	5.8	6.3	3.7
Polypropylene	1.9	3.0	5.5	4.1
HDPE	2.5	5.7	4.1	4.1
LDPE	1.0	2.2	1.8	3.8
ABS	4.5	5.3	5.3	4.3
Polycarbonate	5.4	5.5	2.9	3.3

Chemical Resistance

Typical peel value of 2 mil PET face applied to stainless steel and immersed in test chemicals for four hours, in lbs./in.

Chemical	Adhesion
Isopropyl Alcohol	4.6
Oil	6.4
Oil @ 250° F.	6.4
Water	4.3
Acid – pH 4	5.4
Base – pH 11	5.0
409® Cleaner	5.4
Toluene	2.5
Acetone	2.8
Brake Fluid	6.4
Gasoline	2.8
Diesel Fuel	5.8
Mineral Spirits	5.3
Hydraulic Fluid	6.3
Tide® Detergent	5.7
Kerosene	5.3
Heptane	4.9

Compliance Recognition: UL



Underwriters Laboratories, Inc.

Substrates	Minimum Temperature		Maximum Temperature		(I=Indoor Only I/O= Indoor & Outdoor)	Additional Conditions
	° F	° C	° F	° C		
1. Acrylic Paint	-40	-40	212	100	I/O	C,F1,K,O
2. Alkyd Paint	-40	-40	212	100	I/O	C
3. Aluminum	-40	-40	212	100	I/O	C,F1,O
4. Epoxy Paint	-40	-40	212	100	I/O	C,F1,K,O
5. Galvanized Steel	-40	-40	212	100	I/O	C,F1,O
6. Polyester Paint	-40	-40	212	100	I/O	C,O
7. Polyester Powder Paint	-40	-40	212	100	I/O	C,O
8. Polyurethane Powder Paint	-40	-40	212	100	I/O	C,O
9. Porcelain	-40	-40	212	100	I/O	C,F1,O
10. Stainless Steel	-40	-40	212	100	I/O	C,F1,O
11. Acrylic Powder Paint	-40	-40	212	100	I/O	C,O
12. Epoxy Powder Paint	-40	-40	212	100	I/O	C,F1,O
13. Melamine	-40	-40	212	100	I/O	C,F1,K,O
14. Nylon	-40	-40	212	100	I/O	C,F1,O
15. Phenolic	-40	-40	212	100	I/O	C,F1,O
16. Polycarbonate	-40	-40	212	100	I/O	C,O
17. Unsat Thermoset Polyester	-40	-40	212	100	I/O	C,F1,O
18. ABS Plastic	-40	-40	176	80	I/O	C,O
19. Epoxy	-40	-40	176	80	I/O	C,F1,O
20. Polyphenylene Oxide	-40	-40	176	80	I/O	C,K,O
21. Polypropylene	-9.4	-23	176	80	I/O	C,O
22. Polystyrene	-40	-40	176	80	I/O	C,F1,K
23. Polyvinyl Chloride	-40	-40	176	80	I/O	C,O
24. Acrylic	-40	-40	140	60	I/O	C,O
25. Polyethylene	-9.4	-23	140	60	I/O	C,F1,O

Substrates	Maximum Temperature		(I=Indoor Only I/O= Indoor & Outdoor)	Additional Conditions
	° F	° C		
1. Metals	212	100	I/O	C,O
2. Electrostatic coated metal A	212	100	I/O	C,O
3. Electrostatic coated metal B	212	100	I/O	C,O
4. Electrostatic coated metal C	212	100	I/O	C,O
5. Electrostatic coated metal D	212	100	I/O	C,O
6. Plastic Group I	212	100	I/O	-
7. Plastic Group II	176	80	I/O	-
8. Plastic Group III	176	80	I/O	-
9. Plastic Group IV	176	80	I/O	-
10. Plastic Group V	176	80	I/O	-
11. Plastic Group VI	176	80	I/O	-
12. Plastic Group VII	176	80	I/O	-
13. Plastic Group VIII	176	80	I/O	-
14. Porcelain (PRCLN)	212	100	I/O	C,O

C – Occasional exposure to Cooking Oil (room temp).

F1 – Occasional exposure to Fuel Oil No. 1.

G – Occasional exposure to Gasoline splashing.

K – Occasional exposure to Kerosene.

O – Occasional exposure to Lubricating Oil.

IMPORTANT NOTICE: The information given and the recommendations made herein are based on our research and are believed to be accurate, but no guarantee of their accuracy or completeness is made. In every case, user shall determine before using any product in full scale production, or in any way, whether such product is suitable for user's intended use for their particular purpose under their own operating conditions. User assumes all risk and liability whatsoever in connection with their use of any product. The products discussed herein are sold without any warranty as to merchantability or fitness for a particular purpose, or any other warranty, express or implied. No representative of ours has any authority to waive or change the foregoing provisions, and no statement or recommendation not contained herein shall have any force of effect unless in an agreement signed by the officers of seller and manufacturer. Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention covered by any patent without authority from the owner of the patent. The following is made in lieu of all warranties, express or implied: Seller's and manufacturer's only obligation shall be to replace or credit such quantity of the product proved to be defective at its discretion.

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