

PERFORMANCE GUIDE

WHPET 2 mil White PET / MP690 / 3.2 mil SCK

Revised: 3/12

Description	Applications and End Uses			
Product	<p>WHPET - 2 mil gloss top-coated, white polyester 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 No. PGGU2.MH12627 Marking and Labeling Systems Materials.</i></p> <p><i>CUL recognized under UL file No. PGGU8.MH12627 Marking and Labeling System Materials Certified for Canada.</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 label applications. Excellent flexo and thermal transfer printability with most resin and wax/resin ribbons.</p> <p>Used for warning and instructional labeling that contains critical information about safety and handling. These labels serve various functions including logos, warning labels, and serial numbers. These labels are designed to last the life of the product, adhere to difficult substrates such as plastics and metals, and may require higher heat resistance.</p>		
Face	<p>2 mil white polyester, topcoated for superior printability via flexo and thermal transfer. Features high strength, tear resistance, dimensional stability and temperature resistance.</p>			
	Physical Properties without Adhesive			
	Caliper, inches	0.002 (2 mils)	ASTM D-2103	
	Tensile, lbs./in.	40 MD 60 CD	TAPPI-494	
Adhesive	<p>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. Complies with FDA 21 CFR 175.105</p>			
	Physical Properties of Adhesive			
	Thickness, inches	0.001 +/- 10%		
	180° 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 Polyester Film Dry Surface	
	Service Ranges	-40°F to +302°F (-40°C to +150°C)		
	Loop Tack – Stainless Steel, lbs./in.	3.8	PSTC11	
Liner	<p>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>			
	Caliper, inches	0.0032 +/- 10%	TAPPI T-411	
	Basis Weight, lbs. (24" x 36"/500 sheets)	50 +/- 10%	TAPPI T-410	
Shelf Life	<p>Product retains its performance and properties for two years from date of manufacture when stored at 72° F and 50% relative humidity.</p>			

Compliance Recognition: cUL (CSA C22.2 No. 0.15)



Substrates	Maximum Temperature		(I=Indoor Only I/O= Indoor & Outdoor)	Additional Conditions
	° F	° C		
1. Metals	302	150	I/O	C,G,K,O
2. Electrostatic coated metal A	302	150	I/O	C,G,K,O
3. Electrostatic coated metal B	257	125	I/O	C,G,K,O
4. Electrostatic coated metal C	257	125	I/O	C,G,K,O
5. Electrostatic coated metal D	302	150	I/O	C,G,K,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)	302	150	I/O	C,G,K,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.

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	302	150	I/O	C,F1,G,K,O
2. Alkyd Paint	-40	-40	302	150	I/O	C,F1,G,K,O
3. Aluminum	-40	-40	302	150	I/O	C,F1,G,K,O
4. Epoxy Paint	-40	-40	302	150	I/O	C,F1,G,K,O
5. Galvanized Steel	-40	-40	302	150	I/O	C,F1,G,K,O
6. Polyester Paint	-9.4	-23	302	150	I/O	C,F1,G,K,O
7. Polyester Powder Paint	-9.4	-23	302	150	I/O	C,F1,G,K,O
8. Polyurethane Powder Paint	-9.4	-23	302	150	I/O	C,F1,G,K,O
9. Porcelain	-40	-40	302	150	I/O	C,F1,G,K,O
10. Stainless Steel	-40	-40	302	150	I/O	C,F1,G,K,O
11. Acrylic Powder Paint	-40	-40	257	125	I/O	C,F1,G,K,O
12. Epoxy Powder Paint	-40	-40	257	125	I/O	C,F1,G,K,O
13. Melamine	-40	-40	212	100	I/O	C,F1,G,K,O
14. Nylon	-40	-40	212	100	I/O	C,F1,G,K,O
15. Phenolic	-40	-40	212	100	I/O	C,F1,G,K,O
16. Polycarbonate	-40	-40	212	100	I/O	C,F1,G,K,O
17. Unsat Thermoset Polyester	-40	-40	212	100	I/O	C,F1,G,K,O
18. ABS Plastic	-40	-40	176	80	I/O	C,F1,G,K,O
19. Epoxy	-40	-40	176	80	I/O	C,F1,G,K,O
20. Polyphenylene Oxide	-40	-40	176	80	I/O	C,F1,G,K,O
21. Polypropylene	-9.4	-23	176	80	I/O	C,F1,G,K,O
22. Polystyrene	-40	-40	176	80	I/O	C,F1,G,K,O
23. Polyvinyl Chloride	-40	-40	176	80	I/O	C,F1,G,K,O
24. Acrylic	-40	-40	140	60	I/O	C,F1,G,K,O
25. Polyethylene	-9.4	-23	140	60	I/O	C,F1,G,K,O

Note: All 25 surface categories were tested at UL with occasional exposure to Cooking Oil (room temp), Fuel Oil No. 1, Gasoline splashing, Kerosene and Lubricating Oil.

Recognized Thermal Transfer Ribbon

DNP (Previously Sony Chemicals) TR6075 Resin Ribbon, DNP R300 Resin Ribbon, DNP R510 Resin Ribbon, DNP TR6070 Resin Ribbon, ITW B324 Resin Ribbon, Zebra 5100 Resin Ribbon, Zebra 5095 Resin Ribbon, Imak SP330 Resin Ribbon, Fuji Copian FTX 308 Resin Ribbon, Datamax SDR Resin Ribbon, Datamax PGR Wax-Resin Ribbon, Datamax SDR-D Resin Ribbon, Datamax SDR-5 Resin Ribbon, Datamax IQMID+ Wax-Resin Ribbon and Datamax IQRES+ Resin Ribbon

Recognized Flexo Inks

ACTega WIT Versifilm Plus Series (Water based), ACTega WIT Optafilm Series (Water based) and ACTega WIT Pharmaflex UV ULF (UV Ink System), Environmental Inks Film III Series, Flint Group Narrow Web Flexocure FORCE (UV Ink System) and Flint Group Hydrofilm ACE (Water based) Series

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

This product complies with CONEG regulations.

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

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