



# PERFORMANCE GUIDE

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## VDG6911

Revised KSH: 5/2018

### 3.4 mil Top Coated White Vinyl/ MP690 / 3.2 mil SCK

#### Description

##### Product

VDG6911 - 3.4 mil matte top-coated, white flexible vinyl with a durable and aggressive permanent acrylic adhesive and a 3.2 SCK liner.

*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 and PGJ12.MH26726 Printing Materials.*

*CUL recognized under UL file No. PGGU8.MH12627 Marking and Labeling System Materials Certified for Canada and PGJ18.MH26726 Printing Materials.*

*Meets Federal Motor Vehicle Safety Standards (FMVSS) No. 302 'Flammability of Interior Materials' UL file QMRV2.E490667*

*BS 5609 Compliant. This product conforms to BS 5609: 1986 Section 2 - 'Marine and Laboratory Performance of Label Base Materials'.*

#### Applications and End Uses

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.

##### Face

3.4 mil white flexible PVC, topcoated for superior printability via flexo and thermal transfer. Features up to five year outdoor weather resistance.

##### Physical Properties Without Adhesive

Caliper, inches	0.0034 (3.4 mils)	ASTM D-2103
Tensile, lbs./in.	13 MD 12 CD	TAPPI-494

##### 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.

##### Physical Properties of Adhesive

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 +200°F (-40°C to +93°C)	Polyester Film Dry Surface
Loop Tack - Stainless Steel, lbs./in.	3.8	PSTC11

##### 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.

Caliper, inches	0.0032 +/- 10%	TAPPI T-411
Basis Weight, lbs. (24" x 36"/500 sheets)	50 +/- 10%	TAPPI T-410

CALL 1-800-548-3456 for additional product information



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**Durability** The outdoor durability of the unprinted film is 5 years. Warranted life is based on vertical applications in central USA. Areas with greater weather extremes such as southwestern USA, Mexico and other similar areas in the tropics, sub-tropics or areas with high pollution levels cannot be expected to have the same durability. Therefore, durability in these areas will be 50% or 2.5 years, of this warranty statement.

**Shelf Life** Product retains its performance and properties for two years from date of manufacture when stored at 72° F and 50% relative humidity.

## 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

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

**Compliance Recognition, Inks: UL PGJ12 / cUL PGJ18**

**UL Recognized Thermal Transfer Ribbon**

· DNP TR6075 Resin Ribbon, DNP R300 Resin Ribbon, ITW B324 Resin Ribbon, Datamax SDR-D Resin Ribbon, limak SP330, ARMOR AXR7+

**UL 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

**UL Recognized Digital Inks**

EFI "Jetrion Series" UV Ink Set (All Colors)

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Substrates	Maximum Temperature		(I=Indoor Only I/O= Indoor & Outdoor)	Additional Conditions
	° F	° C		
1. Metals	176	80	I/O	C,K,O
2. Electrostatic coated metal A	176	80	I/O	C,K,O
3. Electrostatic coated metal B	176	80	I/O	C,K,O
4. Electrostatic coated metal C	176	80	I/O	C,K,O
5. Electrostatic coated metal D	176	80	I/O	C,K,O
6. Plastic Group I	176	80	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)	176	80	I/O	C,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.

**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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