AVERY DENNISON | Inspired Brands. Intelligent World.™

AA642

Fasson ®

TRANSFER PET WHITE TOP - AL170-BG42WH

A white polyester film featuring excellent chemical resistance of TT print, combined with a highly resistant acrylic adhesive.
Ideal for use in automotive applications, when applied onto high to medium surface energy substrates.

Key features

> Excellent TT printability.

> High chemical resistance of TT print against harsh chemicals.

> Suitable for UV inkjet printing, qualified by EFI Jetrion and Durst.

> Solvent acrylic adhesive, distinguished by its excellent resistance against harsh chemicals, UV light and heat; for labelling metal or other high surface energy substrates.

> UL and CSA recognised label material.

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Facestock

A gloss white polyester film. The smooth surface is covered with a topcoat for very good ink anchorage.

Basis Weight	76 g/m²	ISO 536
Caliper	50 µm	ISO 534

Adhesive

AL170 is a strong, permanent, solvent-based acrylate adhesive.

Liner

BG42 white, a supercalendered glassine paper.

Basis Weight	64 g/m²	ISO 536
Caliper	57 µm	ISO 534
Transparency	50 %	DIN 53147

Laminate

Total Caliper	132 µm±10%	ISO 534

Performance data

Initial Tack	10 N/25mm	FTM 9 Glass
Min. Application Temp.	0 °C	
Service temperature	-80°C to 150°C	
Peel Adhesion 90°	9 N/25mm	FTM 2 st.st. 24hr
Adhesive Type	Solvent Acrylic	

Adhesive Performance

AL170 is distinguished by very high ageing stability and features excellent resistance against chemicals, heat and UV light. It has a high peel adhesion on high and medium surface energy substrates.

Applications and use

Transfer PET white TOP white is designed for conversion into identification, warning and tracking labels for durable goods such as automotive parts, electronic devices and home appliances.
This product is distinguished by the high chemical resistance of the thermal transfer print. For special requirements we strongly recommend application tests.

Conversion & printing

Very good results can be achieved with thermal transfer printers equipped with conventional or near-edge print heads using resin ribbons. This product is qualified by EFI Jetrion and Durst for UV inkjet printing. Transfer PET white TOP can also be printed by all conventional roll label techniques, including flexo, UV letterpress, silkscreen.
For easy diecutting sharp corners should be avoided.

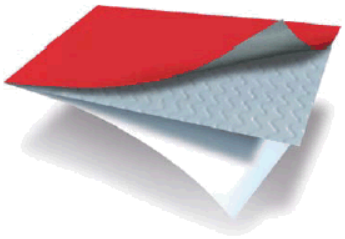
Special Approvals

The adhesive meets the requirements of the so-called "Toy Standard" EN 71-3.

This product meets the requirements as stated in UL 969 and CSA C22.2 No. 0.15 for indoor and outdoor use. The UL file number is MH27538.

Shelf life

Two years under storage conditions as defined by FINAT (20-25°C; 40-50%RH)



TRANSFER PET WHITE TOP
AL170
BG42WH

Appendix 1

Appendix 1:
Performance Data

Note: the following technical data should be considered representative or typical only and should not be used for specification purposes.

Peel Adhesion:
FTM1: 180°, 300 mm/min, dwell time: 48 hours

Surface	N/25mm
ABS	15,0
Automotive lacquered panels	15,5
Glass	16,5
HDPE	3,5
LDPE	0,8
PA6	15,5
Stainless Steel	19,0

Chemical Resistance:
The performance results are based on 4 hours immersions at room temperature unless otherwise noted. Samples were applied to the test panel and conditioned for 24 hours before immersion and evaluated immediately upon removal. Peel adhesion was measured according to FTM1.

Chemical	Test Substrate	N/25mm	Visual appearance	Edge Penetration (mm)
Ad Blue	Aluminium	18,0	No change	0
Biodiesel	Glass	20,0	No change	0
Bioethanol E85	Glass	17,0	No change	2
Brake Fluid	Glass	16,0	No change	0
Diesel	Glass	19,0	No change	0
Engine Oil	Glass	20,5	No change	0
Gasoline	Glass	14,0	No change	6
Heptane	Glass	16,0	No change	4
Water, distilled	Aluminium	19,0	No change	0

Chemicals: Ad Blue: Aral, Bioethanol E85: CropEnergies CropPower85, Brake Fluid: DOT 4 Synthetic (One Way)
Diesel: TOTAL, Engine Oil: TOTAL quartz 700, 10 W 40, Gasoline: TOTAL Euro 95

Thermal Transfer Printing:

Printability – Physical Resistance

Flat head printers (tests were performed with the printer Zebra XII 140):

Ribbon	Settings speed	energy	Print Quality	ANSI Grade	Scratch resistance	Tape resistance
Armor AXR7+	3	20	++	A	++	++
Armor AXR8	3	15	++	A	++	++
DNP R300	3	15	++	A	++	++
DNP R510	3	20	++	A	++	++
Iimak SP330	3	15	++	A	++	++
ITW B324	3	15	++	A	++	++
Ricoh B110CR	3	15	++	A	++	++

Near edge printers (tests were performed with the printer Avery TTX 450 – Near Edge):

Ribbon	Settings	Print Quality	ANSI Grade	Scratch resistance	Tape resistance
Armor AXR 600	4 ”/s	+	A	++	o
Armor AXR 800	4 ”/s	+	B	++	o
Ricoh B120 E	4 ”/s	++	A	+	+

ANSI (American National Standards Institute) Grade: information about barcode quality
A: excellent B: good C: acceptable D: readable with difficulty
++: excellent +: good o: acceptable -: poor

Chemical Resistance

The printed samples were wetted on the surface with a soft clean cotton cloth soaked in the test solution by wiping 10 times back and forth with light pressure. After 5 seconds they were dried with a clean dry soft cloth. After 15 minutes the evaluation took place.

	AXR7+	AXR 8	R300	R510	SP330	B324	B110CR	AXR 600	AXR 800	B120E
Ad Blue	+	+	+	+	+	+	+	+	+	+
Anti-Freeze	+	+	+	+	+	+	+	+	+	+
Biodiesel	+	o	+	+	+	+	+	-	o	-
Bioethanol E85	-	+	+	+	+	+	+	-	o	-
Brake fluid	-	+	+	+	o	+	+	-	o	-
Cleaner solvent	+	+	+	+	+	+	+	-	-	-
Engine oil	+	+	+	+	+	+	+	+	+	o
Gasoline	-	o	-	+	-	-	-	-	-	-
Hard wax polish	+	+	+	+	+	+	+	-	-	-
Isopropanol	+	+	+	+	+	+	+	-	o	-
Spirit	-	+	+	+	+	+	+	-	o	-

+: good (no change) o: acceptable (minor change, still readable) -: poor

Chemicals:
Ad Blue: Aral, Anti-Freeze: Speedfrost "Speedfroil" 1:1 in water, Bioethanol E85: CropEnergies CropPower85
Brake Fluid: DOT 4 Synthetic (One Way), Cleaner Solvent:: “Caramba” Cold Cleaner, Engine Oil: TOTAL quartz 700, 10 W 40
Gasoline: TOTAL Euro 95, Hard Wax Polish: „Nigrin“ Hard Wax Polish

Appendix 2:
Compliance Data

UL – Underwriters Laboratories

File Number: MH27538

This material is UL recognized for exposure indoors and outdoors to high humidity or occasional exposure to water.

Application Surface	Minimum Temperature (°C)	Maximum Temperature (°C)	I	O
Acrylic paint	-40	150	X	X
Alkyd paint	-40	150	X	X
Aluminum	-40	150	X	X
Galvanized steel	-40	150	X	X
Polyester paint	-40	150	X	X
Stainless steel	-40	150	X	X
Nylon - Polyamide	-40	100	X	-
Polyethylene terephthalate (PET)	-40	100	X	-
Polypropylene (PP)	-40	80	X	X
Polystyrene (PS)	-40	80	X	X
Polyvinyl fluoride (PVF)	-23	80	X	-
Acrylonitrile butadiene styrene (ABS)	-40	60	X	X

I: Indoor use O: outdoor use

The UL certification includes the printing with EFI Jetrion 4000 Series UV and the following thermal transfer ribbons: Astro-Med "RF", "RY", "RAF Blue", "R-5", Armor "AXR8", "AXR600", "AXR-7+", Coding Products "5940", "5640 Blue", "5440 Red", DNP "R-300", "R-510", "R-510 Green", "R-510 Blue", "R-510 Red", "TR4070", "TR6070", "TR6075", "Signature Series Resin", Dasco "DR-74", "DR-84", Datamax "SDR-A", "SDR-D", "SDR-5", "SDR-6", "SDR", "PGR", "SDR-7", "SDR-4", "SDR Millenium", Iimak "SH-36", "SP-330", "SP-410", "Primemark", "Primemark 255", Intermec "053258-2", "054048-4", "TMX 3200", "TMX 1500", ITW "B324", "R-90", "R-91", "M-95", Japan Pulp and Paper "Resin 1", "Resin 2 Blue", "Resin 2 Green", "Resin 2 Red", Japan Pulp and Paper GmbH "Sigma P", Kurz "K-300", "K-500", "K-501", Mid-City Columbia "CGL-80HE", "MCC-23HE", Monarch "9446", NCR "Promark 3", "Pacesetter", "Ultra V", "Matrix Resin", "Perma Max", "K3", Peak "Ultra Premium", "Ultra Extreme", Ricoh "B110C", "B110CR", "120EC", "B110CX", RSI ID Technologies "Pressiza H", "Pressiza R", "Pressiza S", "Pressiza K", "Pressiza X", Sato "Premier 1", Sony "4072", "4080", "4075", "4085", "5070", "4571", "TRX-75", Union Chemicar "US-300", United Barcode Industries "HR06", Zebra "5095", "5175", "5100", "5463", "Z-1400", "Z-3100", "Z-4100" and "5555".

Appendix 2:
Compliance Data

CSA – Canadian Standards Association

UL has tested this product according to the requirements described in CSA C22.2 No. 0.15.
This product is C-UL recognized for indoor use, where exposed to wet locations.
The details are listed in the UL file number MH27538.

Group	Application Surface	Max. Temperature (°C)
Metals	Bare, plated or enamelled steel; bare, anodized or enamelled aluminium	+150
Plastic Group III	Polycarbonate, acetates, acrylics	+80
Plastic Group V	Polyamide, polyimide	+80
Plastic Group VI	ABS, styrene, styrene acrylonitrile	+80

The C-UL certification includes the printing with EFI Jetrion 4000 Series UV and the following thermal transfer ribbons:

Armor "AXR600", "AXR7+", "AXR8", DNP "R300", "R510", "TR6075", ITW "B324", Ricoh "B110CR".

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