

Product Data
FASSON Overlam PET 23 UV / AL170 / PET23**AS674**

Issue date: 12.11.2013

Facestock

A UV blocking, crystal clear, gloss overlaminating polyester film with print treated surface for enhanced ink adhesion.

Basis weight: 32 g/m² ISO 536
Caliper: 0,023 mm ISO 534

Adhesive

AL170 is a strong, permanent, solvent-based acrylate adhesive which is distinguished by very high resistance against chemicals und UV rays. AL170 is ideal for outdoor applications.

Type: solvent based acrylate
Coat weight: 20 g/sqm
Initial Tack: 330 N/m FTM 9 glass
Peel Adhesion: 480 N/m FTM 2 steel 24 hrs.
Min. application temperature: +0 °C
Min. service temperature: -80 °C
Max. service temperature: +150 °C

Liner

PET23 is clear durable polyester liner that ensures optimum clarity of the label. Without back imprint.

Basis weight: 33 g/m² ISO 536
Caliper: 0,023 mm ISO 534

Total construction caliper

0,066 mm

Typical Values

Typical values, not for specification use:
see Appendix.

Applications and use

This product is designed for overlaminating printed polyester and vinyl labels to protect the print against the influence of UV, abrasion or chemical exposure. It can also improve the durability of other filmic and paper label materials.

This glass clear product is ideal to change the label appearance to a high gloss finish or to make a label material or printed areas thermal transfer printable. Thanks to the high chemical and moisture stability of the adhesive and film this material can be used in very demanding industrial applications.

Printing and conversion

Variable information can be applied onto Overlam PET 23 UV by using thermal transfer. For best scratch resistance resin ribbons are recommended. Overlamination can be an aid to matrix stripping and automatic label dispensing of the base label material. However, due to the low calliper of this film, we do not recommend automatic dispensing by itself.

RoHS / Regulation 2002/95/EU

The substances listed in article 4 lid 1 of 2002/95/EU (RoHS) are not intentionally used in this product. The concentration limits of these substances will not exceed the set maximum concentration limits as provided in the proposed amendment for 2002/95/EU.

Shelf life

Two years when stored at 22 °C and 50 %rh.

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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	11,5
Aluminium	18,0
Automotive lacquered panels	11,0
Glass	15,0
HDPE	3,0
LDPE	2,0
PA6	11,5
Stainless Steel	13,0

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)
Brake Fluid ¹	Glass	14,0	No change	0
Diesel ²	Glass	12,7	No change	0
Engine Oil ³	Glass	13,9	No change	0
Gasoline ⁴	Glass	10,2	No change	4
Heptane	Glass	11,5	No change	3

¹ DOT 4 Synthetic (One Way)² TOTAL³ TOTAL quartz 700, 10 W 40⁴ TOTAL Euro 95

Thermal Transfer Printing:

Printability – Physical Resistance

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

Ribbon	Settings		Print Quality	ANSI Grade	Scratch resistance	Tape resistance
	speed	energy				
Armor AXR7+	3	30	++	A ¹	++	++
Armor AXR8	3	30	++	A ¹	++	++
DNP R300	3	30	+	A ¹	++	++
DNP R510	3	30	o	A ¹	++	o
limak SP330	3	30	++	A ¹	++	+
ITW B324	3	30	++	A ¹	++	++
Ricoh B110CR	3	30	++	A ¹	++	++

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 800	4 "/s	-	A ¹	++	o
Ricoh B120 E	8 "/s	++	A ¹	+	-

ANSI (American National Standards Institute) Grade: information about barcode quality

A: excellent B: good C: acceptable D: readable with difficulty F: fails

++: excellent +: good o: acceptable -: poor

¹ Based on a white substrate. Readability may vary when applied onto different coloured substrates.

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+	AXR8	R300	R510	SP330	B324	B110 CR	AXR 600	AXR 800	B120 E
Ad Blue ¹	+	+	+	+	+	+	+	+	+	+
Anti-Freeze ²	+	+	+	+	+	+	+	+	+	+
Biodiesel	+	+	+	+	o	+	+	-	-	-
Bioethanol E85 ³	-	+	+	+	o	-	+	-	-	-
Brake fluid ⁴	-	+	o	+	o	-	+	-	-	-
Cleaner solvent ⁵	o	+	+	+	-	o	+	-	-	-
Engine oil ⁶	+	+	+	+	+	+	+	-	-	-
Gasoline ⁷	-	-	-	o	-	-	-	-	-	-
Hard wax polish ⁸	-	+	o	+	o	-	+	-	-	-
Isopropanol	o	+	+	+	o	-	+	-	-	-
Spirit	-	+	+	+	o	-	+	-	-	-

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

¹ Aral

² Speedfrost "Speedfroil" 1:1 in water

³ CropEnergies CropPower85

⁴ "ATE" SL DOT 4

⁵ "Caramba" Cold Cleaner

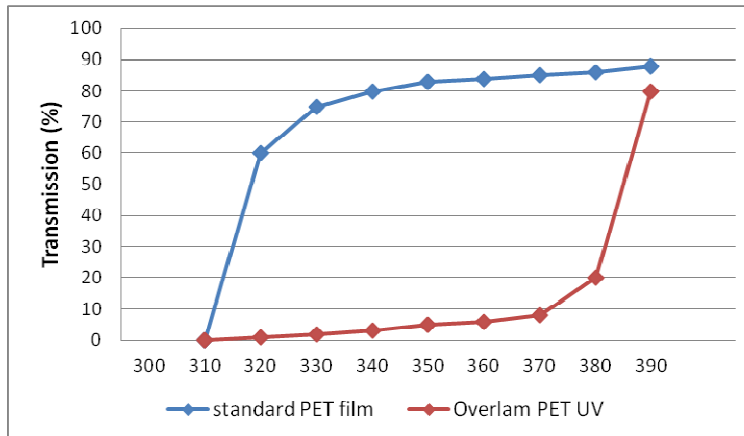
⁶ BP 15 W-40

⁷ Super unleaded

⁸ „Nigrin“ Hard Wax Polish

UV blocking properties

Overlam PET 23 UV contains particles that absorb UV light and converts the harmful rays into thermal energy. The following graphs shows the percentage of the UV transmitted by this film compared to a standard PET film.



Test results:

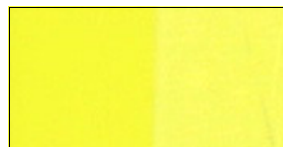
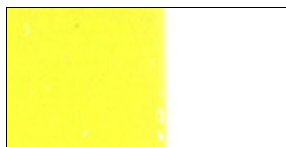
Transfer PET White TOP was printed with HP Indigo inks. The printed labels were exposed to UV light, without any protection and overlaminated with Overlam PET 23 UV / AL170.

QUV (1000 hours):

Exposure conditions:
 QUV Accelerated Weathering: based on EN-ISO 4892-3
 Light source: UVA-340
 Irradiance: 0,76 W/m² at 340 nm
 Cycle: 8 hours light at 55°C, 4 hours condensation at 50°C
 Duration: 1000 hours

Yellow:

	without over laminate			Overlam PET 23 UV / AL170		
	before	after	Δ	before	after	Δ
L	83,95	92,51	8,56	82,9	83,83	0,94
a	-7,45	-1,85	-1,85	-7,39	-8,25	-0,86
b	81,29	3,14	-78,15	81,95	63,81	-18,14
Δ E			78,82			18,18

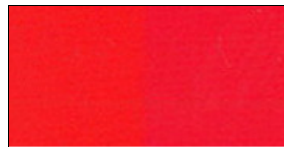


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Red:

	without overlaminate			Overlam PET 23 UV / AL170		
	before	after	Δ	before	after	Δ
L	45,56	84,77	39,21	44,92	45,38	0,46
a	59,13	7,29	-51,84	58,43	57,77	-0,65
b	42,85	3,32	-39,53	42,87	29,68	-13,19
ΔE			76,08			13,22



Suntest (1000 hours):

Exposure conditions:

Suntest: based on EN-ISO 105-B02

Light source: xenon burner with coated quartz glass for simulation of solar global outdoors (daylight)

Settings: BST: 50 °C, 500 W/m²

Duration: 1000 hours, 1800 MJ/m²

This test was carried out in comparison with standardized Blue Wool Scale stripes.

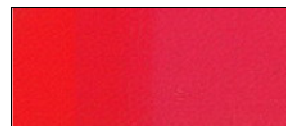
Yellow:

	Overlam PET 23 UV / AL170		
	before	after	Δ
L	83,26	85,18	1,92
a	-7,89	-7,2	0,69
b	79,76	39,92	-39,84
ΔE			39,9



Red:

	Overlam PET 23 UV / AL170		
	before	after	Δ
L	45,32	47,01	1,69
a	58,89	54,99	-3,9
b	42,59	17,56	-25,03
ΔE			25,39

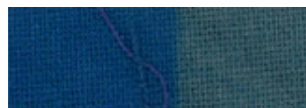


Reference:

Blue Wool Scale stripes after the 1000 hours UV light exposure:



WS reference 4



WS reference 6



WS reference 7

Warranty

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