AS675

Fasson®
Overlam PET 23 UV – S8020 – PET23

A UV filtering, crystal clear overlaminating polyester film combined with an emulsion acrylic adhesive featuring high UV and heat resistance.

Key Features

> UV filtering overlaminating film prolonging the life time of printed labels exposed to UV light
> High clarity of film and adhesive
> Good printability
> Adhesive with high UV and heat resistance
> UL and C-UL recognised for indoor and outdoor use

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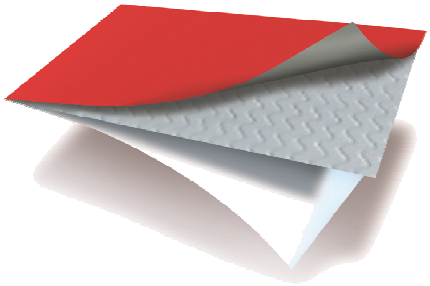


Overlam PET 23 UV

S8020

PET23

Facestock

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

Calliper:	23 µm	ISO 534
Basis weight:	32 g/m²	ISO 536

Adhesive

S8020 is a permanent acrylic adhesive

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:	23 µm	ISO 534

Laminate

Total caliper: 66 µm

Performance data

Type:	Emulsion Acrylate	
Coat weight:	20 g/sqm	
Initial Tack:	300 N/m	FTM 9 glass
Peel Adhesion:	380 N/m	FTM 2 stainless steel 24 hrs.
Min. application temperature:		+5 °C
Min. service temperature:		-40 °C
Max. short term temperature:		+150 °C

Adhesive Performance

The clear adhesive S8020 features excellent wetout characteristics. It sticks well to a range of surfaces including metals and high and medium surface energy plastics. Ideal for indoor applications, it also offers good UV resistance and weather ability when needed.

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.

Application tests are recommended.

UL and CSA recognition

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 MH8212. For specific information on approved conditions, see appendix 2.

Conversion and printing

Overlam PET 23 UV can be printed with conventional printing techniques. Variable information can be applied 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.

Shelf life

Two years under storage conditions as defined by FINAT.

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	12,0
Aluminium	12,5
Automotive lacquered panels	11,0
Glass	11,0
HDPE	4,0
LDPE	6,0
PA6	9,5
Stainless Steel	14,0

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	Glass	13,0	No change	0
Diesel	Glass	12,5	No change	0
Engine Oil	Glass	13,5	No change	0
Gasoline	Glass	4,0	No change	5
Heptane	Glass	9,0	No change	3

Chemicals:
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	30	++	A[1]	++	++
Armor AXR8	3	30	++	A[1]	++	++
DNP R300	3	30	+	A[1]	++	++
DNP R510	3	30	o	A[1]	++	o
Iimak 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 600	5 ”/s	+	A[1]	++	o
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

++: 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	B120E
Ad Blue	+	+	+	+	+	+	+	+	+	+
Anti-Freeze	+	+	+	+	+	+	+	+	+	+
Biodiesel	+	+	+	+	o	+	+	-	-	-
Bioethanol E85	-	+	+	+	o	-	+	-	-	-
Brake fluid	-	+	o	+	o	-	+	-	-	-
Cleaner solvent	o	+	+	+	-	o	+	-	-	-
Engine oil	+	+	+	+	+	+	+	-	-	-
Gasoline	-	-	-	o	-	-	-	-	-	-
Hard Wax Polish	-	+	o	+	o	-	+	-	-	-
Isopropanol	o	+	+	+	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: MH15453

This material is UL approved as pressure-sensitive overlamination for producing finished printed labels.

The conditions of acceptance are:

Affixed to polyester label stock, maximum temperature 150°C, minimum temperature -40°C. Suitable for indoor use where exposed to high humidity or occasional exposure to water and outdoor use.

CSA – Canadian Standards Association

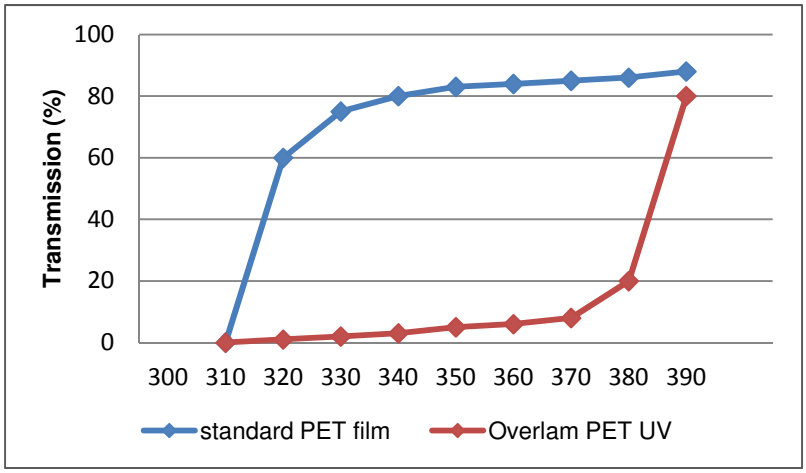
UL has tested this product according to the requirements described in CSA C22.2 No. 0.15.
Details are listed in the UL file number MH15453.

The conditions of acceptance are:

Affixed to polyester label stock, maximum temperature 150°C.
This product is C-UL recognized for indoor use where exposed to wet locations and outdoor use.

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 overlaminate				**Overlam PET 23 UV / S8020**		
	before	after	Δ		before	after	Δ
L	83,95	92,51	8,56		82,79	83,93	1,1
a	-7,45	-1,85	-1,85		-7,06	-7,72	-0,77
b	81,29	3,14	-78,15		82,43	62,51	-19,88
Δ E			**78,82**				**19,92**

Red:

	without overlaminate				Overlam PET 23 UV / S8020		
	before	after	Δ		before	after	Δ
L	45,56	84,77	39,21		44,94	45,82	0,4
a	59,13	7,29	-51,84		58,19	57,59	-0,03
b	42,85	3,32	-39,53		42,23	26,73	-14,73
Δ E			**76,08**				**17,74**

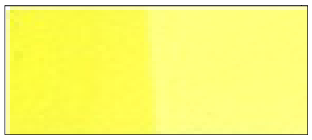
Suntest (1000 hours):

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.

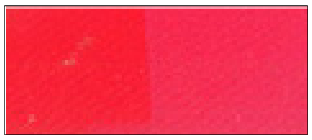
Yellow:

	Overlam PET 23 UV / S8020		
	before	after	Δ
L	83,26	85,5	2,24
a	-7,78	-7,27	0,52
b	81,75	50,3	-31,45
Δ E			**31,54**



Red:

	Overlam PET 23 UV / S8020		
	before	after	Δ
L	45,95	47,6	1,65
a	57,85	56,27	-1,58
b	33,62	17,45	-16,17
Δ E			**16,33**



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

WS reference 4

WS reference 6

WS reference 7

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Warrenty

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