Quick-Laser – Type 4 Transparent
Laser Imprintable Marking Systems

Issued: December 2000
Updated: April 2006

Physical Properties
Not for specification purposes
(Calipers are nominal values)

Facestock	56 Micron Matte Clear polyester
Adhesive	20 micron #250 E Acrylic
Liner	128 micron, 120 g/m² White Polycoated Kraft
Shelf Life	24 months from date of manufacture of product when properly stored between 22°C and 50% relative humidity.

Features:

- Facestock is top-coated with a matte receptive coating, designed to accept images via laser toner. The topcoat also provides improved ink anchorage for traditional forms of press printing.
- Permanent UV stable acrylic adhesive, formulated with high tack and high ultimate adhesion and it particularly suitable for non polar substrates.
- 120g/m^2 Polycoated Kraft liner for excellent lay flat properties.
- UL and cUL approved (File Number MH18072)

Application Ideas:

- Barcode labels and rating plates.
- Die cut labels on A4 sheet.
- Warning, instruction, and service labels for durable goods.
- Nameplates for durable goods.

Performance Characteristics
Not for specification purposes

Adhesion	**90°Peel Adhesion, Test procedure FTM 2**			
	Initial (20 Minute Dwell/RT)		**Ultimate Adhesion 72 Hours Dwell at Maximum UL Temperature rating**	
Surface	**90° Peel**	**90° Peel**	**N/10mm**	**Oz/In**
	N/10mm	**Oz/In**	**5.1**	**47**
Aluminium	**3.6**	**32**	**6.4**	**58**
Stainless Steel	**5.0**	**46**	**5.6**	**51**
Phenolic	**4.1**	**37**	**5.9**	**53**
ABS	**4.5**	**41**	**2.9**	**26**
Polycarbonate	**4.4**	**40**	**3.4**	**31**
Polystyrene	**5.0**	**46**	**2.1**	**19**
Polypropylene	**1.0**	**9**	**4.6**	**42**
HD Polyethylene	**3.2**	**29**	**2.3**	**21**
LD Polyethylene	**2.5**	**23**	**5.6**	**51**
Powder Coating	**4.9**	**45**		

Quick-Laser – Type 4 Transparent

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Surface	Conditioned for 3 Days at - 40ºC	
	90º Peel	
	N/10mm	Oz/In
Aluminium	5.6	51
Stainless Steel	6.5	59
Phenolic	5.5	49
ABS	6.4	58
Polycarbonate	5.0	46
Polystyrene	5.5	49
Polypropylene	2.1	19
HD Polyethylene	4.8	43
LD Polyethylene	3.2	29
Powder Coating	6.4	58

Performance Characteristics
Not for specification purposes

Adhesion	180°Peel Adhesion, Test procedure FTM 1			
	Initial (20 Minute Dwell/RT)		Ultimate Adhesion 72 Hours Dwell at Maximum UL Temperature rating	
Surface	N/10mm	Oz/In	N/10mm	Oz/In
Aluminium	43	39	6.9	63
Stainless Steel	5.0	45	8.1	74
Phenolic	5.4	49	7.5	68
ABS	5.8	53	6.9	63
Polycarbonate	6.5	59	6.0	55
Polystyrene	5.9	54	5.2	47
Polypropylene	0.8	7.3	3.1	28
HD Polyethylene	2.2	20	2.0	18
LD Polyethylene	2.1	19	1.5	13

Surface	Conditioned for 3 Days at - 40ºC	
	180º Peel (FTM1)	
	N/10mm	Oz/In
Aluminium	6.2	56
Stainless Steel	8.6	78
Phenolic	8.4	76
ABS	7.5	68
Polycarbonate	8.3	76
Polystyrene	8.6	78
Polypropylene	0.9	8.2
HD Polyethylene	2.8	25
LD Polyethylene	3.4	31

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Liner Release	FTM 3 180º Removal of Liner from Facestock		
	Rate of Removal	N/10mm	Gms/50mm Width
	2.3 m / min	0.025	13

Quick-Laser – Type 4 Transparent

Environmental Performance	The properties defined are based on four hour immersions at room temperature 22ºC unless otherwise noted. Samples were applied to stainless steel panels 24 hours prior to immersion and were evaluated one hour after removal from the solution for peel adhesion. Adhesion measured at 90º peel angle (FTM 2 at 305 mm/min.)

Chemical Resistance	**Adhesion to Stainless Steel**			**Appearance**	**Edge Penetration**
Chemical	**N/10mm**	**Oz/In**	**% Change**	**Visual**	**Millimetres**
Isopropyl Alcohol	5.0	45	90	No change	1
Detergent (1% Alconox®*)	6.8	62	121	No change	1
Engine Oil (10W30) @ 250ºF (121ºC)	5.7	44	86	No change	1
Water for 48 hours	5.3	48	106	No change	0
pH 4	5.8	53	107	No change	0
PH10	6.8	53	107	No change	0
Toluene	3.0	27	53	Slight Damage	7.0
Acetone	3.0	27	54	Topcoat Damaged	5.0
Brake Fluid	5.3	48	95	Slight Damage	1
Gasoline	2.6	24	47	No change	6.0
Diesel Fuel	4.9	45	87	No change	1
Naphtha	2.6	24	46	No change	4.0
Hydraulic Fluid	5.1	46	92	No change	1

Temperature Resistance	149°C for 24 hours:	no significant visual change 0.7% MD shrinkage 0.9% CD shrinkage
	-40°C for 3 days:	no significant visual change
Humidity Resistance	24 hours at 38°C and 100% relative humidity	no significant changes in appearance or adhesion

Processing

General:
Use label material in environment of 21°C and 50% relative humidity. 1/16" periphery removal of the label matrix is recommended to minimise adhesive ooze. If foam is used to pack the die when rotary sheeting, the foam should be kept at least ¾" away from knife edges. Poly-bag sheets after converting the label material. Keep the laser label material in polyethylene (LDPE) bags until printing. No more than 250 sheets per box.
Fan all edges of sheets prior to laser printing. Use the straightest printing path when printing laser label materials. The extreme heat and pressure used in the toner fusing section of some laser printers may cause curl in the printed label material. When converting to A4 sheets it is recommended that the longest edge of the sheet is parallel to the machine direction.

Printing:
Facestock is top-coated for improved ink receptivity and is designed for laser toner printing. It is printable by all standard roll processing methods including flexography, hot stamp, letterpress, and screen printing.

Die Cutting:
Rotary die cutting is recommended. Fan-folding of labels is not recommended. Small labels should be evaluated carefully. Winding tensions should be kept at a minimum to help prevent the adhesive from oozing.

Packaging:
Finished labels should be stored in plastic bags.

Special Considerations

For maximum bond strength, the surface should be clean and dry. Typical cleaning solvents are heptane and isopropyl alcohol.

NOTE: When using solvents, read and follow the manufacturer's precautions and directions for use.

For best bonding conditions, application surface should be at room temperature or higher. Low temperature surfaces, below 5°C can cause the adhesive to become so firm that it will not develop maximum contact with the substrate. Higher initial bonds can be achieved through increased rubdown pressure.

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