

Quick-Laser – Type 1 Silver

Laser Imprintable Marking Systems

Issued: February 1999
Updated: May 2000

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

Facestock	84 Micron (3.3 thou) Matte Silver polyester
Adhesive	20 micron (0.8 thou) #300 Acrylic
Liner	81 micron (3.2 thou) 90 g/m ² (55#) Densified Kraft
Shelf Life	24 months from date of manufacture of product when properly stored between 22°C and 50% relative humidity.

Features:

- 3M™ Label Material 7883 is UL recognised (Files MH113110) and MH 15311) and CSA accepted (File 993316). See the UL and CSA listings for details.

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	180° peel test procedure is ASTM D3330 90° Peel Test procedure is ASTM D 3330 modified for the angle change			
	Initial (10 minute Dwell / RT)			
Surface	180° Peel		90° Peel	
	N/10mm	Oz/In	N/10mm	Oz/In
Stainless Steel	6.1	56	4.6	42
Polycarbonate	6.7	59	4.8	44
Polypropylene	5.8	53	4.2	38
Glass	6.6	60	4.6	42
HD Polyethylene	3.8	35	3.1	28
LD Polyethylene	3.5	32	2.7	25

Quick-Laser – Type 1 Silver

Performance Characteristics
Not for specification purposes

Surface	Conditioned for 3 Days at Room Temperature 22°C			
	180° Peel		90° Peel	
	N/10mm	Oz/In	N/10mm	Oz/In
Stainless Steel	7.3	67	5.0	46
Polycarbonate	6.7	61	5.0	46
Polypropylene	6.1	56	4.2	38
Glass	7.8	71	5.2	48
HD Polyethylene	4.4	40	3.1	28
LD Polyethylene	4.6	42	3.7	34

Surface	Conditioned for 3 Days at 49°C			
	180° Peel		90° Peel	
	N/10mm	Oz/In	N/10mm	Oz/In
Stainless Steel	7.7	70	5.5	50
Polycarbonate	3.3	30	1.9	17
Polypropylene	5.9	54	4.6	42
Glass	7.7	70	5.5	50
HD Polyethylene	4.4	40	3.2	29
LD Polyethylene	1.0	9	1.1	10

Surface	Conditioned for 24 hours at 32°C At 90° Relative Humidity			
	180° Peel		90° Peel	
	N/10mm	Oz/In	N/10mm	Oz/In
Stainless Steel	7.4	68	5.8	53
Polycarbonate	6.0	55	3.9	36
Polypropylene	7.2	66	4.8	44
Glass	7.3	67	4.8	44
HD Polyethylene	4.9	45	3.5	32
LD Polyethylene	3.9	36	3.3	30

Liner Release	180° Removal of Liner from Facestock		
	Rate of Removal	N/10mm	Gms/50mm Width
	2.3 m / min	0.054	14
	7.6 m / min	0.069	18

Quick-Laser – Type 1 Silver

Performance Characteristics

Not for specification purposes

Environmental Performance	The properties defined are based on four hour immersions at room temperature 22°C 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 180° peel angle (ASTM D3330) at 305 mm/min.			
Chemical Resistance	Adhesion to Stainless Steel		Appearance	Edge Penetration
Chemical	N/10mm	Oz/In	Visual	Millimetres
Isopropyl Alcohol	6.6	60	No change	0.8
Detergent (1% Alconox®*)	7.0	64	No change	0
Engine Oil (10W30) @ 250°F (121°C)	7.0	64	No change	1
Water for 48 hours	7.2	66	No change	0
pH 4	7.1	65	No change	0
PH10	7.0	64	No change	0
409 ®* Cleaning solution	7.0	64	No change	0
Toluene	3.6	33	Topcoat Damaged	6.5
Acetone	5.1	47	Topcoat Damaged or gone	4.3
Brake Fluid	8.1	74	Slight Damage	0
Gasoline	3.9	36	No change	5.8
Diesel Fuel	6.8	62	No change	1
Mineral Spirits	5.9	54	No change	2.4
Hydraulic Fluid	7.2	66	No change	0

Temperature Resistance	149°C for 24 hours:	no significant visual change 0.75% 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

Accelerated Ageing ASTM D3611 : 96 hours at 65°C & 80% relative humidity			
	Rate of Removal	N / 10mm	Oz / In Width
180° Peel Adhesion from Stainless Steel	305mm / min	5.9	54
180° Liner Peel from Facestock	2.3 , / min	0.062	16

Agency Listing Information	<p>Dot Matrix Printing UL recognised and CSA accepted components for indoor and outdoor use. The following ribbons are UL recognised when used with the material. CGL-79™ from Mid-City Colu7mbia, 800-462-2336 pr 800-996-4656 Ranger 288 fro Herbert Dehinton & Co. 847-9098-8150</p> <p>3M does not recommend the Ranger 288 ribbon for bar code printing.</p> <p>Laser Toner Printing: UL recognised with the following printers and toners. Hitachi HMT 446 toner kit for producing finished printed labels with UL listed Synergystex CF-1000 laser printer</p>
-----------------------------------	---

Processing

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 or flatbed may be used. 125g /m² liner is recommended for jobs over eight inches in width or when liner dimensional stability is of concern. 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 10°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.

* Trademarks listed are the property of their respective owners

Values presented have been determined by standard test methods and are average values not to be used for specification purposes. Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications. This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our



Mega Electronics Limited.,

Mega House, Grip Industrial Estate,
Linton, Cambridge, England. CB21 4XN

Tel: +44 (0) 1223 893900 Fax: +44 (0) 1223 893894
email: sales@megauk.com web: www.megauk.com