Label Material 7908

Sheet Polyester Label Material

Product Data Sheet

Updated : May 2000
Supersedes : February 1999

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

Facestock	51 micron (2.0 thou) Gloss Radiant White Polyester
Adhesive	46 micron (1.8 thou) #350 Acrylic
Liner	170 micron (6.7 thou), 147 g/m² (90#) 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 topcoated for improved ink anchorage. Variable information can be added by the end-user as the material is thermal transfer printable.
- #350 adhesive is 3M's most universal adhesive for label materials. It can permanently bond to high surface energy (HSE) and low surface energy (LSE) plastics, textured and contoured surfaces, powder coatings, and slightly oily metals. It has excellent chemical resistance and holding strength even at high temperatures. Thick adhesive caliper provides for stronger bond on textured surfaces.
- 147 g/m^2 lay-flat polycoated kraft liner provides easy sheet processing.
- 3M™ Label Material 7908 is UL recognised (File MH16411) and CSA accepted (File 99316). See the UL and CSA listings for details.
- UL listing includes approval for use on powder coated surfaces.

Application Ideas:

- Barcode labels and rating plates.
- Property identification and asset labelling.
- Warning, instruction, and service labels for durable goods.
- Nameplates for durable goods.

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Performance Characteristics
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Adhesion	180° peel test procedure is ASTM D 3330 90° peel test procedure is ASTM D 3330 modified for the angle change			
Surface	**Initial (10 Minute Dwell/RT)**			
	180º Peel		**90º Peel**	
	N/10mm	**Oz/In**	**N/10mm**	**Oz/In**
Stainless Steel	9.6	88	6.9	63
Polycarbonate	9.8	90	7.1	65
Polypropylene	8.0	73	3.2	29
Glass	10.2	93	7.6	69
HD Polyethylene	5.9	54	3.0	27
LD Polyethylene	5.8	53	3.2	30
Smooth Powder Coating	9.3	85		
Finely Textured Powder Coating	5.4	49		

Surface	**Conditioned for 3 Days at Room Temperature 22ºC**			
	180º Peel		**90º Peel**	
	N/10mm	**Oz/In**	**N/10mm**	**Oz/In**
Stainless Steel	10.5	96	8.2	75
Polycarbonate	10.3	94	7.6	69
Polypropylene	9.1	83	3.4	31
Glass	10.8	99	8.4	77
HD Polyethylene	6.3	58	3.5	32
LD Polyethylene	6.1	56	4.0	37
Smooth Powder Coating	9.7	89		
Finely Textured Powder Coating	5.7	52		

Surface	**Conditioned for 3 Days at 49ºC**			
	180º Peel		**90º Peel**	
	N/10mm	**Oz/In**	**N/10mm**	**Oz/In**
Stainless Steel	11.8	108	10.5	96
Polycarbonate	7.2	66	3.7	34
Polypropylene	8.9	81	1.6	33
Glass	11.6	106	9.4	86
HD Polyethylene	6.1	56	3.5	32
LD Polyethylene	1.6	15	1.5	14
Smooth Powder Coating	10.2	93		
Finely Textured Powder Coating	6.1	56		

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Surface	Conditioned for 24 hours at 32ºC At 90% Relative Humidity			
	180º Peel		90º Peel	
	N/10mm	Oz/In	N/10mm	Oz/In
Stainless Steel	10.8	99	8.9	81
Polycarbonate	8.4	77	6.4	59
Polypropylene	8.5	78	5.1	47
Glass	9.7	89	7.9	72
HD Polyethylene	5.5	50	4.2	38
LD Polyethylene	4.7	43	4.4	40
Smooth Powder Coating	9.6	88		
Finely Textured Powder Coating	5.5	50		

Performance Characteristics Contd…
Not for specification purposes

Liner Release	180º Removal of Liner from Facestock		
	Rate of Removal	N/10mm	Gms/25mm Width
	2.3 m / min	0.077	20

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 180º 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	9.6	88	No change	0.6
Detergent (1% Alconox®*)	10.1	92	No change	1.3
Engine Oil (10W30) @ 250ºF (121ºC)	11.2	102	No change	0.6
Water for 48 hours	7.3	67	No change	0.1
pH 4	9.6	88	No change	0.7
PH10	9.1	83	No change	1.4
409[8]* Cleaning solution	10.1	92	No change	1.3
Toluene	5.5	50	No change	5.2
Acetone	6.5	59	No change	4.9
Brake Fluid	10.7	98	No change	0.1
Gasoline	6.1	56	No change	4.6
Diesel Fuel	10.2	93	No change	0.7
Mineral Spirits	8.8	80	No change	2.2
Hydraulic Fluid	10.5	96	No change	0

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Temperature Resistance	149°C for 24 hours:	no significant visual change 0.4% MD shrinkage 0.6% 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 65ºC & 80% relative humidity

	Rate of Removal	N/10mm	Oz / In Width
180º Peel Adhesion from Stainless Steel	305 mm / min	9.5	87

Processing

Printing:
Material has a topcoating which is receptive to many inks including UV and conventional ink systems. The converter should verify that their ink systems are compatible with the topcoating on the polyester film by testing beforehand. The topcoating is also receptive to other forms of printing including hot stamping and thermal transfer printing. The converter should verify that the method of printing is compatible with the topcoating by testing beforehand.

Die Cutting:
Die cut with steel rule or flatbed dies. The 127 g/m^2 lay-flat also allows kiss cutting and back splitting. The converter can cut through the polyester facestock without cutting through the liner. Sheetable label materials are not recommended for rotary die cutting and stripping operations.

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.

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