Thermal Transfer Printable Retro-Reflective Label Material

3929

Technical Data **August, 2006**

Product Description

3M™ Label Material 3929 thermal transfer printable retro-reflective film with 3M™ Adhesive 200 on a clay-coated paper liner is designed for long range bar code scanning. When bar code printed, the retro-reflective facestock extends the maximum and minimum scanning distance of long range scanners.

NOTE: 3M is unable to specify a maximum scanning distance with this material because of the differences between long range scanners.

Features

- Designed for use with long range scanners available from Symbol Technologies, PSC and Hand Held Products. The maximum and minimum scanning distance of these scanners will increase with the use of this material. The range at which a bar code can be scanned is dependent on the bar code width; i.e.,a 75 mil bar code will scan at a longer distance than a 50 mil bar code. Scanners not designed for long range scanning may not be able to scan bar codes printed on this product – specific bar code verifiers and scanning device recommendations can be obtained from the wide choice of suppliers selling in the marketplace.
- Fan folding is not recommended, roll-to-roll is the preferred continuous printing process.

Construction

Facestock	Adhesive	Liner
4.8 mil (123 microns) topcoated retro-reflective film	1.0 mil (26 microns) 200 high performance acrylic	4.5 mil (114 microns) 78# clay-coated paper

Typical Physical Properties and Performance Characteristics

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Conformability	Conforms to large diameter simple curved surfaces.
Printing	Printable with resin-based thermal transfer ribbons such as Sony 4070, Iimak SP-330, Zebra 5095, Sato Premier I and Ricoh B110C.
Temperature Range	-40°F (-40°C) to 300°F (177°C)
Minimum Application Temperature	50°F (10°C)
Die-Cutting	Rotary
Splices	May contain an unusually high number of splices.

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Adhesion

Note: Peel test procedure is ASTM D-3330

	Initial (10 Minute Dwell/RT)		Conditioned for 3 Days at Room Temperature 72°F (22°C)	
	180° Peel		180° Peel	
Surface	**oz/in**	**N/100 mm**	**oz/in**	**N/100 mm**
Stainless Steel	Destructs Upon Removal			
Polycarbonate	Destructs Upon Removal			
Polypropylene	Not recommended for low surface energy substrates			

Liner Release

Note: 180° peel of liner from facestock

90"/minute grams/1" width	300"/minute grams/1" width
20	50

Environmental Performance

Indoor use only as outdoor use has not been evaluated. The rate at which the scanning distance decreases due to facestock discoloration when used outdoors is not known.

Application Ideas

- Warehouse bin labeling and shelf marking
- Long-range scanning of bar codes in indoor environments

Application Techniques

For maximum bond strength, surface should be clean and dry. A typical cleaning solvent is heptane or isopropyl alcohol.***** For best conditions, application surface should be at room temperature or higher. Low temperature surfaces (below 50°F [38°C]) can cause the adhesive to become so firm that it will not develop maximum contact with the substrate. Higher initial bonds are achieved through increased rub down pressure.

*****Consult the manufacturer's MSDS for proper handling and storage of solvents.

Shelf Life

Two years from date of manufacture of product when properly stored at 72°F (22°C) and 50% relative humidity.

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Product Use

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ISO 9001:2000

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001:2000 standards.

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