



# Screen Printable Vinyl Performance Label Products

7045W • 7052W

Technical Data

January, 2008

**Product Description** 3M™ Screen Printable Vinyl Performance Label Products are durable, high performance materials that offer good durability and moisture resistance. These vinyl label stocks utilize 3M™ Adhesive P1400 which is a high performance tackified acrylic designed for use in demanding environments, including outdoor applications.

| Construction | Product Number  | Facestock                         | Adhesive                   | Liner  |
|--------------|---|-----------------------------------|----------------------------|--|
|              | <b>3M™ Screen Printable Vinyl Performance Label Product 7045W</b> | .0032 in. Soft White Vinyl<br>NTC | P1400<br>Perm.<br>0.9 mils | 90# Polycyd.<br>7.0 mil bleached kraft sheet<br>polyethylene coated on two sides |
|              | <b>3M™ Screen Printable Vinyl Performance Label Product 7052W</b> | .004 in. Soft Clear Vinyl<br>NTC  | P1400<br>Perm.<br>0.9 mils | 90# Polycyd.<br>7.0 mil bleached kraft sheet<br>polyethylene coated on two sides |

(Calipers are nominal values)

**Durability Statement** Based on accelerated age studies, these materials are expected to have up to two years outdoor durability.

- Features**
- Adhesive dry ingredients are listed by FDA as indirect food contact additives when used in food packaging with minimum opportunity for exposure. See 21 CFR 175.105.
  - UL recognized (File MH11410). See the UL listings for details.
  - Adhesive offers good UV resistance and excellent adhesion to a wide variety of substrates, including polyolefins.
  - Liner provides easy sheet processing and is designed for the ultimate in layflat. The backside of this liner is not printable.

- Application Ideas**
- Nameplates and product ID labels.
  - Rating plates.
  - Property identification and asset labeling.
  - Warning, instruction, and service labels for durable goods, equipment/machinery and lawn and garden.

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## Typical Physical Properties

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

Adhesion properties determined per TLMI Method using 1.0 mil polyester with 1.0 mil of adhesive on a polished stainless steel panel.

|                                |   |  |
|--------------------------------|---|--|
| <b>Peel Adhesion to</b>        |   |  |
| <b>Stainless Steel</b>         | 4.0 lbs./in. (700 N/m)  | TLMI Method, 180° Peel, 12"/min., 1" wide sample |
| <b>HDPE</b>                    | 1.5 lbs./in. (262 N/m)  | TLMI Method, 180° Peel, 12"/min., 1" wide sample |
| <b>Polypropylene</b>           | 3.0 lbs./in. (528 N/m)  | TLMI Method, 180° Peel, 12"/min., 1" wide sample |
| <b>Polycarbonate</b>           | 3.5 lbs./in. (612 N/m)  | TLMI Method, 180° Peel, 12"/min., 1" wide sample |
| <b>Loop Tack</b>               | 1.75 lbs./in. (316N/m)  | TLMI Method, 12"/min., 1" wide sample            |
| <b>Shear</b>                   | 4 hours   | TLMI Method, 0.25 in. <sup>2</sup> x 500g        |
| <b>Adhesive Coat Weight</b>    | 1.67 to 1.89 g/100 in. <sup>2</sup>   | TM-2279  |
| <b>Release Range</b>           | 15 to 200 g/2 in.   | TLMI Method, 180° removal, 300 in./min.          |
| <b>Service Temperature</b>     | -20°F to 140°F (-29°C to 60°C)  |  |
| <b>Application Temperature</b> | 40°F to 120°F (5°C to 49°C)   |  |
| <b>Convertability</b>          | 3M™ Outdoor Acrylic Adhesive P1400 is specifically designed to be compatible with a variety of print methods and end use applications. Adhesive processing issues are not anticipated when proper roll tensions, handling and storage conditions are used. Please refer to the die cutting/converting section of this data page or the "Guide to Converting and Handling Label Products" technical bulletin for additional information. |  |

## Application Techniques

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

For best bonding conditions, application surface should be at room temperature or higher. Low temperature surfaces, below 40°F (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.

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

## Printing

- A non-topcoated print surface designed for use with solvent screen ink systems.

### Solvent Screen Inks:

3M™ Screen Printing UV Ink Series 9800

Nazdar's 7700 and System 2

Sericol's Polyplast PY, GVYL, VYL, TMI and Techmark

Please be aware that our current production specifications for these materials are primarily qualified for printers who use flexographic, screen printing, and thermal transfer printing processes. 3M has neither done profile work with these products for printing by digital inkjet processes, nor engaged in any lot variation studies, nor taken any special measures in manufacturing or handling of these products with the intent of recommending these products for printing by digital inkjet methods.

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|--|--|
| <b>Die Cutting /<br/>Converting</b>    | Die cut with steel rule or flatbed dies. The 90# lay-flat liner also allows kiss cutting and back splitting. The converter can cut through the vinyl facestock without cutting through the liner. Sheet label materials are not recommended for rotary die cutting and stripping operations.   |
| <b>Packaging</b>                       | Finished labels should be stored in plastic bags.  |
| <b>Storage</b>                         | Store at room temperature conditions of 72°F (22°C) and 50% relative humidity.   |
| <b>Shelf Life</b>                      | If stored under proper conditions, product retains its performance and properties for two years from date of manufacture.  |
| <b>Product Use</b>                     | All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.  |
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| <b>Limitation of Liability</b>         | Except where prohibited by law, 3M and seller will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.  |

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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.



## Industrial Adhesives and Tapes Division Converter Markets

1030 Lake Road  
Medina, OH 44256-0428  
800-422-8116 • 877-722-5072 (fax)  
www.3M.com/converter



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