Flame Retardant Label Materials
7203 • 7204

Technical Data July, 2006

Product Description
3M™ Flame Retardant Label Materials 7203 and 7204 are designed to meet FR requirements including UL-94-VTM-O. The polyester facestocks offer excellent electrical insulating performance for use in electronic applications where flame resistance is required. These materials utilize 3M™ Adhesive P2000FR which is formulated to impart flame retardant characteristics to the label construction.

Construction

<table>
<thead>
<tr>
<th>Product Number</th>
<th>Facestock</th>
<th>Adhesive</th>
<th>Liner</th>
</tr>
</thead>
<tbody>
<tr>
<td>3M label material 7203</td>
<td>.002 in. White FR Polyester TC</td>
<td>P2000FR</td>
<td>50# SC 3.1 mil semi-bleached super calendered kraft sheet</td>
</tr>
</tbody>
</table>

(Calipers are nominal values)

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.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peel Adhesion</td>
<td>2.5 lbs./in. (435 N/m) TLMI Method, 180° Peel, 12&quot;/min., 1&quot; wide sample</td>
</tr>
<tr>
<td>Loop Tack</td>
<td>1.0 lbs./in. (175 N/m) TLMI Method, 12&quot;/min., 1&quot; wide sample</td>
</tr>
<tr>
<td>Shear</td>
<td>2 hours TLMI Method, 0.25 in² x 500g</td>
</tr>
<tr>
<td>Adhesive Coat Weight</td>
<td>1.9 g/100 in² ± 10% 3M Method E10MFP01</td>
</tr>
<tr>
<td>Release Range</td>
<td>20 to 80 g/2 in. TLMI Method, 180° removal, 300 in./min.</td>
</tr>
<tr>
<td>Service Temperature</td>
<td>-20°F to 302°F (-29°C to 150°C)</td>
</tr>
<tr>
<td>Application Temperature</td>
<td>40°F to 120°F (5°C to 49°C)</td>
</tr>
</tbody>
</table>

Features

- Polyester facestock offers high dielectric strength and long term thermal durability.
- Adhesive is a tackified acrylic suitable for use on a wide range of substrates including high and low surface energy plastics.
- Liner is designed for high-speed die cutting and matrix stripping. Not recommended for sheet on press applications.
## Printing
- 3M™ Flame Retardant Label Material 7203 – Flexographic and thermal transfer.
- 3M™ Flame Retardant Label Material 7204 – Flexographic, thermal transfer, dot matrix imitable.

## Application Ideas
- Electronic insulator label applications.
- Battery labels.
- Computer peripherals.
- Label applications requiring flame retardant performance.

## Storage Conditions
Store under normal conditions of 70°F (21°C) and 50% relative humidity. To minimize the effects of humidity on the products, package the die-cut and printed stock in polyethylene bags. Low density polyethylene (2-4 mils) can help prevent humidity penetration.

## Shelf Life
To obtain best performance, use this product within two years from the date of manufacture.

## Product Use
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.

## Warranty and Limited Remedy
Unless stated otherwise in 3M's product literature, packaging inserts or product packaging for individual products, 3M warrants that each 3M product meets the applicable specifications at the time 3M ships the product. Individual products may have additional or different warranties as stated on product literature, package inserts or product packages. 3M MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's application. If the 3M product is defective within the warranty period, your exclusive remedy and 3M's and seller's sole obligation will be, at 3M's option, to replace the product or refund the purchase price.

## Limitation of Liability
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.