Scotch-Weld™ Hot Melt Adhesives
3781B and 3784B

Technical Data July, 2010

Product Description

3M™ Scotch-Weld™ Hot Melt Adhesive 3781B and 3784B are designed for carton sealing, tray forming and many other product assembly operations.

These metallocene-catalyzed polypropylene based products provide medium to medium fast set times, exceptional high temperature performance and outstanding hot melt tank stability for trouble free operation. They also exhibit excellent color stability at application temperature, very low odor, clean nozzle cut off and excellent viscosity stability. Scotch-Weld Hot Melt Adhesive 3781B provides excellent performance at cold temperatures for both cooler and freezer conditions.

With a specific gravity of approximately 0.89 these products can provide up to a 10-12% increase of coverage over many conventional bulk packaging adhesives resulting in reduced cost per package.

Features

• 100% solids
• Medium to medium fast setting
• Clean nozzle cut off
• Outstanding color stability
• Lower density providing added coverage

• Excellent cold temperature resistance
• High temperature resistance
• Low odor/fumes
• Low char

Typical Properties

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

<table>
<thead>
<tr>
<th>Property</th>
<th>3781B (Freezer Grade)</th>
<th>3784B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity¹ @ 350°F (177°C)</td>
<td>890 cps</td>
<td>980 cps</td>
</tr>
<tr>
<td>Density²</td>
<td>0.89 g/cm³</td>
<td>0.89 g/cm³</td>
</tr>
<tr>
<td>Typical Application Temperature</td>
<td>350°F (177°C)</td>
<td>350°F (177°C)</td>
</tr>
<tr>
<td>Heat Resistance³</td>
<td>210°F (99°C)</td>
<td>190°F (88°C)</td>
</tr>
<tr>
<td>Softening Point⁴</td>
<td>216°F (108°C)</td>
<td>232°F (111°C)</td>
</tr>
<tr>
<td>FDA Listed⁵</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Physical Form</td>
<td>Pellet</td>
<td>Pellet</td>
</tr>
<tr>
<td>Set Time</td>
<td>Medium Fast</td>
<td>Medium</td>
</tr>
</tbody>
</table>

¹ Brookfield Thermosel Viscometer in Centipoise.
² ASTM D1505-03.
³ Last reported temperature that will support a 2 lb dead load for 30 minutes.
⁴ ASTM E 28-99.
⁵ Made from components listed as indirect food additives under FDA regulations for adhesives (21 CFR 175.105).
⁶ 1/8" semicircular bead, Douglas fir to Douglas fir.
Caution!
Extruded molten adhesive and hot applicator tip will cause burns. Always wear heat resistant gloves and protective eyewear.

Vapors from heated adhesive may cause eye and respiratory tract irritation.

Use only approved hot melt dispensing equipment designed for the purpose of melting and dispensing hot melt adhesive. Follow equipment manufacturers’ procedures and safety instructions.

For professional or industrial use only.

Directions For Use
Dispensing equipment recommendations for changing from any other adhesive type:
• Drain and clean the tank following equipment manufacturers’ instructions.
• Thoroughly flush the system with 3M™ Scotch-Weld™ Hot Melt Adhesive 3781B and 3784B following equipment manufacturers’ instructions.

Adhesive Dispensing:
• Add the required amount of Scotch-Weld Hot Melt Adhesive 3781B or 3784B.
• The suggested application temperature of these adhesives is 350°F (177°C). Set the tank, hose and applicator temperatures following the equipment manufactures’ instructions.
• Once the adhesive has become fully melted set the dispensing equipment according to the equipment manufacturers’ recommendations to control adhesive flow.

Important: The pump pressure, temperature settings, size of the nozzle orifice and application speed are important factors for obtaining the proper amount of adhesive delivered.

Additional information:
Contact 3M technical service for additional considerations if an Ethylene Vinyl Acetate (EVA) based hot melt adhesive was previously used in the dispensing equipment.
Technical Information
The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

Product Use
Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

Warranty, Limited Remedy, and Disclaimer
Unless an additional warranty is specifically stated on the applicable 3M product packaging or product literature, 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. If the 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability
Except where prohibited by law, 3M 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.

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