



# Scotch-Weld™ Hot Melt Comparison on Plastics

Technical Bulletin

August, 2006

The 3M™ Scotch-Weld™ Adhesive formulations are excellent candidates for bonding low surface energy (LSE) substrates. We can offer five formulas for extruding or spraying.

- The bonding range/open time is 30-120 seconds.
- Can be applied with 3M™ Scotch-Weld™ Hot Melt LT Applicators.
- Stable in bulk hot melt systems and available in bulk form. (except 3M™ Scotch-Weld™ Polyolefin Adhesive 3796)
- Adheres to difficult-to-bond substrates.
- Provide high heat resistance.
- Available in most of the popular 3M™ Scotch-Weld™ Hot Melt Adhesive sizes.

## Comparison Data

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

|                                          | 3M™ Scotch-Weld™ Polyolefin Adhesive 3731 | 3M™ Scotch-Weld™ Polyolefin Adhesive 3748 | 3M™ Scotch-Weld™ Polyolefin Adhesive 3764 | 3M™ Scotch-Weld™ Polyolefin Adhesive 3796 | 3M™ Sprayable Hot Melt Adhesive 6111 HT |
|------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|-----------------------------------------|
| <b>Viscosity @ 375°F (191°C) (cps)</b>   | 12,000                                    | 5,600                                     | 6,900                                     | 24,000                                    | 3,500                                   |
| <b>Heat Resistance - 2 Lb. Dead Load</b> | 265°F (129°C)                             | 170°F (77°C)                              | 140°F (60°C)                              | 200°F (93°C)                              | 175°F (79°C)                            |
| <b>Bonding Range (sec)</b>               | 30                                        | 40                                        | 40                                        | 50                                        | 120                                     |
| <b>Overlap Shear (PSI)</b>               |                                           |                                           |                                           |                                           |                                         |
| PP/PP                                    | 550                                       | 348                                       | 285                                       | 260                                       | 388                                     |
| HDPE/HDPE                                | 420                                       | 363                                       | 389                                       | 61                                        | 100                                     |
| Cold Rolled Steel/Cold Rolled Steel      | 390                                       | 221                                       | 235                                       | 789                                       | 365                                     |
| ABS/ABS                                  | 450                                       | 193                                       | 454                                       | 655                                       | 372                                     |
| PVC/PVC                                  | 430                                       | 272                                       | 450                                       | 873                                       | 417                                     |
| <b>Peel (PIW)</b>                        |                                           |                                           |                                           |                                           |                                         |
| PP/Canvas                                | 22                                        | 22                                        | 5.3                                       | 1.4                                       | 14.4*                                   |
| HDPE/Canvas                              | 23                                        | 24                                        | 6.2                                       | 0.1                                       | 3.5*                                    |
| <b>Ball &amp; Ring</b>                   | 315°F (157°C)                             | 290°F (143°C)                             | 190°F (88°C)                              | 244°F (118°C)                             | 212°F (100°C)                           |

\*Spray applied

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### Precautionary Information

Refer to Product Label and Material Safety Data Sheet for health and safety information before using this product. For additional health and safety information, call 1-800-364-3577 or (651) 737-6501.

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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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