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3M Polyolefin Bonding Adhesive 3731

Technical Data **February, 2015**

Product Description

3M™ Polyolefin Bonding Adhesive 3731 is a 100% solids, high heat resistant adhesive that bonds to a variety of substrates including polyethylene, polypropylene and many other plastics.

Features

- Solvent free, 100% solids
- High temperature resistance
- Bonds well to polyolefin based plastics
- Light tan color
- Fast setting

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.

Color	Light Tan
Specific Gravity	.92
Flash Point (C.O.C.)	525°F (273°C)
Viscosity @ 375°F[1] (191°C)	12,000 cps
Ball & Ring[2]	315°F (157°C)
Bonding Range - 1/8" Bead (sec.)[3]	25-30 seconds
Impact Resistance (Inch lbs @ 72°F)	80

[1]Brookfield Thermocel Viscometer in Centipoise using a #27 Spindle @ 10 RPM.

[2]ASTM E-28-607.

[3]1/8" semicircular bead, Douglas Fir to Douglas Fir.

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Typical Performance Properties

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

Heat Resistance

Load (PSI)	Temperature
.33 lbs (150 grams)	305°F (152°C)
1 lbs (454 grams)	275°F (135°C)
2 lbs (908 grams)	265°F (129°C)

Overlap Shear Strength

Substrate	Value (Pounds Per Square Inch)
Polypropylene	550 PSI
HDPE	420 PSI
ABS	450 PSI
P.V.C. (Rigid)	430 PSI
Polystyrene (High Impact)	257 PSI
Polycarbonate	430 PSI
Nylon 66	475 PSI
Douglas Fir	490 PSI
Cold Rolled Steel	390 PSI

180° Peel Adhesion (Canvas bonded to various substrates)

Substrate	Value (Pounds Per Inch Width)
Polypropylene	22 PIW
HDPE	23 PIW
ABS	23 PIW
P.V.C. (Rigid)	18 PIW
Polystyrene (High Impact)	15 PIW
Polycarbonate	22 PIW
Nylon 66	19 PIW
Cold Rolled Steel	15 PIW

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Directions for Use

1. 3M™ Polyolefin Bonding Adhesive 3731 is designed for applications using a 3M™ Polygun™ EC Applicator at the 4 or 5 module setting or a 3M™ Polygun™ II Applicator.
2. Recommended equipment temperature for bulk dispensing 350-375°F (177-191°C).
3. Apply to one surface. Make bond as soon as possible. Bond strength is maximized when open time is reduced.
4. After bond is made, there is immediate strength and no clamping is necessary.
5. Adhesive should be allowed to fully crystallize (possibly up to 12 hours) to obtain full performance properties.

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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.

For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-362-3550 or visit www.3M.com/adhesives. Address correspondence to: 3M Engineered Adhesives Division, 3M Center, Building 220-7E-01, St. Paul, MN 55144-1000. Our fax number is 651-733-9175. In Canada, phone: 1-800-364-3577. In Puerto Rico, phone: 1-787-750-3000. In Mexico, phone: 52-70-04-00.

Important Notice

3M MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of application. Please remember that many factors can affect the use and performance of a 3M product in a particular application. The materials to be bonded with the product, the surface preparation of those materials, the product selected for use, the conditions in which the product is used, and the time and environmental conditions in which the product is expected to perform are among the many factors that can affect the use and performance of a 3M product. Given the variety of factors that can affect the use and performance of a 3M product, some of which 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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If the 3M product is proved to be defective, THE EXCLUSIVE REMEDY, AT 3M'S OPTION, SHALL BE TO REFUND THE PURCHASE PRICE OF OR TO REPAIR OR REPLACE THE DEFECTIVE 3M PRODUCT. 3M shall not otherwise be liable for loss or damages, whether direct, indirect, special, incidental, or consequential, regardless of the legal theory asserted, including, but not limited to, contract, negligence, warranty, or strict liability.

ISO 9002

This Engineered Adhesives Division product was manufactured under a 3M quality system registered to ISO 9002 standards.

3M

Engineered Adhesives Division

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