English
Last Revision Date: February, 2015

Technical Data Sheet

3M™ Polyolefin Bonding Adhesive 3731

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.

Product Features

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

Technical Information Note

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

Typical Physical Properties

Property	Values	Additional Information
Color	Light Tan	
Flash Point	273 °C	View
Notes: C.O.C.		
Flash Point	525 °F	View
Notes: C.O.C.		
Viscosity	12000 cP	View
Test Condition: 375°F(191°C) Notes: Brookfield Thermocel Viscometer in Centipoise using a #27 Spindle @ 10 RPM.		
Specific Gravity	0.92	
Ball & Ring	157 °C	View
Test Method: ASTM E-28-607		

Ball & Ring	315 °F	View

Test Method: ASTM E-28-607

Typical Performance Characteristics

Property	Values	Additional Information
180° Peel Adhesion	352 oz/in	View

Substrate: Polypropylene (PP)

Notes: Peel bonds of cotton duck were tested at a peel angle of 180° @ 2in/min separation rate @RT. The value listed is the average force required to peel the canvas from the substrates in pounds per inch of bond width (PIW).

180° Peel Adhesion	368 oz/in	View

Substrate: High Density Polyethylene (HDPE)

Notes: Peel bonds of cotton duck were tested at a peel angle of 180° @ 2in/min separation rate @RT. The value listed is the average force required to peel the canvas from the substrates in pounds per inch of bond width (PIW).

180° Peel Adhesion	368 oz/in	View

Substrate: ABS

Notes: Peel bonds of cotton duck were tested at a peel angle of 180° @ 2in/min separation rate @RT. The value listed is the average force required to peel the canvas from the substrates in pounds per inch of bond width (PIW).

180° Peel Adhesion	288 oz/in	View

Substrate: Polyvinyl chloride (PVC)

Notes: Peel bonds of cotton duck were tested at a peel angle of 180° @ 2in/min separation rate @RT. The value listed is the average force required to peel the canvas from the substrates in pounds per inch of bond width (PIW).

180° Peel Adhesion	240 oz/in	View

Substrate: Polystyrene (High Impact)

Notes: Peel bonds of cotton duck were tested at a peel angle of 180° @ 2in/min separation rate @RT. The value listed is the average force required to peel the canvas from the substrates in pounds per inch of bond width (PIW).

180° Peel Adhesion	352 oz/in	View

Substrate: Polycarbonate (PC)

Notes: Peel bonds of cotton duck were tested at a peel angle of 180° @ 2in/min separation rate @RT. The value listed is the average force required to peel the canvas from the substrates in pounds per inch of bond width (PIW).

180° Peel Adhesion	304 oz/in	View

Substrate: Nylon

Notes: Peel bonds of cotton duck were tested at a peel angle of 180° @ 2in/min separation rate @RT. The value listed is the average force required to peel the canvas from the substrates in pounds per inch of bond width (PIW).

180° Peel Adhesion	240 oz/in	View

Substrate: Cold Rolled Steel

Notes: Peel bonds of cotton duck were tested at a peel angle of 180° @ 2in/min separation rate @RT. The value listed is the average force required to peel the canvas from the substrates in pounds per inch of bond width (PIW).

Temperature Resistance	0.02 kg/cm²	View
Test Condition: 305°F (152°C)		
Temperature Resistance	0.33 lb/in²	View
Test Condition: 305°F (152°C)		
Temperature Resistance	0.07 kg/cm²	View
Test Condition: 275°F (135°C)		
Temperature Resistance	1 lb/in²	View
Test Condition: 275°F (135°C)		
Temperature Resistance	0.14 kg/cm²	View
Test Condition: 265°F (129°C)		
Temperature Resistance	2 lb/in²	View
Test Condition: 265°F (129°C)		
Overlap Shear Strength	550 lb/in²	View
Substrate: Polypropylene (PP)		
Overlap Shear Strength	420 lb/in²	View
Substrate: High Density Polyethylene (HDPE)		
Overlap Shear Strength	450 lb/in²	View
Substrate: ABS		
Overlap Shear Strength	430 lb/in²	View
Substrate: P.V.C. (Rigid)		
Overlap Shear Strength	257 lb/in²	View
Substrate: Polystyrene (High Impact)		
Overlap Shear Strength	430 lb/in²	View
Substrate: Polycarbonate (PC)		
Overlap Shear Strength	475 lb/in²	View

Substrate: Nylon

Overlap Shear Strength	490 lb/in²	View

Substrate: Douglas Fir

Overlap Shear Strength	390 lb/in²	View

Substrate: Cold Rolled Steel

Storage and Shelf Life

Store product below 120°F (49°C).
When stored at the recommended conditions, this product has a shelf life of 24 months from date of manufacture.

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.

Bottom Matter

3M
Industrial Adhesives and Tapes Division
3M Center, Building 225-3S-06
St. Paul, MN 55144-1000
800-362-3550

Handling/Application Information

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.

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b40065542/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=3731

ISO Statement

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

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.

Information

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