

Technical data sheet



Product: 3747,3779,3789,3797

Manufacturer: 3M DEUTSCHLAND GMBH

Product group: KLEBSTOFF

Article group: SCHMELZKLEBSTOFF

Download: 26.12.2024

3M™ HOT MELT 3747,3779,3789,3797

This data sheet was provided to you by Tewipack Uhl GmbH. The company tewipack Uhl GmbH assumes no responsibility for the topicality and the Accuracy of the information contained. The properties of the products can vary due to various influences such as composition and condition of the Substrate, impurities in or on the substrate, temperature and humidity at the Change storage and environmental conditions during use. Using this product in combination with other material, the customer is responsible for to check through our own tests whether the product is suitable for the planned combination and whether this combination delivers the expected results

Tewipack Uhl GmbH
Industriestraße 15
D-75382 Althengstett

Telephone:
+49(0)7051/9297-0
Fax:
+49(0)7051/9297-99

E-Mail:
info@tewipack.de
Website:
www.tewipack.de

Managing director:
Alexander Uhl,
Michael Uhl
HRB 330424
Amtsgericht
Stuttgart

Bank details:
Sparkasse
Sindelfingen
Pforzheim
Calw
BLZ 666 500
85
Konto 17 787

Commerzbank
Sindelfingen
BLZ 603 400 71
Konto 8 001 166

Vereinigte
Volksbank AG
Böblingen
BLZ 603 900 00
Konto 80 089
003

Postbank
Stuttgart
BLZ 600 100
70
Konto 146
294 708

3M

Hot Melt Adhesive

3747 • 3779 • 3789 • 3797

Technical Data

July, 2016

Product Description	3M™ Hot Melt Adhesives are heat applied, 100% solids adhesives. 3M™ Hot Melt 3747, 3779, 3789 and 3797 are thermoplastic adhesives to bond to wide variety of substrates such as wood, plastic, vinyl, metal and glass.
3M™ Hot Melt Adhesive 3747	General purpose adhesive for bonding dissimilar substrates such as wood to plastic, fabric to metal.
3M™ Hot Melt Adhesive 3779	High strength bonding with excellent environmental stability including very high heat resistance. Fast set time.
3M™ Hot Melt Adhesive 3789	High performance for plastic with good fuel, oil and plasticizer resistance. Long open time.
3M™ Hot Melt Adhesive 3797	Low viscosity for fast flow rates, good high temperature resistance, and fast set. Good for electrical potting.

- Features**
- 100% solids, no VOCs
 - Easy to use
 - Long open times allow for easy use on large assemblies and large surfaces
 - Adhesive sets and obtains strength in seconds
 - Creates high performance bonds
 - Ideal for woodworking and general industrial applications.

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.

	3M™ Hot Melt Adhesive			
	3747	3779	3789	3797
Color (solid)	Tan	Amber	Brown	Off-White
Density (g/cm³)	0.97	0.99	0.95	0.92
Flashpoint (°F)¹	509	550	>392	570

(1) Determined by Cleveland Open Cup ASTM D 92-72.

Directions for Use

1. Surface Preparation: Surfaces must be clean, dry and dust free. Wipe with a solvent such as isopropyl alcohol for plastic, metal and glass substrates to remove oil and dirt.*
***Note:** When using solvents, extinguish all ignition sources, including pilot lights, and follow the manufacturer's precautions and directions for use.

2. Application: 3M™ Hot Melt Adhesives are designed for application with a 3M™ Hot Melt Applicators. Read and follow the precautions and directions for use in the user's manual before operating the applicator. 3M™ Hot Melt Adhesives are applied at 350-385°F. Adhesives yield approximately 430 linear feet per pound of adhesive when extruded as a 1/8" diameter semi-circular bead. Extruded bead sizes can be customized using 3M™ applicator tips.

3M™ Hot Melt Adhesive

3747 • 3779 • 3789 • 3797

Directions for Use (continued)

3. Coverage: 3M™ Hot Melt Adhesives yield approximately 430 linear feet per pound of adhesive when extruded as a 1/8" diameter semi-circular bead.

4. Set up time: After the bond is made, 3M™ Hot Melt Adhesives immediately build strength and no clamping is necessary. Set will occur faster on cold or metallic substrates.

Typical Application Properties

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

	3M™ Hot Melt Adhesive			
	3747	3779	3789	3797
Application Temperature¹	350-385°F/ 177-196°C	350-385°F/ 177-196°C	350-385°F/ 177-196°C	350-385°F/ 177-196°C
Viscosity (CPS)²	4,100 @ 375°F	7,000 @ 375°F	5,200 @ 375°F	2,650 @ 375°F
Open Time (seconds)³	45	25	50	30
Delivery Time (seconds)⁴	45	75	70	55
Available sizes/forms	5/8"x8" Q 5/8"x2" TC 1"x3" PG 1/2"x12" AE	5/8"x8" Q 5/8"x2" TC 1"x3" PG 1/8" Bulk	5/8"x8" Q 1"x3" PG 1/8" Bulk	5/8"x2" TC 1"x3" PG

(1) Recommended application temperature range. Temperature can be adjusted to regulate desired viscosity, delivery rate and pot life.

(2) Brookfield Thermocel Viscometer in Centipoise using a #27 Spindle @ 10 RPM.

(3) Open time is the maximum time between the application of the adhesive and when the parts must be joined together. Data based on 1/8" semicircular bead on non-metallic substrates at 75°F. Higher environmental temperatures and/or larger beads will lengthen open times.

(4) Extrusion time for one 1"x3" PG cartridge.

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.

	3M™ Hot Melt Adhesive			
	3747	3779	3789	3797
Heat Resistance¹	145°F/ 63°C	300°F/ 149°C	220°F/ 104°C	170°F/ 77°C
Ball & Ring Melt Point²	220°F/ 104°C	325°F/ 163°C	270°F/ 132°C	304°F/ 151°C
Shear Strength³	430 psi	700 psi	570 psi	350 psi
Peel Strength⁴	20 piw	18 piw	16 piw	10 piw
UL94 Listing	n/a	V0	V2	V2
FDA Indirect Food Contact⁵	21 CFR 175.105	21 CFR 175.105	21 CFR 175.105	21 CFR 175.105

(1) Highest temperature that the adhesive will support a 2 psi dead load

(2) ASTM E28-67

(3) Overlap shear measured on Douglas Fir to Douglas Fir

(4) Measured in pounds per inch width (piw). Flexible canvas bonded to Douglas Fir

(5) Permitted for indirect food contact subject to the limitations in applicable CFR section(s).

3M™ Hot Melt Adhesive

3747 • 3779 • 3789 • 3797

Storage	Store product below 120°F (49°C).
Shelf Life	When stored at the recommended conditions, this product has a shelf life of 2 years after 3M ships the product to a customer or distributor.
Pre cautionary 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
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.

ISO 9001:2000

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



Industrial Adhesives and Tapes Division

3M Center, Building 225-3S-06
St. Paul, MN 55144-1000
800-362-3550 • 877-369-2923 (Fax)
www.3M.com/Adhesives

3M is a trademark of 3M. Printed in U.S.A.
©3M 2016