

3M Hot Melt Adhesive

3764 • 3748

Technical Data

July, 2016

Product Description	3M™ Hot Melt Adhesives are 100% solids, thermoplastic resins that become fluid when heated and quickly wet the bonding surface. They cool, harden and reach bond strength in seconds, keeping production flowing by eliminating clamps, fixturing and drying, and saving time energy and space. 3M™ Hot Melt Adhesive 3764 and 3748 bond to a wide variety of substrates such as wood, plain and coated corrugated, fabrics and foams, plastics, and other lightweight materials.
3M™ Hot Melt Adhesive 3764	Excellent general plastics bonder with low temperature flexibility.
3M™ Hot Melt Adhesive 3748	Designed especially for low surface energy plastics and coatings such as polyolefins. Good high temperature stability and thermal shock resistance.

Features	<ul style="list-style-type: none">• 100% solids, no VOCs• Easy to use• Adhesive obtains strength in seconds• Designed for plastics and polyolefin bonding, including ABS, PVC, polycarbonate, polypropylene and polyethylene
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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
	3764	3748
Color (solid)	Clear	Off White
Density (g/cm³)	0.95	0.93
Flashpoint (°F)¹	514	536

(1) Cleveland Open Cup ASTM D92-72

Directions for Use	<p>1. Surface Preparation: Surfaces must be clean, dry and dust free. Wipe with a solvent such as isopropyl alcohol for plastic substrates to aid in removing oil and dirt.*</p> <p>*Note: When using solvents, extinguish all ignition sources, including pilot lights, and follow the manufacturer's precautions and directions for use.</p> <p>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.</p> <p>Extruded bead sizes can be customized using 3M™ applicator tips.</p>
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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

4. Set 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	
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Application Temperature¹	350-385°F/ 177-196°C	350-385°F/ 177-196°C
Viscosity (CPS)²	6,000 @ 375°F	5,000 @ 375°F
Open Time (seconds)³	40	45
Delivery Time (seconds)⁴	55	65
Available sizes/forms	5/8"x8"Q 5/8"x2" TC 1"x3" PG 1/2"x12"AE 1/8" Bulk	5/8"x8"Q 5/8"x2" TC 1"x3" PG Bulk

(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	
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Heat Resistance¹	140°F/ 60°C	175°F/ 79°C
Ball & Ring Melt Point²	190°F/ 88°C	292°F/ 144°C
Shear Strength³	390 psi	250 psi
Peel Strength⁴	14 pwi	18 pwi
UL94 Listing	V2	V2
FDA Indirect Food Contact⁵	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) Douglas Fir to Douglas Fir.

(4) Canvas to Douglas Fir.

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

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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.
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
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.
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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.

3M

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

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