

Technical Data Sheet

3M™ Hot Melt Adhesive 3738



Product Details



Regulatory Info/SDS

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 3738 is a thermoplastic adhesive with low to medium viscosity and long open times. It bonds to wide a variety of substrates such as wood, plain and coated corrugated, sand cores, foams, many plastics, and other lightweight materials.

- General purpose bonder with low temperature dispensing.

Product Features

- 100% Solids, no VOCs
- Easy to use
- Long open times allow for ease use on large assemblies and large surfaces
- Adhesive sets and obtains strength in seconds
- Low Melt (LM) adhesives are designed for low temperature application and heat sensitive substrates
- Ideal for woodworking and general industrial applications.

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

Attribute Name	Test Method	Temperature	Substrate	Value
Color				Tan
Density				0.95 g/cm ³ (0.034 lb/in ³)
Open Time			OSB	50 s ¹
Flash Point	ASTM D92-72			288 °C (550 °F) ²
Delivery Time				35 s ³
Viscosity		191 °C (375 °F)		2,875 cP ⁴

¹ Open time is the max time between the application of the adhesive and joining the parts. Data based on 3.2 mm (1/8 in) semicircular bead on non-metallic substrates at 24 °C (75 °F). Higher environmental temperatures and/or larger beads will lengthen open times.

² Cleveland Open Cup

³ Extrusion time for one 25 x 76 mm (1 x 3 in) PG cartridge.

⁴ Brookfield Thermocel Viscometer in Centipoise using a #27 Spindle @ 10 RPM.

Typical Performance Characteristics

Temperature: 23 °C (73 °F)

Attribute Name	Substrate	Value
180° Peel Adhesion	Flexible canvas bonded to Douglas Fir	23 N/cm (208 oz/in)
Overlap Shear Strength	Douglas Fir	26 kg/cm ² (375 lb/in ²)

Attribute Name	Test Method	Value
Temperature Resistance		54 °C (130 °F) ¹
Application Temperature		177 — 196 °C (350 — 385 °F) ²

Attribute Name	Test Method	Value
Ball & Ring Melt Point	ASTM E28-67	86 °C (186 °F)

¹ Highest temperature that the adhesive will support a 14 kPa (2 psi) dead load

² Recommended application temperature range. Temperature can be adjusted to regulate desired viscosity, delivery rate and pot life.

Handling/Application Information

Directions for Use

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.*

*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, except the Low Melt (LM) series which are designed to be applied at 250-275°F. LM series are adhesives designed for lower temperature application but still yield long-lasting bonds. Extruded bead sizes can be customized using 3M™ applicator tips.

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.

Industry Specifications

UL 94 - V2

Storage and Shelf Life

Store under normal conditions of 16° to 27°C (60° to 80°F) and 40 to 60% relative humidity in the original packaging, out of direct sunlight. For best performance, use this product within 24 months from date of manufacture.

Available Sizes - Detailed

5/8 in x8 in Q
 5/8 in x2 in TC
 1 in x3 in PG
 1/2 in x12 in AE
 1/8 in Bulk

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

Information

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ISO Statement

This product was manufactured under a 3M quality system registered to ISO 9001 standards.

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