

3M™ Double Coated Tape PBT539

Product Description

3M™ Double Coated Tape PBT539 is a 3M specialty adhesive tape. The double coated film tape features a thin polyester film carrier for dimensional stability and excellent handling with ease of die cutting and laminating, and 3M™ Adhesive 360 on either side of the carrier. 3M™ Adhesive 360 is an acrylic adhesive that bonds to most surfaces, including high and low surface energy materials.

Key Features

- 3M™ Double Coated Tape PBT539 provides easy handling for rigid-to-rigid substrate bonding.
- Polyester liner offers moisture stability.
- Polyester film carrier enhances workability when laminating to various types of surfaces.
- Polyester film carrier enhances the die cutability of the finished product.
- Provides clean removability from many surfaces.

Product Construction/Material Description

Note: The following technical information and data is based upon limited 3M testing conditions and should not be used for specification purposes.

3M™ Double Coated Tape PBT539	
Property	Value
Faceside Adhesive	3.5 Mils (88.9µm)
PET Carrier	2.0 Mils (50.8µm)
Backside Adhesive	3.5 Mils (88.9µm)
PET Release Liner	3.0 Mils (76.2µm)

Applications

The tape can be used to bond together a wide variety of similar and dissimilar materials such as rubbers, metals, glass, papers, paints and many plastics. Some application ideas include:

- Splicing films, foils, papers or fabrics.
- Holding objects where high shear forces are encountered.
- Holding grinding and polishing pads.
- Please work with your 3M Application Engineer to discuss other potential joining and holding applications.

Application Techniques

Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure helps develop better adhesive contact and improves bond strength.

To obtain optimum adhesion, the bonding surfaces must be thoroughly cleaned and dried. Some typical surface cleaning solvents are isopropyl alcohol or heptane.

Note: Carefully read and follow the manufacturer's precautions and directions for use, as well as all local, state and federal regulations, when working with solvents.

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Ideal tape application temperature range is 70°F to 100°F (21°C to 38°C). Initial tape application to surfaces at temperatures below 50°F (10°C) is not recommended because the adhesive becomes too firm for good adhesion. However, once properly applied, low temperature holding is generally satisfactory.

Typical Physical Properties and Performance Characteristics

Note: The following technical information and data is based upon limited 3M testing conditions and should not be used for specification purposes. Final product specifications and testing methods will be outlined in the product's Certificate of Analysis (COA) that is shipped with the commercialized product once it is approved by 3M for general commercialization and development work is completed.

3M™ Double Coated Tape PBT539		
Property	Test Method ¹	Value
180° Peel Adhesion @ Room Temperature 15 min dwell ²	ASTM D3330	SS 1.58 N/mm
180° Peel Adhesion @ RT 72 hour dwell ²	ASTM D3330	SS 1.50 N/mm PC 1.56 N/mm PP 1.49 N/mm ABS 1.28 N/mm
Static Shear 1000g RT 500g at 70C	ASTM D3654	>10,000 Minutes

¹ Methods listed as ASTM are tested in accordance with the ASTM method noted

² Peel tests were completed with 2 mil PET film backing

Storage and Shelf Life

The shelf life of 3M™ Double Coated Tape PBT539 is 36 months from date of manufacture when stored in original packaging materials and stored at 70°F (21°C) and 50% relative humidity.

Certificate of Analysis (COA)

The 3M Certificate of Analysis (COA) for this product is established when the product is manufactured and is deemed commercially available from 3M. The COA contains the 3M specifications, test methods and test results for the product's performance attributes that the product will be supplied against. Contact your local 3M representative for this product's COA.

This technical data sheet may contain preliminary data and may not match the COA specification limits and/or test methods that may be used for COA purposes.

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Safety Data Sheet: Consult Safety Data Sheet before use.

Regulatory: For regulatory information about this product, contact your 3M representative.

Technical Information: The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

Product Use: Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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