



1316 Magnet Tape

Product Data Sheet

Updated : March 1996
Supersedes : September 1995

Product Description

3M Magnet Tape is a flexible, polymer bonded product coated on one side with the pressure sensitive adhesive. The magnetic material is made using a special process that orients barium ferrite crystals in the polymer binder during manufacture. This orientation process yields a magnet with excellent magnetic properties.

The high energy magnet tape is then permanently magnetised with multiple north and south poles along its length, providing a minimum holding force of 16 ounces per square inch.

The strong holding power of 3M Magnet Tape allows its use in relatively narrow widths where it combines economy with exceptional performance capabilities.

3M Magnet Tape can be bent, twisted and flexed without loss of magnetic energy. The product conforms readily to irregular surfaces without cracking. It will not lose its magnetic strength when dropped or struck. 3M Magnet Tape is, indeed permanently magnetic.

3M Magnet Tape has a high-tack pressure-sensitive adhesive layer on one side, protected by a peel-away backing. The adhesive will adhere to a wide variety of surfaces including most plastics, wood and metal. The non-adhesive side may be used to hold small ferrous objects such as screw drivers and other tools. The product also saves time by holding small parts during assembly. 3M Magnet Tape is a versatile holding material, which can be used effectively on both metal and non-metal surfaces.

Physical Properties

Not for specification purposes

Adhesive Type	Rubber	3M ref :
Thickness (ASTM D-3652)	0.84 mm	
Shelf Life	12 months from date of despatch by 3M when stored in the original carton at 21°C (70°F) & 50 % Relative Humidity	

Performance Characteristics

Not for specification purposes

Magnetic Holding Force	16 oz/in ² (70 g/cm ²) to bare steel.	
Adhesion to Stainless Steel (Peel)	7.6 N/10mm 60 oz/in	
Sliding Force	8 oz/in ² (35g/cm ²) to polished steel.	

Date : March 1996
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Performance Characteristics Cont...
Not for specification purposes

Flexibility	0.84 mm thick - Bend around 3.2mm diameter mandrel.	
Temperature Performance	- 40°C to + 71°C (- 40°F to + 160°F)	
Chemical Resistance	Weather Water Ozone Dilute Acids Dilute Bases Oils & Common Solvents	Excellent Excellent Excellent Good Good Poor

Additional Product Information

Temperature Resistance

3M Magnet Tape retains its flexibility even in cold weather. The product performs well indoors or out, in hot or cold climates. Extensive testing in 3M laboratories at temperatures ranging from - 40°C to + 71°C (- 40°F to + 160°F) has documented the broad range of capability of both the adhesive and the magnetic holding force.

Clean, Safe Handling

The magnetic side of 3M Magnet Tape is specially coated to ensure clean attachment. This coating also resists the external physical conditions that might otherwise result in adhesive bonding between magnet and application surface. Newly painted surfaces should be allowed adequate drying time before application of magnet tape.

Application

3M Magnet Tape is easily cut with scissors or a knife. Adhesive mounting surfaces should be free of dirt, grease, oil and solvent. Following placement, the magnet tape should be pressed down firmly with a roller.

Application Techniques

1. Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure develops better adhesive contact & thus improves bond strength.

2. To obtain optimum adhesion, the bonding

surfaces must be clean dry and well unified. A typical surface cleaning solvent is isopropyl alcohol & water. Use proper safety precautions for handling solvents.

3. Ideal tape application temperature range is 21°C to 38°C (70°F to 100°F).

Initial tape application to surfaces at temperatures below 10°C (50°F) is not recommended because the adhesive becomes too firm to adhere readily. However once properly applied low temperature holding is generally satisfactory.

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Values presented have been determined by standard test methods and are average values not to be used for specification purposes. Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications. This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our recommendations.



Specialty Tapes & Adhesives

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