8672 Outdoor Grade Polyurethane Protective Tape

Product Data Sheet

Updated : November 1995
Supersedes : October 1994

Product Description

8672 is made of exceptionally tough, abrasion resistant polyurethane formulated especially for its excellent resistance to ultraviolet light.

8672 may be applied over painted surfaces and show little or no discoloration after prolonged periods of environmental exposure.

8672 comes coated with a long-ageing solvent resistant, pressure sensitive acrylic adhesive, protected with an easy release liner.

Physical Properties
Not for specification purposes

Adhesive Type	Pressure Sensitive Firm Acrylic	**3M ref :**
Liner	Paper	
Thickness (ASTM D-3652) Tape (Without Liner)	0.20 mm	
Tape Colour	Glossy Transparent	
Tolerance	±0.025 mm	
Density	1057 kg/m³	
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

Adhesion ASTM-D1000 24-hour dwell at room temp; 180° peel at 12"/minute	**Glass** 6.1 N/10mm **Acrylic Enamel** 4.8 N/10mm	**Aluminium** 6.6 N/10mm **ABS Plastic** 5.5 N/10mm

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Performance Characteristics Cont...
Not for specification purposes

Tensile Strength ASTM-D882 2" jaw separation and 6in/mm crosshead rate	700 N/100mm	
Elongation at Break ASTM-D882 2" jaw separation and 6in/mm crosshead rate	500 %	
Tear Strength ASTM-1938	0.8 kg	
Taber Abrasion ASTM-C501 H18, 1 Kg 1000 cycle	Wt, loss 0.10 g.	
Hardness Shore A ASTM-D2240	80	
Dielectric Strength ASTM-D1000	9,711 Volts	
Solvent Resistance	There is little or no effect after 24 hours immersion in the following solvents when applied to bonded steel unless otherwise stated (***** Slight edge lifting) Auto Oil — Distilled Water Regular Gasoline***** — Unleaded Gasoline* Diesel Fuel***** — JP-4 Jet Fuel***** JP-5 Jet Fuel***** — Mil 5606-D Hydraulic Fluid Unleaded Gas with w/10%ethanol*****	

Environmental Exposure
Not for specification purposes

Low Temperature Flexibility ¼" Mandrel bend	No cracking after 24 hours at -60°F (-51°C)	
Maximum Service Temperature	Film softens above this limit. 275°F 135°C	
Dimensional Stability % shrinkage after 30 minutes at 250°F (120°C)	1.0 or less	
Florida 12 months @ 5° South exposure	Negligible discoloration and little or no gloss loss.	
Arizona 12 months @ 45° South exposure	Negligible discoloration and little or no gloss loss.	

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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.
Applications	This tape is used in military, commercial, business and private aviation lead edge" protection against particle and rain erosion.	8672 can easily be die-cut to exacting shapes and is paintable, printable and thermoformable. Care should be taken when handling die-cut shapes to prevent them from sticking together ("face to face").	It is recommended that they be stacked with liner side to film side of adjacent pieces.
Additional Product Information	Polyurethane Protective Tapes are a fast and exact way to provide exceptionally tough surface protection on metals, woods and plastics.	They are made from a highly durable thermoplastic elastomer and precoated with either a natural rubber or high performance acrylic adhesive.	They conform well to curvatures, can be pre-cut into convenient shapes and can even be painted or printed over without priming.

3M

Specialty Tapes & Adhesives

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