



433 High Temperature Aluminium Foil Tape

Product Data Sheet

Updated : March 1996
Supersedes : October 1993

Product Description

No. 433 combines an aluminium foil backing (alloy 1100-0) with a silicone adhesive making it a good candidate for high temperature applications - 316°C or more depending on length of exposure.

Physical Properties

Not for specification purposes

Adhesive Type	Silicone (white)	
Backing	Aluminium Foil (alloy 1100-00)	
Thickness (ASTM D-3652)	90 µm	
Backing Thickness	50 µm	
Tape Colour	Shiny silver	
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 to Stainless Steel ASTM D-3330	3.3 N/10mm	
Tensile Strength ASTM D-3759	4.2 N/10mm	
Elongation at Break ASTM D-3759	7.0 %	
Temperature Range Maximum Minimum	316 °C -54 °C	
Water Vapour Transmission Rate	1.55 g/m ² /24hrs	
Weight	0.0049kg/m/24mm	

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Additional Product Information	<p>Ideal as a heat reflective wrap along or over asbestos, applied to tubes, engine support structures, missile ground handling equipment, or as a protector from other heat sources such as hot areas in steel mills.</p> <p>Good holding, splicing, patching or general protecting tape on applications involving high temperatures (over 150°C).</p>	<p>Performance range from -54° to over 316°C. Adhesive will gradually thermoset at high temperatures. As it thermosets, the adhesive mass becomes firm and gradually loses its pressure sensitivity but will continue to hold the tape in place.</p> <p>Flame resistant - will not support combustion.</p>	<p>Test results reflecting the most severe high temperature conditions indicate the following. No. 433 was applied to <u>flat</u> aluminium panels and conditioned at 316°C for various periods of time. The various adhesion levels were then measured after the panels had cooled to room temperature.</p>		
	<p>LENGTH OF TIME (HRS.) N/100mm</p>	<p>None 36</p>	<p>65 19</p>	<p>200 10</p>	<p>400 5</p>

Application Techniques	<p>Best results are attained when applied to a clean, dry and non dusty surface above 0°C.</p>	<p>To improve adhesion ensure firm and even application pressure is applied.</p>
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Applications	<p>Moisture barrier around doors and windows to prevent fogging of glass.</p> <p>Repair tears or ruptures in insulation blankets used on jet engines.</p>	<p>To hold insulation on hot air ducts in industry.</p> <p>Splice jumbo rolls of aluminium foil or holding the last lap of narrow width rolls in preparation to annealing the rolls (NOTE: The use of 3M TAPE PRIMER increases the bond on oily surfaces.)</p>	<p>As a heat reflective wrap used in conjunction with asbestos, tube, cables, or where otherwise required for high heat protection.</p> <p>Maskant of metal during plastic coating.</p>
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FEATURES	ADVANTAGES	BENEFITS
Aluminium foil backing.	Ultimate protection.	Protects parts from water, dust or chemical damage.
	Heat reflective.	Protects from heat damage.
	Non-flammable.	Will not aid combustion.
Silicone adhesive.	Wide temperature range.	Will seal or protect even under extreme temperature conditions.

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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.

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