

STEEL Disks (9502 Adhesive)

Applications

Steel Disks are custom size disks that are die cut from Steel Tape material. Steel Disks permit frequent sign changes without fasteners. Primarily used for attaching magnetic items to any non-steel surface. Aggressive acrylic adhesive bonds well to metals, painted metals and high energy plastics.



- Attaching magnetic items to any non-steel surface

Product Benefits

- Permits frequent signs changes without fasteners
- Bonds well to metals, painted metals, and high energy plastics

Adhesive Properties

Total Thickness of adhesive	2.3mil (0.06 mm)
Adhesive Type	Acrylic
Liner Type	Tan #58, Polycoated Kraft with Green 3M logo
Color	Clear
<i>Values shown are typical. Certified test reports for writing specifications are available.</i>	

Adhesive Test Data

I. Adhesion to stainless steel ASTM D3330 modified (90 degree peel, 2 mil aluminum foil backing) Dwell on stainless steel:

	2.3 mil (.0023 inches)		4.9 mil (.0049 inches)	
	Oz./In.	N/100 mm	Oz./In.	N/100 mm
15 minute room temperature (RT)	40	44	53	58
72 hour RT	74	80	98	107
72 hour 158°F (70°C)	131	143	173	189
II. Adhesion to Other Surfaces²				
ASTM D3330 modified (90 degree peel, 2 mil aluminum foil backing)				
Dwell/substrate:				
	2.3 mil (.0023 inches)		4.9 mil (.0049 inches)	
	Oz./In.	N/100 mm	Oz./In.	N/100 mm
72 hour RT ABS	55	60	65	71
72 hour RT glass	70	77	89	97
72 hour RT polycarbonate	55	60	63	69
III. Relative High Temperature Operating Ranges				
Short term (minutes/hours) 350°F (177°C)				
Long term (days/weeks) 250°F (121°C)				
IV. Static Shear - ASTM D3654 - 1" x 1" sample area - aluminum foil to stainless steel				
Minutes to Failure				
Temperature	Load	2 mil /5 mil		
70°F (21°C)	2000 grams	5,000/ 5,000		
158°F (70°C)	1000 grams	4,000/4,000		
V. Shelf Life of Tape in Roll Form				
24 months from the manufacturing date when stored at 70°F (21°C) and 50% relative humidity.				
VI. Environmental Performance				
The 3M™ Adhesive 220 family is resistant to occasional splashes of organic materials including MEK, automotive oil, weak acid and base solutions and gasoline. These adhesives are also resistant to humidity and intermittent water exposure.				
VII. Low Service Temperature				
The glass transition temperature, Tg, for 3M adhesive 220 is -31°F (-35°C). Many applications survive below this temperature. Factors to consider are: the materials being bonded, the dwell at RT before cold exposure and the stresses below the Tg (ie. expansion/contraction stresses, impact). Optimum conditions are: bonding HSE materials, longer time at RT before cold exposure and little or no stress below the glass transition temperature.				

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1220 Mound Avenue -Suite 140 – Racine, WI 53404 – (800) 776-7194 – (262) 637-7103 – Fax (262) 637-8205