3M Laminating Adhesives/Data Page

FOD # 0915

Scotch[®] 9567 Stabilized Laminating Adhesives 9568 Stabilized Laminating Adhesives

Description:

Scotch 9567 and 9568 stabilized "Hi-Performance" acrylic laminating adhesives are specifically designed for industrial applications requiring excellent bond strength, outstanding aging and superior roll stability. The adhesive is a stabilized version of Scotch 467/468 for narrow roll requirements.

Features:

- Stabilized adhesive for narrow rolls
- #200 "Hi-Performance" acrylic adhesive for excellent chemical, temperature and environmental resistance
- 9567 for application to smooth surfaces
- 9568 for application to rough or textured surfaces

Product Specifications:

		950	68	9567 Appropriate Thickness	
		Appropriate	e Thickness		
Product	Description	Inches	<u>(mm)</u>	Inches	<u>(mm)</u>
Adhesive:	#200 "Hi-Performance" Acrylic	0.005	(0.127)	0.002	(0.051)
Liner:	62# Kraft Glassine	0.0035	(0.089)	0.0035	(0.089)
	Total Thickness:	0.0085	(0.216)	0.0055	(0.140)

Properties and Performance:

The properties defined are based on the attachment of impervious face plate materials (such as aluminum) to a aluminum test surface.

1. Bond Buildup	The bond strength of Scotch [®] #200 "Hi-Performance" Acrylic Adhesive increases as a function of time and temperature.
2. Humidity Resistance	High humidity has minimal effect on adhesive performance. Bond strengths are generally higher after exposure to 7 days 100°F (38°C) 100% R.H.
3. U.V. Resistance	Ultraviolet light does not affect the adhesive performance. Bond strengths are generally higher after exposure to 1 year in Florida, or sunlight chamber that simulates outdoor exposure.
4. Water Resistance	Immersion in water has no appreciable effect on the bond strength. After 100 hours in 150° F (65°C) water the adhesive shows an increase in bond strength.
5. Temperature Cycling Resistance	Bond strength generally increases after cycling 5 times through: 30 min. $250^{\circ}\text{F} (121^{\circ}\text{C})$ 15 min. $72^{\circ}\text{F} (22^{\circ}\text{C})$ 30 min. $-20^{\circ}\text{F}(-29^{\circ}\text{C})$ 15 min. $72^{\circ}\text{F} (22^{\circ}\text{C})$
6. Chemical Resistance	When properly applied, nameplate and decorative trim parts will hold securely after exposure to numerous chemicals including gasoline, oil, kerosene, JP-4 fuel, grease, mild acids and alkalies, and most aromatic and aliphatic solvents.
7. Heat Resistance	The #200 "Hi-Performance" adhesive is serviceable for short periods (minutes, hours) at temperatures up to 350° F (177°C) and for intermittent longer (days, weeks) exposure up to 250° F (121°C).

Adhesion Properties:

The results indicated are typical values

	9567				9568				
ASTM D903 180° peel, 12"/min. (305 mm/min.) 1 mil polyester to stainless steel,		<u>Oz./In.</u>	<u>N/</u>	<u>100 mm</u>	<u>(</u>	<u>)z./In.</u>	<u>N</u>	7 <u>/100 mm</u>	
20 min. dwell		55		60		86		94	
3M Test 90° peel, 12"/min.	72 hr. Dwell		<u>Ultimate Bond</u>		72 hr. Dwell		<u>Ultimate Bond</u>		
(305 mm/min.) 8 mil aluminum to various surfaces	#/in.	N/100 mm	#/in.	N/100 mm	#/in.	N/100 mm	#/in.	N/100 mm	
Metal (stainless)	7.2	126	12.7	222	12.9	226	21.3	373	
High Surface Energy Plastic (Polycarbonate)	5.1	89	3.8	67	7.7	135	4.9	86	
Low Surface Energy Plastic									
(Polypropylene) Evaluate 9471					Evaluate 9472				

Special Considerations:

For maximum bond strength of the surface should be thoroughly cleaned and dried. A typical cleaning solvent is heptane or isopropyl alcohol.

Bond strength can also be improved with firm application pressure and moderate heat causing the adhesive to flow and develop intimate contact to the bonding surface.

Applications:

The 0.002" 9567 is suited for joining materials that are smooth, thin, and have low residual stress. The 0.005" 9568 is suited for joining lightly textured surfaces that have low residual stress. If heavier textured surfaces are to be joined, Scotch 468 MP 5-mil unstabilized adhesive should be considered.

4/1/96

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