

## DIELECTRIC POLYMERS, INC

### TRANS-SIL<sup>®</sup> SILICONE TRANSFER ADHESIVE

#### DESCRIPTION

TRANS-SIL<sup>®</sup> NT-1001 unsupported silicone transfer adhesive is designed for high performance applications requiring chemical resistance, high bond strength to low surface energy materials and resistance to extreme temperatures (-300° F to 500° F). The 2 mil adhesive is protected by two clear polyester film liners.

#### SURFACE APPLICATIONS

Used in electronics, aerospace, automotive and other applications involving harsh environments. Bonds well to silicone foam, metals, most plastics and low energy surfaces such as polyethylene and polypropylene.

#### CONSTRUCTION

Liner: 2 mil (.05 mm) polyester film release liner  
 Adhesive: 2 mil (.05 mm) pressure sensitive silicone  
 Liner: 2 mil (.05 mm) polyester film release liner

#### PERFORMANCE PROPERTIES

- Excellent chemical resistance
- Excellent low and high temperature performance, -300° F to 500° F (-185° C to 260° C)
- UV resistant
- Resists aromatic and aliphatic solvents

#### 180° PEEL ADHESION AND SHEAR STRENGTH, ROOM TEMPERATURE

SURFACE ENERGY		PEEL STRENGTH 1 mil PET				SHEAR STRENGTH 1 mil PET
		20 minute dwell		24 hour dwell		24 hour dwell 1" x 1" 1000 gms
Dynes/cm		oz./in.	N/100 mm	oz./in.	N/100 mm	Minutes to fail
400	Alum.	48	53	50	55	> 10,000
	Stainless steel	48	53	50	55	> 10,000
Cu,Zn,Sn,Pb						
	Glass	44	48	49	54	> 10,000
	Polyimide	40	44	44	48	> 10,000
Phenolic, Nylon						
	Polyester	39	43	43	47	> 10,000
	ABS	45	49	47	51	> 10,000
	Polycarbonate	43	47	45	49	> 10,000
	PVC	44	48	45	49	> 10,000
	PPO	45	49	46	50	> 10,000
	Acrylic	41	45	41	45	> 10,000
PVA,PS,EVA						
	Polyethylene	41	45	44	48	> 10,000
	Polypropylene	39	43	43	47	> 10,000
TEDLAR						
	SIL	37	40	37	40	> 10,000
18	TF	31	34	32	35	> 10,000

#### ELECTRICAL PROPERTIES (NT-1001 silicone adhesive as a dry, cured self-supported mass; no film support)

	<u>ASTM Procedure</u>	
Dielectric Strength	D-149	1487 volts/mil @ 2 mils of adhesive = 2974 volts
Dielectric Constant	D-150	@ 10 <sup>2</sup> Hz = 2.99; @ 10 <sup>5</sup> Hz = 2.93
Dissipation Factor	D-150	@ 10 <sup>2</sup> Hz = 0.0046; @ 10 <sup>5</sup> Hz = 0.0025
Volume Resistivity	D-257	@ 75 volts/mil, otmm-cm = 2.5 x 10 <sup>15</sup>