

CV-2680-12

Controlled volatility film adhesive

DESCRIPTION

- Two-part film adhesive
- Cures at room temperature or rapidly with heat

Meets or exceeds the ASTM E 595 low outgas specifications outlined in NASA SP-R-0022A and European Space Agency PSS-014-702, with a TML of $\leq 1\%$ and CVCM of $\leq 0.1\%$

APPLICATION

- For electronic and space applications requiring low outgassing and minimal volatile condensables to avoid condensation in sensitive devices
- For bonding or sealing silicone elastomers and some metals or plastics
- For applications requiring shorter work times, easy clean-up, and consistent bond thickness

PROPERTIES

Typical Properties	Average Result	Standard	NT-TM
Uncured:			
Appearance, Part A*	Translucent	-	139
Appearance, Part B*	Translucent	ASTM D2090	002
Dimensional Analysis*	0.013 inches (0.3 mm)	-	138
Cured: 4 hours at 65°C (149°F)			
Lap Shear Strength*	250 psi (1.7 MPa)	ASTM D1002	157
Coefficient of Linear Thermal Expansion, above T _g (-25 to 250°C)	465 ppm/°C (465 $\mu\text{m}/\text{m}/^\circ\text{C}$)	ASTM D3386	-
Collected Volatile Condensable Material (CVCM)*	0.06%	ASTM E595	072
Total Mass Loss (TML)*	0.29%	ASTM E595	072
Base Properties (material not in Film form):			
Tensile Strength	1,450 psi (10.0 MPa)	ASTM D412	007
Elongation	850%	ASTM D412	007
Tear Strength	115 ppi (20.3 kN/m)	ASTM D624	009

Typical Properties	Average Result	Standard	NT-TM
Young's Modulus	315 psi (2.2 MPa)	-	-
Lap Shear Strength (primed w/ SP-270)	250 psi (1.7 MPa)	ASTM D1002	010
After High Temperature Exposure: 7 days @ 240°C (464°F)			
Tensile Strength	420 psi (2.9 MPa)	ASTM D412	007
Elongation	395%	ASTM D412	007
Tear Strength	50 ppi (8.6 kN/m)	ASTM D624	009
Young's Modulus	150 psi (1.0 MPa)	-	-
Lap Shear Strength (primed w/ SP-270)	200 psi (1.4 MPa)	ASTM D1002	010
10 cycles of 5 minutes at 300°C (572°C)			
Tensile Strength	1,400 psi (9.5 MPa)	ASTM D412	007
Elongation	750%	ASTM D412	007
Tear Strength	110 ppi (19.2 kN/m)	ASTM D624	009
Young's Modulus	300 psi (2.1 MPa)	-	-
Lap Shear Strength (primed w/ SP-270)	300 psi (2.1 MPa)	ASTM D1002	010

*Properties tested on a lot-to-lot basis. Do not use the properties shown in this technical profile as a basis for preparing specifications. Please [contact](#) NuSil Technology for assistance and recommendations in establishing particular specifications.

INSTRUCTIONS FOR USE

Apply the activator to one or both surfaces coming in contact with the film and allow the solvent to evaporate. Peel off the dark blue backing and apply the sheeting to one surface. Remove the other backing and apply the other surface to the film.

Substrate Considerations

Cures in contact with most materials, exceptions include: sulfur-cured organic rubbers, latex, chlorinated rubbers, some RTV silicones and unreacted residues of some curing agents.

Processing and Handling Recommendations

Product cures at a wide range of cure times and temperatures to accommodate different production needs. [Contact](#) NuSil technical sales staff regarding questions or concerns related to a particular application.

Packaging

12"x 12" Sheet Kit
(30.48 x 30.48 cm)
14" x 20' Roll
(35.56 x 609.6 cm)

Warranty

12 Months

OPERATING TEMPERATURE

The operating temperature range of a silicone in any application is dependent on many variables, including but not limited to: temperature, time of exposure, type of atmosphere, exposure of the material's surface to the atmosphere, and mechanical stress. In addition, a material's physical properties will vary at both the high and low end of the operating temperature range. Silicone typically remains flexible at extremely low temperatures and has been known to perform at -50°C (-58°F) as well as resist breakdown at elevated

temperatures up to 250°C (482°F). The user is responsible to verify performance of a material in a specific application.

ROHS AND REACH COMPLIANCE

Please [contact](#) NuSil Technology's Regulatory Compliance department with any questions or for further assistance

SPECIFICATIONS

Do not use the properties shown in this technical profile as a basis for preparing specifications. Please [contact](#) NuSil Technology for assistance and recommendations in establishing particular specifications.

WARRANTY INFORMATION

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Do not use any chemical in a food, drug, cosmetic, or medical application or process until having determined the safety and legality of the use. The user is responsible to meet the requirements of the U.S. Food and Drug Administration (FDA) and any other regulatory agencies. Before handling any other materials mentioned in the text, the user is advised to obtain available product safety information and take the necessary steps to ensure safety of use.

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