

MED-1000 & MED-1011

Silicone Adhesives

Product Profile



Creative Partners in a Material World

NuSil Technology

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An ISO 9001 Certified Company

Description

- One-part, self-leveling, solvent-free silicone materials
- Cure at room temperature upon exposure to atmospheric moisture

Applications

- For bonding silicone elastomers to each other and some synthetics and metals

NuSil Technology's MED-1000 & MED-1011 are restricted products. They shall not be considered for use in human implantation for a period of greater than 29 days.

Typical Properties	Result		Metric Conv.		ASTM	NT-TM
	MED-1000	MED-1011	MED-1000	MED-1011		
Uncured:						
Appearance	Translucent		-		D2090	002
Volatility	2.3%	2.5%	-	-	D2288	004
Flow Rate*	2 inches	2 inches	50.8 mm	50.8 mm	D2202	019
Tack-Free Time	10 min.	10 min.	-	-	C679	005
Cured: 72 hours @ ambient temp. and humidity						
Specific Gravity	1.08	1.12	-	-	D792	003
Durometer, Type A	25	25	-	-	D2240	006
Tensile Strength	1,175 psi	1,400 psi	8.1 MPa	9.7 MPa	D412, D882	007
Elongation	700%	800%	-	-	D412, D882	007
Tear Strength	90 ppi	100 ppi	15.8 kN/m	17.6 kN/m	D624	009
Stress @ 200% Strain	110 psi	105 psi	0.76 MPa	0.72 MPa	D412, D882	007

*0.375 inches (9.525 mm) plunge for 1 minute

Instructions for Use

Apply MED-1000 and MED-1011, supplied in cartridges, with the use of an appropriate caulking gun. Do not store alcohol near the worksite as traces of alcohol inhibit the catalytic system of the adhesive.

Surface Preparation

Thoroughly clean surfaces being bonded or built-up with silicone adhesive using a non-oily cleaner or mild soap to remove any surface contaminants. Do not use synthetic detergents or oil-based soaps, as they may be absorbed and subsequently leach out. Rinse copiously with hot water and follow with a thorough rinse using distilled water. Use compatible degreasers to clean metal surfaces.

Bonding Applications

Spread a layer of silicone adhesive on one of the surfaces. Squeeze both surfaces together to bond. Apply sufficient pressure to ensure full contact without forcing the silicone adhesive from between the pieces.

Curing Time

Curing or vulcanization time depends upon the thickness of the silicone adhesive layer, relative humidity, and accessibility of atmospheric moisture to the curing adhesive. For sections of typical thickness, a relative humidity level between 20-60% is recommended to cure the adhesive at room temperature.

Packaging

6 Oz. Tube (177 mL)
32 Oz. Tube (946 mL)
5 Gallon (18.2 kg)
Case (24 x 6 Oz.)

Warranty

12 Months

Generally the adhesive forms a thick, tack-free outer skin for thick section films within a few minutes after application. The vulcanization rate slows when exposing very thin films to excessive humidity ($\geq 80\%$ relative air humidity). For films below 80 microns, the relative air humidity should be within 30% - 50%.

Because MED-1000 and MED-1011 cure upon exposure to moisture vapor, keep the tubes tightly closed when not in use. A plug of cured material may form in the tip of the tube. Remove or dispense the plug from the tube before using.

Non-Sterile Packaged Units

The acidic nature of MED-1000 and MED-1011 provides a natural bactericidal effect. While containers may be relatively free of microorganisms, it cannot be considered sterile unless subjected to a validated sterilization process. When the adhesive is fully cured it can withstand sterilization with ethylene oxide, dry heat, or steam autoclaving. The size and shape of fabricated articles must be considered when establishing the conditions of sterilization. Larger quantities and larger parts may require longer periods of heating and may retain ethylene oxide longer than small parts. It is the user's responsibility to determine the outgassing time required for a particular application if ethylene oxide sterilization methods are used.

Caution

Do not use MED-1000 and MED-1011 in the uncured state to repair or encapsulate living tissue in the body because approximately 4.5% acetic acid (vinegar-like odor) evolves in vapor form during the cure process. Avoid contact with eyes and skin, as uncured adhesive irritates. Take appropriate precautions if wearing contact lens. In case of contact, flush eyes with water or use a dry towel to remove from skin and contact a physician. Keep out of the reach of children.

FDA Master Access File

A Master Access File for MED-1000 and MED-1011 has been filed with the U.S. Food and Drug Administration. Customers interested in authorization to reference the Master Access File must contact NuSil Technology.

Warnings About Product Safety

NuSil Technology believes the information and the data contained herein are accurate and reliable. However, the user is responsible to determine the material's suitability and safety of use. NuSil Technology cannot know each application's specific requirements and hereby notifies the user that it has not tested or determined this material's suitability or safety for use in any application. The user is responsible to adequately test and determine the safety and suitability for their application and NuSil Technology makes no warranty concerning fitness for any use or purpose. NuSil Technology has completed no testing to establish safety of use in any medical application.

NuSil Technology has tested this material only to determine if the product meets the applicable specifications. (Please contact NuSil Technology for assistance and recommendations when establishing specifications.) When considering the use of NuSil Technology products in a particular application, review the latest Material Safety Data Sheet and contact NuSil Technology with any questions about product safety information.

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, obtain available product safety information and take the necessary steps to ensure safety of use.

Specifications

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

Patent Warning

NuSil Technology disclaims any expressed or implied warranty against the infringement of any patent. NuSil Technology does not warrant the use or sale of the products described herein will not infringe the claims of any United States' or other country's patents covering the product itself, its use in combination with other products or its use in the operation of any process.

Warranty Information

NuSil Technology's warranty period is 12 months from the date of shipment when stored below 40°C in original unopened containers. Unless NuSil Technology provides a specific written warranty of fitness for a particular use, NuSil Technology's sole warranty is that the product will meet NuSil Technology's then current specification. NuSil Technology specifically disclaims any other expressed or implied warranty, including warranties of merchantability and fitness for use. The exclusive remedy and NuSil Technology's sole liability for breach of warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted. NuSil Technology expressly disclaims any liability for incidental or consequential damages.