

NuSil Technology

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An ISO 9001 Certified Company

Product Profile

MED-1137 Adhesive Silicone Type A

Description:

NuSil Technology MED-1137 is a one-component, low slump, translucent silicone RTV material for bonding silicone elastomers to each other and to some synthetics and metals.

It contains no solvents and cures at room temperature upon exposure to atmospheric moisture. During the curing process, the silicone adhesive releases acetic acid vapor as a by-product. After final cure, the resulting silicone elastomer possesses the appearance, texture and general composition of many conventional silicone elastomers.

Advantages of this product include:

- Provided in ready-to-use tubes for easy application
- Cures at room temperature at moderate relative humidity
- Can be shaped by spatula or other hand-held tools

Applications:

NuSil Technology MED-1137 is used for bonding silicone elastomers to each other and to some synthetics or metals.

The purchaser should thoroughly test products made in part or otherwise incorporating NuSil Technology elastomers to determine the acceptability of the products' performance in a specific application.

Instructions For Use:

Surface Preparation

Surfaces to be bonded or built-up with silicone adhesive should be cleaned thoroughly to remove possible surface contaminants. Use a non-oily cleaner or mild soap. Do not use synthetic detergents or oil-based soaps, as these soaps may be absorbed and may subsequently leach out. Rinse copiously with hot water and follow with a thorough rinse with distilled water. Compatible degreasers, such as 1,1,1-trichloroethane, may be used to clean metal surfaces.

Bonding Applications:

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

Curing Time:

Curing or vulcanization time depends upon the thickness of the silicone adhesive layer, the relative humidity, and the accessibility of atmospheric moisture to the curing adhesive.

For sections of typical thickness, a relative humidity level between 20 to 60 percent is recommended to cure the adhesive at room temperature, since controlled atmospheric moisture is an important factor for vulcanization. Dry heat will not accelerate

the cure and should not be used for at least the first 72 hours.

Usually the adhesive forms a thin, tack-free outer skin for thick section films within a few minutes after application. Any shaping of the uncured adhesive should be completed before this skin forms. A spatula serves well as a shaping instrument and works best if kept wet with distilled water (sterile, if required) while shaping the uncured adhesive. A piece of ice can also be used as a shaping tool.

Because MED-1137 cures upon exposure to moisture vapor, the tube must be kept 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-1137 provides a natural bactericidal effect. While a MED-1137 container may be relatively free of microorganisms, it cannot be considered sterile unless subjected to a validated sterilization process.

MED-1137 is not intended to be sterilized in the tube, as the white polyethylene cap on the tube will not withstand heat-sterilization temperatures. 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 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 responsibility of the user to determine the outgassing time required for a particular application if ethylene oxide sterilization methods are used.

Caution:

MED-1137 should not be used in the uncured state to repair or encapsulate living tissue in the body since acetic acid is evolved in vapor form during the cure process. On contact, uncured adhesive irritates eyes. Avoid contact with eyes and skin. Contact lens wearers should take appropriate precautions. In case of contact, flush eyes with water. Call a physician. Remove from skin with dry cloth or paper towel. Adhesive releases acetic acid (vinegar-

like odor) during cure. Keep out of reach of children.

Shipping Limitations:

None

Packaging:

MED-1137 is supplied in non-sterile tubes.

- Twenty-Five Ounce Tube
- Two Ounce Tube
- Five Ounce Tube
- Six Ounce Tube
- Twelve Ounce Tube

Typical Properties as Supplied:

| | <u>MED-1137</u> |
|--------------------------------|-------------------|
| Appearance, | Translucent paste |
| Skin-Over Time, minutes | 5 |
| Odor | Acetic Acid |
| Specific Gravity | 1.07 |
| Durometer Hardness, Type A | 29 |
| Tensile, psi / Mpa | 550 / 3.8 |
| Elongation | 450 |
| Metals, ppm | |
| Al | <100 |
| P | <300 |
| Fe, Sb, Ge, Mg, Mn, Mo, Pb, | |
| Cr, Bi, Ti, Be, Ca, V, Zn, Ag, | |
| Co, Ni, Cu, Zr, Ba, As | <10 |
| Sn | 150 |

Test Methods:

| | <u>ASTM</u> | <u>NTM</u> ⁽¹⁾ |
|---------------------|-------------|---------------------------|
| Appearance, uncured | ----- | 002 |
| Specific Gravity | D 792 | 003 |
| Durometer Hardness, | | |
| Type A | D2240 | 006 |

Specification Writers: Please contact NuSil Technology, Specification Department, 1040 Cindy Lane, Carpinteria, California 93013, before writing specifications on this product.

FDA Master File:

A Master File for MED-1137 has been filed with the U.S. Food and Drug Administration. The Master File will contain the results of applicable chemical and mechanical equivalency tested as well as confirmatory biological testing. Customers interested in authorization to reference these files must contact NuSil Technology.

Warnings About Product Safety:

NuSil Technology believes that the information and data contained herein is accurate and reliable; however, it is the user's responsibility to determine suitability and safety of use for these materials. NuSil Technology can not know the specific requirements of each application and hereby makes the user aware that it has not tested or determined that these materials are suitable or safe for any application. It is the user's responsibility 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. There has been no testing done by NuSil Technology 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, you should review the latest Material Safety Data Sheets and contact NuSil Technology for any questions about product safety information you may have.

No chemical should be used in a food, drug, cosmetic, or medical application or process until you have determined the safety and legality of the use. It is the responsibility of the user 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, you should obtain available product safety information and take the necessary steps to ensure safety of use.

Specifications:

The typical properties shown in this technical profile should not be used 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 that the use or sale of the products described herein will not infringe the claims of any United States patents or other country's patents covering the product itself or the use in combination with other products or in the operation of any process.

Warranty Information:

NuSil Technology's warranty period is 6 months from date of shipment when stored below 40°C in original unopened containers. Unless NuSil Technology provides you with 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 express or implied warranty, including warranties of merchantability and of fitness for use. Your 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, and NuSil Technology expressly disclaims any liability for incidental or consequential damages.