

BIOMATERIALS  
 PREMIUM CARE LINE

# MED-4980

## Liquid Silicone Rubber

### DESCRIPTION

- Two-part, translucent silicone system used with injection molding equipment
- Cures with heat via addition-cure chemistry
- 1:1 Mix Ratio (Part A: Part B)

### APPLICATION

- For the injection molding of parts requiring a material with a high durometer including: molded rubber stoppers, gaskets, seals, valves, o-rings and other precision parts
- Suitable for over-molding applications
- Can be used with NuSil's Healthcare color masterbatches for applications requiring colored silicones

NuSil®MED-4980 shall not be considered for use in human implantation for a period of greater than 29 days.

### PROPERTIES

Typical Properties	Average Result	Standard	NT-TM
Uncured:			
Appearance	Translucent	ASTM D2090	002
Extrusion Rate*, Part A	35 g/min	ASTM C603	033
Extrusion Rate*, Part B	180 g/min	ASTM C603	033
Work Time	>24 hours	-	008
Cured: 5 minutes at 165°C (329°F)			
Specific Gravity	1.17	ASTM D792	003
Durometer, Type A	80	ASTM D2240	006
Tensile Strength	1000 psi (6.9 MPa)	ASTM D412	007
Elongation	250%	ASTM D412	007
Tear Strength	90 ppi (15.9 kN/m)	ASTM D624	009
Stress at 200% Strain	865 psi (6.0 MPa)	ASTM D412	007
Tissue Culture (Cytotoxicity Testing)	Pass	USP <87> ISO 10993-5	061
Elemental Analysis of Trace Metals	Pass	ASTM E305	131

\* Performed using a Semco model 250-A pneumatic gun with a 1/8" nozzle orifice and 90 +/- 5 psi air pressure

The test data shown for this material is the average value for typical properties. All of these properties may not be tested on a lot to lot basis and cannot be used to draft specifications. Please [contact](#) us for assistance and recommendations in establishing limits for product specifications

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INSTRUCTIONS FOR USE

Mixing

Combine Part A and Part B in a 1:1 mix ratio prior to use. Airless mixing, metering or dispensing equipment is recommended for production operations.

Recommended mixing equipment: <https://synergymixers.com/>

If mixing by hand, take care to minimize air entrapment.

Vacuum Deaeration

Remove air entrapped during mixing by common vacuum deaeration procedure, observing all applicable safety precautions. Slowly apply full vacuum to a suitable container of at least four times the volume of material being de-aired. Hold vacuum until bulk deaeration is complete.



**DASD™ Vacuum Mixers**

The DASD™ Dual Asymmetric Servo Drive Mixers is the most advanced mixing technology available today, fully capable of mixing a variety of materials from thick to thin in any combination quickly and repeatably.

Contact our mixing gurus today:  
[www.synergymixers.com](http://www.synergymixers.com)

NO Bubbles   NO Blades   NO Cleanup

Substrate Considerations

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

Vulcanization

Curing of the blended elastomer is accelerated by heat. The pre-measured catalyst provides a fixed cure rate. Do not attempt to change molding times by mixing the two components in any other than a 1:1 ratio, as this will affect the properties of the elastomer. Only temperature adjustments should be employed to alter the rate of cure.

Note: Some bonding applications may require the use of a primer.

Recommended Primer: [MED1-161](#)

For more information on primer application, review: [Application & Storage Recommendations](#)

Packaging	Warranty
400 mL SxS Kit (0.420 kg)	12 Months
24 Ounce Kit (710 mL)	
2 Pint Kit (0.910 kg )	
2 Gallon Kit (7.28 kg)	
10 Gallon Kit (36.4 kg)	
2 Drum Kit (360 kg)	

WARRANTY INFORMATION

The warranty period provided by NuSil Technology LLC (hereinafter "NuSil Technology") 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 all other expressed or implied warranties, including, but not limited to, 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.

FDA MASTER FILE

A Master File for MED-4980 has been filed with the U.S. Food and Drug Administration. Customers interested in authorization to reference the Master File must [contact us](#) for more information.

REACH COMPLIANCE

Please [contact](#) our 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 us for assistance and recommendations in establishing particular specifications.

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**WARNINGS ABOUT PRODUCT SAFETY**

NuSil Technology believes, to the best of its knowledge, that the information and data contained herein are accurate and reliable. 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](#) Us 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](#) us 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, the user is advised to obtain available product safety information and take the necessary steps to ensure safety of use.

**PATENT / INTELLECTUAL PROPERTY WARNING**

NuSil Technology disclaims any expressed or implied warranty against the infringement of any domestic or international patent/intellectual property right. NuSil Technology does not warrant the use or sale of the products described herein will not infringe the claims of any domestic or international patent/intellectual property right covering the product itself, its use in combination with other products, or its use in the operation of any process.

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Bubbles



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Blades



NO  
Cleanup

## Dispensing Solutions

With over 25 years of knowledge in dispensing solutions, we are available to assist you with your dispensing and fine-tune your processes. Our catalogue features precision systems that provide consistent fluid applications, leading to enhanced accuracy, increased yields, decreased material expenses, improved process control, and a safer work environment.

Contact us today to discuss your options:

[sales@silicone-polymers.co.uk](mailto:sales@silicone-polymers.co.uk)



## Silicone Cleaning & Removal

To ensure a safe and clean environment and to prevent contamination that could impact your silicone in the future, we recommend using the following products on the link below:

[PST- Silicone Cleaning and Removal](#)

**Polymer Systems Technology Limited**

Unit 2, Network 4, Lincoln Road, Cressex Business Park, High Wycombe, Buckinghamshire, HP12 3RF

[www.silicone-polymers.com](http://www.silicone-polymers.com)

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