

# MED-4735, MED-4750 & MED-4765

Silicone Elastomers



Creative Partners in a Material World

NuSil Technology

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An ISO 9001 Certified Company

## Product Profile

### Description

- A series of two-part, high tear strength silicone elastomers
- Available as soft (4735), medium (4750), and firm (4765) silicones
- Thermally cure via addition cure chemistry
- Have non-tacky surfaces and no volatile byproducts or peroxide residues
- Strained through a minimum 200-mesh screen to ensure freedom from particulate contamination
- 1:1 Mix Ratio (Part A: B)

### Applications

- For molding or extruding parts for the healthcare industry

Typical Properties	MED-4735		MED-4750		MED-4765		ASTM	NT-TM
	Result	Metric	Result	Metric	Result	Metric		
<b>Uncured:</b>								
Plasticity (Part A)	70 mil	1.8 mm	100 mil	2.5 mm	135 mil	3.4 mm	D926	058
Plasticity (Part B)	70 mil	1.8 mm	90 mil	2.3 mm	120 mil	3.0 mm	D926	058
Work Time	2 hours		2 hours		2.5 hours	-	-	008
<b>Cured:</b> 10 min* @ 116°C, stabilize for a minimum 24 hours								
Specific Gravity	1.10	-	1.16	-	1.21	-	D792	003
Durometer, Type A	35	-	50	-	65	-	D2240	006
Tensile Strength	1,500 psi.	10.3 MPa	1,450 psi	10.0 MPa	1,100 psi	7.6 MPa	D412, D882	007
Elongation	1125%	-	1,000%	-	950%	-	D412, D882	007
Tear Strength, Die B	185 ppi	32.6 kN/m	250 ppi	44.1 kN/m	250 ppi	44.1 kN/m	D624	009
Stress @ 200% Strain	170 psi	1.2 MPa	300 psi	2.1 MPa	350 psi	2.4 MPa	D412, D882	007

\*Proportionally more time is required to cure thicker cross sections

### Instructions for Use

Combine Parts A and B in equal portions on a two-roll mill prior to use. Take care to work in a meticulously clean area with no organic rubbers used on the same equipment, as traces of foreign materials can poison the catalyst, thus inhibiting the cure.

### Blending

First soften Part B on a cooled two-roll mill. Remove from the mill and soften Part A. Add an equal portion by weight of softened Part B and cross blend the components until thoroughly mixed. Keep the temperature of the blended material as low as possible to give maximum table life. Blend only sufficient material required for use in within 3 to 4 hours. Extend the useful life of blended material by re-milling. Blended material may be stored in a freezer for at least 7 days if carefully wrapped. Warm material stored in a freezer to room temperature before unwrapping to avoid condensation on the elastomer, which may cause voids in molded or extruded parts.

### Vulcanization

Cure of the blended elastomer is accelerated by heat. The pre-measured catalyst gives the stock 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 change the properties of the elastomer. Only adjusting the temperature may vary the rate of cure.

### Packaging

2 Pound Kit (900 g)  
10 Pound Kit (4.54 kg)  
50 Pound Kit (22.68 kg)

### Warranty

12 Months

## **Cure Inhibition**

The cure may be inhibited by traces of amines, sulfur, nitrogen oxide, organotin compounds, and carbon monoxide. Because organic rubbers often contain these substances, they should not come in contact with the uncured elastomer. Catalyst residues from silicone RTV elastomers and peroxide-cured silicone elastomers may also inhibit the cure.

## **Post-Curing**

Because these materials vulcanize via addition cure, no residues are present and post cure is not required for many applications. The user must confirm that press molding or short oven-cures are suitable for any specific application.

## **FDA Master Access File**

Master Access Files for MED-4735, MED-4750, and MED-4765 have been filed with the U.S. Food and Drug Administration. Customers interested in authorization to reference a 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.