

MED-4014

Silicone Elastomer

Product Profile

Description

- Two-part, high tear strength silicone elastomer
- Thermally cures via addition cure chemistry
- 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: Part B)

Applications

- For molding or extruding of parts for the healthcare industry

NuSil Technology's MED-4014 is a restricted product. It 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
Uncured:				
Work Time	3 hours min.	-	-	074
Plasticity, Part A	60 mils	1.52 mm	D926	058
Plasticity, Part B	60 mils	1.52 mm	D926	058
Cured: 10 minutes* @ 116°C, stabilize for minimum 24 hours				
Specific Gravity	1.09	-	D792	003
Durometer, Type A	14	-	D2240	006
Tensile Strength	675 psi	4.6 MPa	D412, D882	007
Elongation	1450%	-	D412, D882	007
Tear Strength	140 ppi	24.7 kN/m	D624	009
Stress @ 200% Strain	35 psi	0.2 MPa	D412, D882	007

*Proportionally more time is required for 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 this material vulcanizes 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.

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

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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.