

# Product Profile

## R-2940 Thermally Conductive RTV Silicone

### Description:

NuSil Technology R-2940 is a two-part, gray, thermally conductive RTV silicone. The cure of R-2940 may be heat-accelerated, thereby eliminating the concerns of flow and separation often associated with highly filled materials. R-2940 has a service temperature of -65°C to 240°C (-85°F to 465°F).

### Applications:

NuSil Technology R-2940 is designed to provide heat transfer between electrical/electronic components and their heat sinks.

### Mixing:

NuSil Technology R-2940 base should be stirred well prior to weighing for curing agent addition. R-2940 should be thoroughly mixed in a ratio of 20 parts base to 1 part curing agent and vacuum deaired at 28 inches Hg prior to use.

### Vacuum Deaeration:

Air entrapped during mixing should be removed by common vacuum deaeration procedure, observing all applicable safety precautions. Apply vacuum slowly to a container rated for use and of volume at least four times the volume of material to be deaerated. Hold vacuum until presence of air is no longer visually evident.

### Typical Properties as Supplied:

	<u>R-2940</u>
Chemical Classification	VMQ
Color	Gray
Viscosity	Paste
Work Time @ 25°C (77°F), hours	2
Mix Ratio	20:1

### Typical Properties:

#### Cured 30 minutes @ 150°C (302 °F)

	<u>R-2940</u>
Specific Gravity @ 25°C (77°F)	2.41
Durometer, Type A	90
Tensile Strength, psi / MPa	800 / 5.5
Elongation, %	35
Tear Strength, ppi, Die B / kN/m	25 / 4.4
Thermal Conductivity, W/mK	0.84
<i>*Tested by ASTM C-177 * 20x10(-4) cal/cm-sec-C</i>	
Dielectric Strength, volt/mil	450

### Typical Cure Cycles:

At 25°C (77°F) NuSil Technology R-2940 has a tack free time of 24 hours, with full cure achieved in seven days. The addition of heat will result in the following cure schedule.

<u>Temperature</u>	<u>Time</u>
65°C (149°F)	4 Hours
100°C (212°F)	2 Hours
150°C (302°F)	30 Minutes

## **Substrate Consideration:**

R-2940 will cure in contact with most materials. Exceptions include butyl and chlorinated rubbers, some RTV silicones and unreacted residues of some curing agents.

NOTE: A PRIMER MAY BE REQUIRED IN SOME APPLICATIONS. NuSIL TECHNOLOGY CF1-135 PRIMER IS RECOMMENDED.

## **Packaging:**

One Pint kit  
One Gallon kit

## **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.

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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.