

**Novagard® 600 Series 600-251**  
**Potting and Encapsulant**  
**Preliminary Specification Data – Technical Data Sheet**



**DESCRIPTION**

Novagard 600 Series 600-251 is a two-component silicone that when mixed, cures to a hard elastomer with improved thermal conductivity. This material is ideally suited for application as a general potting compound in power supplies, connectors, industrial controls, and junction boxes.

**FEATURES**

- Wide range of compatibility
- Low shrinkage
- No exotherm during curing
- Low viscosity
- Excellent dielectric properties
- No solvents or cure by-products
- No post-cure cure required
- UL 94 V0 certification pending

**INSTRUCTIONS**

This material is shipped in separate containers that are labeled Part A and Part B. The compound is designed with a 1:1 volume-to-volume mix ratio. While the material may be mixed by hand, it is more appropriate to use automated, meter-mixing equipment as the work life is short. The ultimate cure time is under 4 hours and heat can accelerate the cure time. Automated mixing equipment eliminates the need for a deaeration cycle. If mixing by hand, weigh 100 parts of Part A into an appropriately sized mixing vessel; add 100 parts of Part B, mix thoroughly, and cast into power after short vacuum degas.

**STORAGE**

Novagard 600 Series 600-251 may be stored in the original unopened containers at, or below, 77°F (25°C) for up to one year.

**AVAILABILITY**

Novagard 600 Series 600-251 is available in 5-gallon, straight-sided pails or 55-gallon drums. Speak with a Novagard representative for custom packages.

**PRECAUTIONS**

Certain materials, chemicals, curing agents, and plasticizers may inhibit the cure. The most notable are organo-tin catalysts, amino compounds, polysulfide, and other sulfur-containing materials.

Do not use in or around highly oxidative chemicals such as liquid oxygen, chlorine, or peroxides. Not recommended for surfaces that are to be painted.

**GENERAL PROPERTIES**

**BEFORE CURE**

Physical Property	Test Method	Performance Range
Appearance	After mixing	White flowable
Mix Ratio	Base: Cure (by volume)	1:1
Specific Gravity (A/B)	ASTM D1875	1.60/ 1.60
Viscosity (cPs) A/B: 1:1 mixture Part A Part B	Brookfield HBT #2 @ 20 rpm	5,700 6,000 5,400
Working Time	RT	2 hours
Cure Time	70F (23°C) 140°F (60°C)	24 hours 30 min

**AFTER CURE**

Physical Property	Test Method	Typical Value
Tensile Strength (psi)	ASTM D412	420 ± 23
Elongation (%)	ASTM D412	71 ± 3
Hardness (Shore A)	ASTM D2240	52
Thermal Conductivity (w/m*K)	ASTM D5470	0.60
Thermal Expansion CTE (ppm/°C)	ASTM E831	250
Volume Resistivity (Ω cm)	ASTM D257	7.20E+13
Dissipation Factor (100 Hz/100 kHz)	ASTM D150	0.0317 / 0.0058
Dielectric Constant (100 Hz/100 kHz)	ASTM D150	3.38 / 3.23
Dielectric Strength	ASTM D149	> 22 kV/mm > 559 V/mil

**CERTIFICATIONS**

Physical Property	Test Method	Typical Value
Flammability	UL 94	V-0 (Pending)
Outgassing (TML & CVCM)	ASTM E595	Pass

\*The values outlined reflect testing that was conducted under laboratory conditions, actual results may vary. The information provided in the above table is not intended for use in preparing specifications. Please consult the manufacturer for additional information.

\*Total Mass Loss

\*Collected Volatile Condensable Material

**ADDITIONAL INFORMATION**

Novagard believes that the information provided is a true and accurate description of the characteristics of the aforementioned product, however, it is the responsibility of the individual user to thoroughly test the product in their specific application to determine performance, efficacy, and safety.