

Novagard® G644

Technical Data Specification



DESCRIPTION

Novagard G644 is a heat transfer compound that is formulated with select polydimethyl siloxane fluids in combination with metallic oxide fillers to provide superior thermal conductivity.

APPLICATIONS

Designed for use as a heat transfer compound in both the electrical and the electronic industries, Novagard G644 is similar to the original thermal compound, G641, only formulated to a higher penetration specification (softer). Characterized by its high thermal conductivity, high dielectric constant, and high dissipation factor, Novagard G644 is an ideal material for use in thermocouple wells, power diodes, transistors, semi-conductors, and ballasts, among various other applications. Novagard G644 exhibits excellent long-term storage stability, without the oil separation that is common to other brand names.

RESTRICTIONS

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.

AVAILABILITY

Novagard G644 is available in 3-ounce squeeze tubes, 1-gallon pails, 5-gallon pails, and 55-gallon drums.

STORAGE

Novagard G644 has a shelf-life of sixty (60) months from the date of manufacture, as indicated by the lot number, when stored in the original, unopened container at, or below, 100°F.

PRECAUTIONS

Silicone compounds may be cleaned with non-polar solvents such as toluene, hexane, and mineral spirits. Whenever using solvents be certain to observe all proper, safety precautions. Not for application on surfaces that are to be painted

Consult and obey all applicable local, state, and federal regulations for the disposal of solvent and silicone waste. For additional information consult product S.D.S.

PRODUCT SPECIFICATIONS

Physical Property	Test Method	Performance Range
Appearance		White Paste
Penetration (worked 60X)	ASTM D217	290 – 330
Bleed	200°C/24 hours	2.0% maximum
Evaporation	200°C/24 hours	2.0% maximum
Specific Gravity		2.3 minimum

TYPICAL PROPERTIES*

Physical Property	Test Method	Typical Value
Thermal Conductivity	Hot Wire Method	0.62 W/mK
Volume Resistivity	ASTM D257	$1.5 \times 10^{15} \Omega/\text{cm}^3$
Dissipation Factor	ASTM D150	0.0032
Dielectric Constant	ASTM D150	3.81
Dielectric Strength 10 mil gap	ASTM D149	400 v/mil

*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.

ADDITIONAL INFORMATION

Novagard believes that the information provided is a true and accurate description of the typical 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.