

Novagard® 500 Series 500-452
500 Series
Technical Data Specification - Preliminary

NOVAGARD®

DESCRIPTION

Novagard 500 Series 500-452 is a UL94 V1 Alkoxy adhesive. This single-component silicone-based sealant and/or adhesive provides fast tack-free times, flame and fire resistance, excellent electrical insulation, arc-resistance properties and superior bonding strength to general substrates.

FEATURES & BENEFITS

- UL94 V-1 Flammability Rating
- Wide range of compatibility
- Single component
- Primerless adhesion
- Excellent dielectric properties
- Room temperature curing
- Solvent-free formulation

APPLICATIONS

Specially formulated to retain the physical properties even during service in extreme environmental conditions, the product is a smooth paste that is ideal for applications that require superior bond strength and flame resistance. Designed primarily for electronics, automotive, industrial and aerospace/space applications, this material is well suited to sealing and bonding applications to a wide variety of plastic and non-porous or porous substrates.

INSTALLATION

As with all single-component materials, the work time and cure times of Novagard 500-452 is dependent upon environmental conditions such as temperature, humidity, and application thickness. Adhesion should be checked on small samples prior to full-scale production.

AVAILABILITY

Novagard 500-452 is available in 5-gallon pails and 310ml cartridge.

STORAGE

Novagard 500 Series 500-452 may be stored in the original unopened container at, or below, 70°F (21°C) for up to twelve (12) months.

PRECAUTIONS

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.

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.

PRODUCT SPECIFICATIONS - Preliminary

Physical Property	Test Method	Typical Value
Appearance	Visual	Gray Paste
Extrusion Rate (g/min)	1/8" orifice @ 50 psi	55
Skin Over Time (minutes)	1/8" @ 50% RH & 77°F	8
Viscosity (cPs)	Brookfield HB #7 @ 10 rpm	250,000

TYPICAL PROPERTIES*- Preliminary

Physical Property	Test Method	Typical Value
Specific Gravity (g/cm ³)	ASTM D0792	1.40
Through Cure (hour)	1/8" @ 50% RH & 77°F	72
Hardness (Shore A)	ASTM D2240	42
Tensile Strength (psi)	ASTM D412	400
Elongation (%)	ASTM D412	185
Dielectric Strength	ASTM D149	>17.7 kV/mm
Dissipation Factor (100 Hz / 100 kHz)	ASTM D150	0.0053 / 0.0054
Dielectric Constant (100 Hz / 100 kHz)	ASTM D150	2.95 / 2.85
Adhesion (pli) Glass Aluminum FR4 Stainless Steel Apply with primer	ASTM C794	6 - 8 6 - 8 6 - 12 4 - 6
Thermal Conductivity (W/m-K)	ASTM D5470	0.60
Coefficient of Thermal Expansion (CTE) (ppm/°C)	ASTM E831	272
Volume Resistivity (Ω-cm)	ASTM D257	2.50 x 10 ¹⁴
Chemical Resistance Gasoline Brake Fluid Antifreeze Wheel Cleaner		Yes Yes Yes Yes

CERTIFICATIONS

Physical Property	Typical Value
UL 94	V1
REACH	Compliant
PFAS free	Compliant
Cytotoxicity (ISO 10993-5)	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.

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.