



- Thermal management
- Vibration damping
- Shock absorption
- High surface wet-out

# NOVATHERM

## Novagard Thermal Management Materials

Novagard silicone-based thermal management materials offer excellent heat dissipation over a wide temperature and humidity range making them particularly useful for protecting electronics in extreme conditions. Along with thermal conductivity, they provide structural adhesion, rapid assembly, and environmental protection. Furthermore, Novagard silicones contain no solvents, are resistant to ozone and ultraviolet degradation, and come in a wide variety of cure systems.



Performance characteristics of our silicone formulations can be adjusted based on specific application requirements. Viscosity, hardness, adhesion, and cure properties can all be customized as needed.

Novagard is proud to serve the following industries:

- Automotive and Electric Vehicles
- Batteries and Control Modules
- Consumer Electronics
- Power Supplies & Power Systems
- Solid State (LED) Lighting
- Telecommunications Equipment
- Sustainable Energy

**NOVAGARD**  
SILICONE | HYBRIDS | FOAM

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ISO 9001:2015 QMS (with Design) | IATF 16949:2016 QMS (with Design)  
Certified Women's Business Enterprise | Certified Woman Owned Small Business

Made in the USA. For Professional Use.

Properties	Test Method	600-303	600-305	600-307	600-310	600-315
<b>Uncured</b>						
Form		Flowable	Flowable	Flowable	Flowable	Flowable
Cure Chemistry		2-part, Addition Cure	2-part, Addition Cure	2-part, Addition Cure	2-part, Addition Cure	2-part, Addition Cure
Appearance Part A Part B		White Green-Yellow	White Green-Yellow	White Green-Yellow	White Green-Yellow	White Green-Yellow
Thixotrophy		n/a	n/a	n/a	n/a	n/a
Specific Gravity (Mixed)		1.25	1.21	1.88	1.88	2.27
Viscosity (cP) Part A 10s-1 Part B 10s-1 Mixed		3,300 3,200 3,250	2,800 3,400 3,100	5,300 5,000 5,150	5,200 5,300 5,250	8,800 7,100 7,950
Density at 25°C (g/cm <sup>2</sup> )	ASTM D792	1.25	1.21	1.88	1.88	2.27
Mixed Ratio		1:1	1:1	1:1	1:1	1:1
Cure Time at 25°C		>1 hour	>1 hour	>1 hour	>1 hour	>1 hour
Working Life (Pot Life)		>1 hour	>1 hour	>1 hour	>1 hour	>1 hour
<b>Cured</b>						
Durometer Shore A	ASTM D2240	55	52	5	11	28
Appearance (Mixed)		Lime Green	Lime Green	Lime Green	Lime Green	Lime Green
Adhesive Strength (Aluminum Lap Shear) (MPa)	ASTM D3163	10	16	15	15	23
Dielectric Strength (V/mil)	ASTM D149	25.00	14.03	10.02	11.19	9.69
Dielectric Constant at 100 Hz	ASTM D150	1.01	1.03	1.05	1.22	1.35
Volume Resistivity (Ω cm)	ASTM D257-14	3.00x10 <sup>13</sup>	2.21x10 <sup>10</sup>	1.60x10 <sup>10</sup>	1.44x10 <sup>10</sup>	1.40x10 <sup>10</sup>
Dissipation Factor at 100 Hz	ASTM D150	0.000421	0.001759	0.000876	0.000552	0.000476
Thermal Conductivity , TC (W/mK)	ASTM D5470	0.30	0.50	0.75	0.90	1.40
Flammability Class (UL 94)	UL 94 V0	Yes	Yes	Yes	Yes	Yes

\*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 manufacturer for additional information.

Properties	Test Method	600-320	600-325	600-330	600-335	600-340	600-345	600-350
<b>Uncured</b>								
Form		Paste	Paste	Paste	Paste	Paste	Paste	Paste
Cure Chemistry		2-part, Addition Cure	2-part, Addition Cure	2-part, Addition Cure	2-part, Addition Cure	2-part, Addition Cure	2-part, Addition Cure	2-part, Addition Cure
Appearance Part A Part B		White Green-Yellow	White Green-Yellow	White Green-Yellow	White Green-Yellow	White Green-Yellow	White Green-Yellow	White Green-Yellow
Thixotrophy		n/a	n/a	n/a	n/a	n/a	n/a	n/a
Specific Gravity (Mixed)		2.45	2.81	2.88	2.89	2.93	2.97	3.00
Viscosity (cP) Part A 10s-1 Part B 10s-1 Mixed		35,400 21,400 28,400	59,000 38,700 48,850	70,000 38,000 54,000	46,000 32,000 39,000	62,000 43,000 52,500	88,100 49,700 68,900	106,000 127,000 116,500
Density at 25°C (g/cm <sup>2</sup> )	ASTM D792	2.45	2.81	2.88	2.89	2.93	2.97	3.00
Mixed Ratio		1:1	1:1	1:1	1:1	1:1	1:1	1:1
Cure Time at 25°C		>1 hour	>1 hour	>1 hour	>1 hour	>1 hour	>1 hour	>1 hour
Working Life (Pot Life)		>1 hour	>1 hour	>1 hour	>1 hour	>1 hour	>1 hour	>1 hour
<b>Cured</b>								
Durometer Shore A	ASTM D2240	42	58	30	56	54	68	35
Appearance (Mixed)		Lime Green	Lime Green	Lime Green	Lime Green	Lime Green	Lime Green	Lime Green
Adhesive Strength (Aluminum Lap Shear) (MPa)	ASTM D3163	30	103	0.1	30	40	65	77
Dielectric Strength (V/mil)	ASTM D149	6.86	10.97	7.61	22.68	15.61	13.42	7.39
Dielectric Constant at 100 Hz	ASTM D150	1.00	1.36	1.10	0.95	1.01	0.98	1.04
Volume Resistivity (Ω cm)	ASTM D257-14	1.31x10 <sup>12</sup>	6.60x10 <sup>11</sup>	1.70x10 <sup>12</sup>	7.85x10 <sup>11</sup>	5.05x10 <sup>11</sup>	5.91x10 <sup>11</sup>	1.11x10 <sup>10</sup>
Dissipation Factor at 100 Hz	ASTM D150	0.000621	0.000358	0.000532	0.000744	0.000843	0.000934	0.002071
Thermal Conductivity , TC (W/mK)	ASTM D5470	1.90	2.35	3.00	3.36	4.10	4.45	5.00
Flammability Class (UL 94)	UL 94 V0	Yes	Yes	Yes	Yes	Yes	Yes	Yes

\*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 manufacturer for additional information.