

Advanced Innovations. Collaborative Solutions.

We don't just manufacture materials — we engineer answers.

At Novagard, we partner with you to develop silicone solutions to meet your specific design, production, and performance challenges.

What We Make

- Silicone sealants, coatings, adhesives, lubricants, and PVC foams for demanding environments
- UV Cure, UV/Dual Cure, Moisture Cure (1K & 2K), Platinum Addition Cure chemistries
- Cure on demand UV silicones (3–5 second cure time)
- Electronics-grade silicones. Non-corrosive byproducts, no unreacted plasticizers

Why It Matters

- Custom formulations to meet performance specs like hardness, adhesion, and cure time
- Innovations are shared and applied across technology platforms and industries
- Sustainability, durability, and longevity at the core of every product

What Sets Us Apart

- Customer-centric and quality driven culture
- Agile R&D with materials science expertise
- Woman-owned with an 80% diverse workforce and 40% women in leadership
- Products designed and manufactured in USA
- CMMC Level 2 Compliant (SPRS Score: 82)

INDUSTRIES
WE SERVE

We bring specialized materials to high performance applications in:

AEROSPACE & DEFENSE

AUTOMOTIVE & MOBILITY

ELECTRONICS & FLEXIBLE
HYBRID ELECTRONICS

CONSTRUCTION &
BUILDING PRODUCTS

ENERGY & SOLAR

MEDICAL DEVICES &
WEARABLES

INDUSTRIAL
MANUFACTURING



Effective Date: Jun 2025-1.3



Encapsulants form a flexible protective shell that provides a conformal barrier around individual components

Pottants completely encapsulate a device, fully filling an enclosure to isolate and protect entire assemblies

Gels offer soft protection of components with reworkability for future repairs

NOVAGARD® Innovative Silicones for a Connected World

Novagard's silicone encapsulants and gels are engineered for demanding applications in electronics, sensors, energy, automotive, and industrial manufacturing. Designed to provide superior protection against environmental stressors, these high performance materials offer robust dielectric performance, thermal management, and long-term durability. They serve as protective materials in electronic assemblies to shield sensitive components from environmental hazards, thermal shock, vibration, and chemical exposure.

KEY BENEFITS

- Environmental Resistance:** Excellent protection against moisture, dust, vibration, and chemicals
- Dielectric Strength:** Maintains insulation performance in high voltage or sensitive electronic assemblies
- Extreme Environments:** Reliability in extreme temperatures: from -55°C to +200°C, with some up to 300°C
- Ease of Processing:** Adjustable work times including fast cures for quick processing, UV stable grades, and 1:1 ratios for manageable mixing
- Reworkability:** Gels can be re-entered for inspection or repair without damaging components

	SILICONES	EPOXIES & URETHANES
Thermal Range	-55°C to 200–300°C	Max 120–150°C
Flexibility	Low modulus, absorbs stress	Rigid, prone to cracking
Reworkable	Yes, self healing gel	No, permanently set
Cure Process	Room temp or heat, no exotherm	Heat cure, may require moisture control
Moisture Resistance	Excellent	Can degrade
Dielectric Performance	Excellent insulation properties	Medium to good
Shrinkage & Stress	Low shrink, minimal stress	Higher shrink, potential stress cracks



NOVAGARD®

Novagard encapsulants and gels are used in a range of critical applications. They protect electrical components from moisture and dust, absorb shock and vibration in mobile electronics, and provide dielectric isolation in high voltage systems.

APPLICATIONS

IoT / Communication: Tracker sensor encapsulation to enable tracking of assets in extreme environments

Aerospace / Space: Drone and satellite component encapsulation, high reliability insulation, and a low outgassing encapsulation offering (600–251)

Electronics / Automotive & Mobility: LiDAR sensor potting, onboard charger circuit protection, optical clarity in LEDs & displays, UV stability (600 series only)

Medical Devices: Wearable sensor coatings, high voltage imaging pottants

Energy & Power Systems: Junction box pottants, IGBT module encapsulants

	Standard Encapsulants	Specialty Encapsulants					Tough Gels	Specialty Gels	
	600–200	600–250	600–251	800–610	800–550	800–750	600–223	800–754	800–755
	Addition Cure Silicone	Clear Flowable Electronics Pottant	Flowable White Filled Encapsulant/Pottant	UV Cure Sprayable Silicone Encapsulant	UV Alkoxy Dual Cure Flowable Silicone	UV Alkoxy Dual Cure Sensor Encapsulant	Soft Dielectric Potting Gel	UV Cure Self-Leveling Pottant/Encapsulant	UV Cure Pottant & Encapsulant Soft Gel
Cure System (Mixing Ratio)	2K Addition Cure (1:1)	2K Addition Cure (1:1)	2K Addition Cure (1:1)	1K UV Cure	1K UV/Moisture Cure	1K UV/Moisture Cure	2K Addition Cure (1:1)	1K UV Cure	1K UV Cure
Description	Silicone gel that cures quickly to a soft, self-adhering material for deep section applications	Fast cure highly transparent, flowable encapsulant with excellent dielectric & flame resistant properties	Low-outgassing flowable encapsulant & pottant with excellent dielectric & flame resistant properties	Optically clear, low viscosity encapsulant curable up to 20mm that creates a solid elastomer	Flowable UV cure silicone with a secondary, neutral alkoxy moisture cure for enhanced adhesion & shadow cure	Medium viscosity UV cure silicone with secondary, neutral alkoxy moisture cure for enhanced adhesion & shadow cure	Platinum catalyzed electronics grade dielectric potting gel, designed to protect delicate circuits & assemblies	UV curable maximum vibration damping soft translucent pottant/ encapsulant (20mm single pass cure to a soft surface but not tacky)	UV curable maximum vibration damping soft translucent pottant/ encapsulant (20mm single pass cure to a soft tacky surface)
Used for	• General potting & encapsulation • Junction box enclosures • Clam shell connectors • Cable splice kits • Waterproof connectors & sensors • Electrical insulation • Amplifiers & relays	• LED lighting encapsulation • Power supplies • Connectors & sensors • Industrial controls • Transformers & amplifiers • High voltage resistor packs • Relays & junction boxes	• Photovoltaic junction boxes • Power inverters/power supplies • Industrial controls, transformers & amplifiers • High voltage resistor packs & relays • Sensor electronics • Security coatings • General potting applications	• Printed circuit/wiring boards • Flexible hybrid electronics • Rigid electronics • Sensitive components & harsh environments • Potting	• Sealing sensitive components & gaps against moisture & harsh environments • Coating & protecting fiber optic cables • Printed circuit/wiring boards • Flexible hybrid electronics • Rigid electronics • Conformal coating, sealing & potting	• Sensor coating • Medical device electronics • Printed circuit/wiring boards • Flexible hybrid electronics • Rigid electronics • Sensitive components & harsh environments • Formed-in-place gasketing • Sealing & potting	• Protecting delicate components • Sealing PCB assemblies • Encapsulating or potting sensors & other electronic devices	• Printed circuit/wiring boards • Flexible hybrid electronics • Formed-in-place gasketing • Rigid electronics • Sensitive components & harsh environments • Potting	• Potting of delicate components • Printed circuit/wiring boards • Flexible hybrid electronics • Rigid electronics • Sensitive components & harsh environments
Viscosity	Part A: 3,000 cPs Part B: 3,000 cPs Mixed: 3,000 cPs	Part A: 7,200 cPs Part B: 5,600 cPs Mixed: 6,300 cPs	Part A: 6,000 cPs Part B: 5,400 cPs Mixed: 5,700 cPs	1,000 cPs	5,500 cPs	50,000 cPs	Part A: 550 cPs Part B: 450 cPs Mixed: 500 cPs	50,000 cPs	55,000 cPs
Working Time	15 min @ RT	30 min @ RT	2 hrs @ RT	Cure on demand	Cure on demand	Cure on demand	>2 hrs @ RT	Cure on demand	Cure on demand
Cure Time	3 – 24 hrs	≥ 4 hrs @ RT 30 min @ 140°F (60°C)	24 hrs @ RT 30 min @ 140°F (60°C)	3–5 seconds	3 – 5 seconds Secondary Moisture Cure: 7 days	3 – 5 seconds Secondary Moisture Cure: 7 days	72 hrs @ RT 3 hrs @ 140°F (60°C) 30 min @ 212°F (100°C) 15 min @ 302°F (150°C)	3 – 5 seconds	3 – 5 seconds
Hardness (Shore A)	N/A	35	52	19	8	8	16 (Shore 00)	65 (Shore 00)	65 (Shore 00)
Dielectric Strength	N/A	673 V/mil	>559 V/mil	907 V/mil	>405 V/mil	TBD	330 V/mil	>395 V/mil	>395 V/mil
Thermal Conductivity	N/A	350 ppm/°C	250 ppm/°C	386 ppm/°C	TBD	TBD	400 ppm/°C	TBD	TBD
Listings/ Specifications	-	HB (pending) V-1 (pending)	V-0 (pending) ASTM E595	92%-94% transmittance	V-1 UL 746E ISO 10993-5	V-1 (pending) UL746E (pending) ISO 10993-5/10/23	-	-	



DESIGNED & MANUFACTURED
in CLEVELAND, OH