



Industrial Silicones

Product Selection Guide

NOVAGARD®



*Whatever you're doing with
your manufacturing*

**Adhering
Assembling
Gasketing
Protecting
Lubricating**

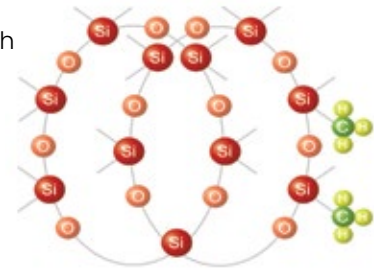
Silicone does it better.

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The values outlined in the following tables reflect testing that was conducted under laboratory conditions, actual results may vary. Some data in the enclosed tables are derived from pre-production samples and are subject to change. Consult TDS for up to date product data and specifications. The information provided in the tables is not intended for use in preparing specifications. Please consult your sales representative for additional info.

Silicones are **inert synthetic compounds** whose main component is **silicon** combined to **oxygen**.

These silicon-oxygen linkages (called siloxanes) have an extended bond length and uncommonly open bond angle as compared with other materials – properties our scientists leverage into product performance.



Derived from sand, silicone's backbone is solvent and carbon-free, making it an eco-friendly and sustainable option.

It begins with the chemistry

Product Performance Advantages:

- Protection against shock and vibration
- Flexible over a wide temperature range
- High dielectric strength and insulation resistance
- Resistant to chemicals and UV radiation
- Excellent adhesion to many substrates including metals & plastics
- Modifiable characteristics makes it the ideal material for just about any job

Novagard Silicone Advantages:

- Multiple cure technologies
- Great adhesion
- Wide viscosity range
- Quality products meeting the highest industry standards
- PFAS free

Adhering p6
Assembling p6
Gasketing p18
Protecting p24
Lubricating p30

Silicone does it better. And nobody does silicone better than **Novagard**.

It continues with our formulations

With over 35 years of silicone experimentation and development, Novagard offers you a broad line of PFAS free silicone products. And with no harmful VOC emissions or outgassing, our 100% solid materials are simply safer for people and the planet, while removing complexity, cost, and time from your manufacturing processes.

Cure chemistries

Selecting the right material often depends on your manufacturing environment and processes. That's why Novagard offers our industrial silicones in a variety of cure chemistries. Curing is the process by which the liquid (wet) silicone is converted into a solid form. During this reaction, the silicone polymer chains and other elements of the material bind together in a process called crosslinking.

Moisture Cure

Novagard manufactures one component and two component moisture cure materials. Rather than using heat to cure, these materials react with moisture to initiate the crosslinking process. This produces a small amount of byproduct. For electronics applications, engineers typically prefer an alkoxy moisture cure, which produces only non-corrosive methanol as its byproduct. Care must be taken when selecting oxime silicones as their byproducts can be corrosive to copper and yellow metals in enclosed environments. Novagard offers a broad selection of oxime silicones and alkoxy silicones & hybrids.

Single component materials arrive from Novagard completely mixed and ready to use. The curing of single component materials is limited by the rate at which the material can absorb moisture from the atmosphere, typically hours to days. Single component silicones are valued for their ease of use, strong adhesion, and shelf stability.

Novagard two component moisture cure materials are separate components (Part A and Part B) that must be mixed prior to use. The moisture required to drive the crosslinking process is contained within one of the components, which allows these products to cure rapidly (minutes to hours), speeding production. The mix ratio of two component systems may be fixed for simplicity, or variable for flexibility, depending on the composition of the formula and the customer's manufacturing requirements. These products are typically meter-mixed for precise control.

Novagard also offers hybrids for those times when an organic material is needed. While hybrids use the moisture in the air to cure, they skin over rather quickly and are paintable in one hour. Novagard hybrids adhere to most substrates without a primer. These are often used to bond materials with dissimilar coefficients of expansion, or where silicone is prohibited such as paint facilities.

Addition Cure

Addition cure materials arrive from Novagard as separate components (Part A and Part B) that must be mixed in a specific ratio prior to use. Everything necessary to crosslink these materials is contained within either Part A or Part B. Once the two components are mixed, the platinum catalyzed reaction occurs automatically – no added moisture or energy is necessary to complete the reaction (although the cure can often be accelerated with heat).

Two component addition cure materials crosslink very uniformly and predictably, do not absorb any constituent from the atmosphere, nor release any byproduct, eliminating shrinkage and the associated stresses. Addition cure materials typically have very limited adhesion, further reducing stress on components.

UV Cure

Novagard UV Cure materials are premixed and arrive ready to use. Once dispensed, these materials require energy to drive the crosslinking process. This energy comes from UV light, traditionally from a broad-spectrum mercury lamp, but more recently from a narrow spectrum LED lamp.

Our UV cure materials can be cured by using either a broad-spectrum UV system or a 365nm LED UV system. For the broad-spectrum UV system, we recommend a minimum dosage of 1,000 mJ/cm². For the 365nm LED UV system, we recommend a minimum dosage of 4,000 mJ/cm². Once exposed to sufficient UV energy, the crosslinking process occurs very rapidly often as quick as 3 - 5 seconds.



Adhesive Pastes

	400-1xx (filled) page 8	900-1xx page 9	500-09x* page 9	400-195 page 10	400-196 page 10	400-202 page 10	500-600 (Part A/Part B) page 11	400-590 page 12	900-5xx page 13	400-110 400-118 page 14	400-155 page 14	500-642 (Part A/Part B) page 15	400-900 400-950 page 16
Essential Attributes	General Purpose			Fast Cure					High Strength				Low Adhesion
	PHYSICAL PROPERTIES												
Appearance	Paste, various colors	Paste, various colors	Paste, black	Paste, translucent	Paste, translucent	Paste, black	Paste, black / Paste, white	Paste, black	Paste, various colors	Paste, black or gray	Paste, translucent	Paste, black / Paste, off-white	Paste, white or trans.
Cure Chemistry	Oxime Silicone (1-part)	Alkoxy Hybrid (1-part)	Alkoxy Moisture Cure (1-part)	Oxime Silicone (1-part)	Oxime Silicone (1-part)	Oxime Silicone (1-part)	Alkoxy Silicone (2-part)	Oxime Silicone (1-part)	Alkoxy Hybrid (1-part)	Oxime Silicone (1-part)	Oxime Silicone (1-part)	Alkoxy Silicone (2-part)	Oxime Silicone (1-part)
Viscosity (cPs)	450,000-750,000	250,000-600,000	225,000-650,000	350,000-800,000	200,000-400,000	350,000-750,000	50,000-160,000 / 30,000-85,000	-	400,000-1,200,000	500,000-900,000	400,000-1,500,000	150,000-400,000 / 35,000-100,000	320,000-550,000 / 150,000-250,000
Skin-Time	5 - 10 min	15 - 45 min	8 min	4 - 7 min	4 - 10 min	4 - 7 min	<10 min	<15 min	15 - 45 min	3 - 10 min	5 - 15 min	-	30 - 40 min
Through Cure	48 hrs	-	7 days	<72 hrs	<24 hrs	<72 hrs	-	<24 hrs	<4 days	2 - 24 hrs	3 - 6 hrs	-	24 hrs
Tensile Strength	170 - 220 psi	>200 psi	650 psi	>150 psi	150 - 180 psi	150 - 200 psi	200 - 300 psi	200 - 300 psi	300 - 400 psi	300 - 400 psi	>200 psi	175 - 275 psi	200 - 250 psi
Elongation	800 - 1,000%	>200%	150%	>300%	500 - 600%	500 - 600%	300 - 400%	400 - 500%	350 - 500%	300 - 500%	>300%	250 - 350%	250 - 350%
Hardness (Shore A)	20 - 30	40 - 55	40 - 55	15 - 35	15 - 25	15 - 25	35 - 45	>40	40 - 50	20 - 45	20 - 40	45 - 50	35 - 45
Adhesion	glass, aluminum, Lexan®	glass, aluminum, concrete, wood, PVC	glass, aluminum	glass, aluminum, wood	glass, aluminum, wood	glass, aluminum, Lexan®	glass, aluminum, steel, ceramic	chrome plated plastic, acrylic coated metal	glass, aluminum, wood	chrome plated plastic, acrylic coated metal	glass, aluminum, wood	chrome plated plastic, acrylic coated metal	no bond

*Lab preliminary data

Discovering the best method to bond components together for a specific application is about the most common challenge in manufacturing.

Novagard strives to produce exceptional solutions with sustainable silicone technology that meets all performance goals within harsh environments.



General Purpose Adhesive Pastes

400-1xx
series
(filled)

400-1xx
series
(unfilled)

900-1xx
series

500-09x

General Purpose Oxime-Cure Silicone Paste (1-part adhesive) 400-1xx

400-1xx is a single-component, non-sagging silicone paste that cures to a low to medium modulus, rubber-like solid. The cure mechanism is neutral (oxime), which cures on exposure to moisture in room temperature air. It is non-corrosive to metal substrates such as aluminum and ferrous metals (with adequate ventilation).

This ready-to-use adhesive sealant skins over in 5 - 10 minutes, and bonds to most common substrates without the use of a primer. With a lower odor than conventional acetoxy-cured silicones, this general purpose silicone is used in any area where the weather and environment needs to be sealed out.



- 400-100 (white, filled)
- 400-102 (black, filled)
- 400-103 (aluminum, unfilled)
- 400-108 (gray, filled)
- 400-150 (translucent, unfilled)

Applications include:

- Substitute for mechanical fasteners
- Formed-in-place gaskets
- Sealing refrigerator & freezer liners
- Adhering plastic moldings
- Waterproofing electrical components
- Sealing coaxial connectors
- Protecting instrumentation assemblies

Filled or unfilled?

Unfilled silicone adhesives are formulated primarily from silicone polymers, and typically also include plasticizers, crosslinkers, and catalysts. Filled silicone adhesives also include one or more reinforcing fillers, which can contribute to increases in thixotropy, shore hardness, elongation, and tensile strength.

	400-1xx series (filled)	400-1xx series (unfilled)
Appearance	Paste, various colors	Paste, various colors
Cure Chemistry	Oxime Silicone	Oxime Silicone
Viscosity (cPs) Brookfield #7 @ 10 rpm	450,000-750,000	350,000-700,000
Skin-Time 3/8" @ 50% RH & 77°F	5 - 10 min	5 - 10 min
Through Cure 3/8" @ 50% RH & 77°F	48 hrs	24 hrs
Tensile Strength ASTM D412	170 - 220 psi	140 - 180 psi
Elongation ASTM D412	800 - 1,000%	500 - 600%
Hardness (Shore A) ASTM D2240	20 - 30	15 - 25
Adhesion ASTM C794 Glass Aluminum Lexan® Wood	12 - 15 pli 10 - 14 pli 12 - 15 pli -	12 - 15 pli 10 - 14 pli - 12 - 15 pli
Specific Gravity ASTM D1875	1.15 - 1.25	1.00 - 1.05
Tear Resistance ASTM D624	30 - 35 pli	30 - 35 pli
Extrusion Rate 1/8" orifice @ 50 psi	30 - 80 g/min	-
Service Temp	-40°F to 400°F (-40°C to 204°C)	-40°F to 400°F (-40°C to 204°C)
Compliance	PFAS free, 50 state VOC	PFAS free, 50 state VOC

General Purpose Silicone-Free Hybrid Adhesive (1-part adhesive) 900-1xx

Functioning as an alkoxy-cure hybrid adhesive sealant, this silicone-free paste bonds to most substrates without the use of a primer. This adhesive is paintable in 1 hour, and is ideal for sealing materials with dissimilar coefficients of expansion. Suitable for use in automotive paint facilities and other environments that must remain silicone free.

- 900-100 (white)
- 900-102 (black)

Applications include:

- Metal-to-metal bonding
- Adhering to plastics, fiberglass, glass, and all common industrial substrates

UL94 V0 Alkoxy Silicone Paste (1-part adhesive) 500-09x

Product Development Pipeline

500-09x is a neutral cure (alkoxy), UL 94 V-0 rated black paste for applications that require superior bond strength and flame resistance. This one-part paste has a good balance of tensile strength and elongation and cures to a tough, resilient elastomer with no unreacted components remaining after cure.

When a non-corrosive product is required, 500-09x is an unprimed adhesive solution that delivers a more uniform bond, acts like a gasket to protect against moisture and dust, and helps dampen vibrations. This paste is safe for electronics applications.

500-09x skins over in less than 10 minutes, and is completely cured within 7 days. Specially formulated to retain its physical properties even during service in extreme environmental conditions, it is ideal for applications that require superior bond strength and a UL 94 V-0 rating.



Applications include:

- Frame and junction box sealant in photovoltaic modules, sensitive electronic components, and circuit boards
- General industrial sealing and bonding applications requiring a non-corrosive product

	900-1xx series	500-09x
Appearance	Paste, various colors	Paste, black
Cure Chemistry	Alkoxy Hybrid	Alkoxy Moisture Cure
Viscosity (cPs) Brookfield #7 @ 10 rpm	250,000-600,000	225,000-650,000 Brookfield HB #6 @ 20 rpm
Skin-Time 3/8" @ 50% RH & 77°F	15 - 45 min	8 min
Tensile Strength ASTM D412	>200 psi	650 psi
Elongation ASTM D412	>200%	150%
Hardness (Shore A) ASTM D2240	40 - 55	40 - 55
Adhesion ASTM C794 Glass Aluminum Concrete Wood PVC	7 - 13 pli 9 - 14 pli 9 - 17 pli 7 - 17 pli 7 - 12 pli	15 - 20 pli 15 - 20 pli - - -
Specific Gravity ASTM D1875	1.35 - 1.45	1.46
Extrusion Rate 1/8" orifice @ 50 psi	>100 g/min	>50 g/min
Slump Boeing Jig ASTM D2202	<0.1"	-
Compliance	PFAS free, 50 state VOC	REACH, PFAS free, 50 state VOC

Lab preliminary data

Fast-Cure Adhesive Pastes

400-195 **400-196** **400-202**

Fast-Cure Oxime Paste (1-part adhesive)

400-195 / 400-196 / 400-202

400-195 and 400-202 are non-flowable, non-sagging pastes that provide a fast tack free time and high green strength. 400-196 has similar physical properties in a softer and slumpier uncured form. The fast tack and early strength of these materials combine to hold the assembly together as a unit moves from station to station, outperforming slower materials in multi-step assembly applications.

The cure mechanism is neutral (oxime), curing on exposure to moisture in room temperature air. They are non-corrosive to metal substrates such as aluminum and ferrous metals (with adequate ventilation), and offer excellent adhesion to numerous substrates including metals and plastics. These smooth pastes cure to a low to medium modulus, rubber-like solid, and are ideal for applications that require superior bond strength and moisture resistance.

400-195 can serve as a drop-in replacement for DOWSIL™ 737 Neutral Cure Sealant. 400-195 and 400-202 are listed on the GM 9985557 / GMW18180 specifications.

400-195 (translucent)
400-196 (translucent)
400-202 (black)

Applications include:

- Component assembly
- Component staking
- Formed-in-place gaskets

	Paste, translucent	Paste, translucent	Paste, black
Appearance	Paste, translucent	Paste, translucent	Paste, black
Cure Chemistry	Oxime Silicone	Oxime Silicone	Oxime Silicone
Viscosity (cPs) <small>Brookfield #7 @ 10 rpm</small>	350,000-800,000	200,000-400,000	350,000-750,000
Skin-Time <small>3/8" @ 50% RH & 77°F</small>	4 - 7 min	4 - 10 min	4 - 7 min
Through Cure <small>3/8" @ 50% RH & 77°F</small>	<72 hrs	<24 hrs	<72 hrs
Tensile Strength <small>ASTM D412</small>	>150 psi	150 - 180 psi	150 - 200 psi
Elongation <small>ASTM D412</small>	>300%	500 - 600%	500 - 600%
Hardness (Shore A) <small>ASTM D2240</small>	15 - 35	15 - 25	15 - 25
Adhesion <small>ASTM C794</small> Glass Aluminum Wood Lexan®	12 - 15 pli 10 - 14 pli 12 - 15 pli -	12 - 15 pli 10 - 14 pli 12 - 15 pli -	12 - 15 pli 10 - 14 pli - 12 - 15 pli
Specific Gravity <small>ASTM D1875</small>	1.00 - 1.06	1.00 - 1.05	1.01 - 1.06
Tear Resistance <small>ASTM D624</small>	30 - 35 pli	30 - 35 pli	30 - 35 pli
Extrusion Rate <small>1/8" orifice @ 90 psi</small>	>100 g/min	-	>100 g/min
Dielectric Strength <small>ASTM D149</small>	>27.9 kV/mm (708 V/mil)	-	-
Volume Resistivity <small>ASTM D257</small>	1.5x10 ¹⁵ Ω-cm	-	-
Listings/Specifications	GM 9985557 GMW18180	-	GM 9985557 GMW18180
Compliance	PFAS free, 50 state VOC	PFAS free, 50 state VOC	PFAS free, 50 state VOC

Fast-Cure Silicone Paste (2-part adhesive) 500-600

Designed with a simple 2:1 fixed ratio for easy handling, this industrial adhesive is ideal for high-speed assembly. UL 746C certified (yellow card #E534109), this silicone paste is formulated to perform in extreme environments such as high humidity and exposure to high heat.

500-600 is a very quick curing material with less than 5 minutes open time. It rapidly builds green strength to allow parts to move swiftly from station to station in the assembly process without shifting. It is a medium modulus material with a balanced adhesion profile, and its low viscosities reduce strain on dispensing equipment. 500-600 adheres to many industrial substrates, including aluminum, steel, ceramic, ceramic glass, and polyester coated aluminum.

Applications include:

- General industrial assembly
- Consumer products assembly
- Adhesive for electrical equipment



500-600
(Part A/Part B)

	Paste, black Paste, white
Appearance	Paste, black Paste, white
Cure Chemistry	Alkoxy Silicone
Viscosity (cPs) <small>Brookfield #7 @ 10 rpm</small>	50,000-160,000 30,000-85,000
Base Ratio by Volume	2:1
Base Ratio by Weight	1.6:1
Mixed Color	black
Mixed Specific Gravity	1.4
Snap Time	<10 min
Tack-Free Time	<10 min
Working Time	<5 min
Skin-Time <small>3/8" @ 50% RH & 77°F</small>	<10 min
Tensile Strength <small>ASTM D412</small>	200 - 300 psi
Elongation <small>ASTM D412</small>	300 - 400%
Hardness (Shore A) <small>ASTM D2240</small>	35 - 45
Slump <small>Boeing Jig ASTM D2202</small>	<0.3"
Shear Stress <small>ASTM D1002 (@25°C/50% RH)</small>	150 - 200 psi 150 - 250 psi
Ceramic Glass to Stainless Steel	150 - 200 psi
Ceramic Glass to Aluminum	100 - 150 psi
Stainless Steel	100 - 200 psi
Polyester Painted Aluminum	150 - 250 psi
Ceramic Glass	150 - 250 psi
Ceramic Tile	150 - 250 psi
Galvalume	175 - 225 psi
Aluminum	125 - 175 psi
Glass	125 - 175 psi
Listings/Specifications	UL 746C
Compliance	REACH, PFAS free, 50 state VOC

Fast-Cure Oxime Paste

400-590

Blow Out Resistant Oxime-Cure Silicone Paste (1-part adhesive) 400-590

400-590 is a single-component, moisture-curing silicone paste that cures to a low to medium modulus, rubber-like solid. The cure mechanism is neutral (oxime), curing on exposure to moisture in room temperature air. It is non-corrosive to metal substrates such as aluminum and ferrous metals (with adequate ventilation), and offers excellent adhesion to numerous substrates including metals and plastics.

This ready-to-use adhesive sealant skins over in less than 15 minutes, and has a tensile strength of 200 - 300 psi after fully cured. When used as a blow-out resistant gasket (such as an automotive rear differential), 400-590 can withstand a 4 psi pressure test after 5 minutes. 400-590 is a smooth, black paste that is ideal for applications that require superior bond strength and moisture resistant sealing in automotive and industrial arenas.

Applications include:

- Formed-in-place gaskets that must be pressurized immediately after assembly

Appearance	Paste, black
Cure Chemistry	Oxime Silicone
Skin-Time 3/8" @ 50% RH & 77°F	<15 min
Through Cure 1/8" @ 50% RH & 77°F	<24 hrs
Tensile Strength ASTM D412	200 - 300 psi
Elongation ASTM D412	400 - 500%
Hardness (Shore A) ASTM D2240	>40
Adhesion ASTM C794 (7 days @ 75°F/100% RH) Chrome Plated Plastic Acrylic Coated Metal	>20 pli >20 pli
Specific Gravity ASTM D1875	1.30 - 1.45
Extrusion Rate 1/8" orifice @ 90 psi 1/8" orifice @ 50 psi	45-120 g/min minimum 10-45 g/min minimum
Slump Boeing Jig ASTM D2202	<0.3"
Chemical Resistance Novagard Test Method Gasoline Break Fluid Antifreeze Wheel Cleaner	no effect
Compliance	PFAS free, 50 state VOC

High Strength Adhesive Paste

900-5xx series

Heavy-Duty Fastening Silicone-Free Hybrid Paste Sealant (1-part adhesive) 900-5xx

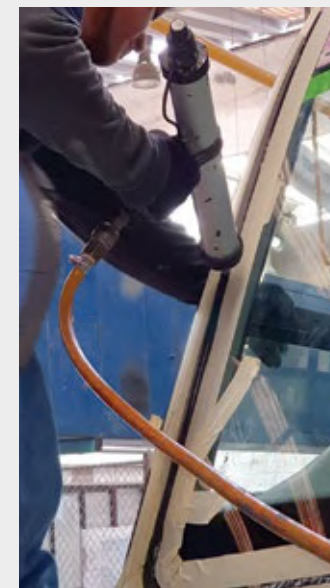
Use our heavy-duty high strength fastening hybrid paste for bonding in a single step. This remarkable, silicone-free adhesive can replace rivets, screws, welds, and other mechanical fasteners. Extremely peel and tear resistant, our 900-5xx series bonds to most substrates without the use of a primer.

Novagard 900-5xx series can be used in place of Sikaflex® 552 or 252, and Manus-Bond 25-AM. With a viscosity of 400,000 - 1,200,000 cPs, this non-corrosive paste skins over in 15 - 45 minutes, and is thoroughly cured in less than 4 days. 900-5xx can be painted after 1 hour.

900-502 (black)
900-511 (gray)

Applications include:

- Vehicle coachwork assembly
- Exterior building waterproofing



Selecting the right sealant

Silicones sit on top of the sealant hierarchy as they are the only inorganic sealant that will not degrade over time. However, some applications call for an organic hybrid.

Novagard hybrids offer many of the same qualities as a silicone - no solvents, low VOC, and are high in solid material content. Hybrids will not shrink or crack even when exposed to harsh weather. They are paintable and will bond to most substrates without primer, making hybrids ideal for sealing materials with dissimilar coefficients of expansion.

Appearance	Paste, various colors
Cure Chemistry	Alkoxy Hybrid
Viscosity (cPs) 70-LO-Viscosity HBT @ 10 rpm	400,000- 1,200,000
Skin-Time 70-LO-Skin @ 50% RH & 77°F	15 - 45 min
Through Cure 3/8" @ 50% RH & 77°F	<4 days
Extrusion Rate 1/8" orifice @ 50 psi	20 - 80 g/min
Tensile Strength ASTM D412	300 - 400 psi
Elongation ASTM D412	350 - 500%
Hardness (Shore A) ASTM D2240	40 - 50
Adhesion ASTM C794 Glass Aluminum Wood Concrete	15 - 30 pli 25 - 40 pli 12 - 20 pli 20 - 35 pli
UV Exposure ASTM G154 (2,000 hours UV - A)	pass
Application Temp	-30°F to 120°F (-34°C to 49°C)
Service Temp	-35°F to 225°F (-37°C to 107°C)
Compliance	PFAS free, 50 state VOC

High Strength Adhesive Pastes

**400-110
400-118**

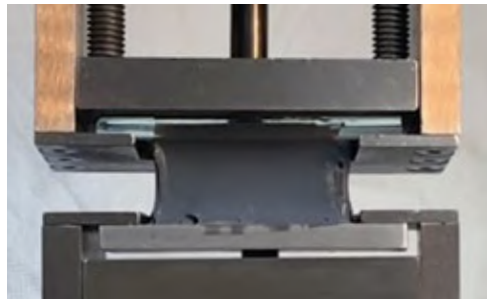
400-155

High Strength Oxime-Cure Silicone Paste (1-part adhesive)

400-110 / 400-118 / 400-155

400-110, 400-118, and 400-155 are non-flowable, non-sagging pastes that are ideal for industrial applications that require superior bond strength and moisture resistance. These cure to a low to medium modulus, rubber-like solid.

The cure mechanism is neutral (oxime), curing on exposure to moisture in room temperature air. It is non-corrosive to metal substrates such as aluminum and ferrous metals (with adequate ventilation), and offers excellent adhesion to numerous substrates including plastics and metals. These ready-to-use adhesive sealants skin over in 3 – 15 minutes, and are well suited to sealing and bonding applications within many arenas.



400-110 (black)
400-118 (gray)
400-155 (translucent)

Applications include:

- High strength bonding
- Deep section cure applications

	400-110 400-118	400-155
Appearance	Paste, black or gray	Paste, translucent
Cure Chemistry	Oxime Silicone	Oxime Silicone
Viscosity (cPs) <small>Brookfield #7 @ 10 rpm</small>	500,000-900,000	400,000-1,500,000
Skin-Time <small>3/8" @ 50% RH & 77°F</small>	3 - 10 min	5 - 15 min
Through Cure <small>1/8" @ 50% RH & 77°F</small>	2 - 24 hrs	3 - 6 hrs
Tensile Strength <small>ASTM D412</small>	300 - 400 psi	>200 psi
Elongation <small>ASTM D412</small>	300 - 500%	>300%
Hardness (Shore A) <small>ASTM D2240</small>	20 - 45	20 - 40
Adhesion <small>ASTM C794 (7 days @ 75°F/100% RH) Chrome Plated Plastic Acrylic Coated Metal</small>	>20 pli >20 pli	-
Adhesion <small>ASTM C794 (7 days @ 75°F/100% RH) Glass Aluminum Wood</small>	-	>20 pli >20 pli >20 pli
Specific Gravity <small>ASTM D1875</small>	1.04 - 1.16	1.00 - 1.05
Extrusion Rate <small>1/8" orifice</small>	>100g/min (@ 90 psi)	>40g/min (@ 50 psi)
Slump <small>Boeing Jig ASTM D2202</small>	<0.3"	-
Chemical Resistance <small>Novagard Test Method Gasoline / Break Fluid Antifreeze/Wheel Cleaner</small>	no effect	-
Listings/Specifications	MSCD135 GM 9985557 GMW18180	-
Compliance	PFAS free, 50 state VOC	PFAS free, 50 state VOC

High-Performance Fast-Cure Silicone Paste (2-part adhesive) 500-642

With its simple 2:1 fixed ratio, 500-642 is a 2-component industrial adhesive designed for easy handling and with low viscosities to reduce strain on dispensing equipment. This high modulus material offers a strong adhesion profile and is formulated to stand up to harsh conditions for maximum longevity, such as high humidity and high temperature water immersion testing.

With a typical open time of 6 – 9 minutes, 500-642 rapidly builds green strength, allowing parts to move from station to station swiftly in the assembly process. 500-642 bonds securely to a variety of challenging surfaces and industrial substrates including metals, glass, and polyester paint.



Applications include:

- Bonding of wheel cladding, exterior fixturing, exposed junction boxes, and enclosures

**500-642
(Part A/Part B)**

Appearance	Paste, black Paste, off-white
Cure Chemistry	Alkoxy Silicone
Viscosity (cPs) <small>Brookfield HB #6 @ 20 rpm</small>	150,000-400,000 35,000-100,000
Specific Gravity <small>ASTM D1875</small>	1.40 - 1.45 1.67 - 1.72
Extrusion Rate <small>1/8" orifice @ 90 psi</small>	>150g/min >1,000 g/min
Base Ratio by Volume	2:1
Base Ratio by Weight	1.5:1
Mixed Color	black
Mixed Specific Gravity	1.48 - 1.52
Slump <small>Boeing Jig ASTM D2202</small>	<0.1"
Snap Time	5 - 10 min
Tack-Free Time	5 - 20 min
Tensile Strength <small>ASTM D412</small>	175 - 275 psi
Elongation <small>ASTM D412</small>	250 - 350%
Hardness (Shore A) <small>ASTM D2240</small>	45 - 50
Adhesion <small>Pull Tab Adhesion Test Chrome Plated Plastic Acrylic Coated Metal</small>	>80 lbf >80 lbf
Listings/Specifications	GMW 16232
Compliance	PFAS free, 50 state VOC

Low Adhesion Pastes

400-900 **400-950**

Low Adhesion Oxime-Cure Removable Silicone Paste (1-part sealant)

400-900 / 400-950

400-900 and 400-950 are single-component, moisture-curing silicone pastes that cure to a rubber-like solid and are easily removed. These ready-to-use sealants skin over in 30 – 40 minutes.

The cure mechanism is neutral (oxime), curing on exposure to moisture in room temperature air. These non-flowable, non-sagging low-adhesion pastes are ideal for creating formed-in-place gaskets where re-entry or post production disassembly is necessary. It is non-corrosive to metal substrates such as aluminum and ferrous metals (with adequate ventilation).



400-900 (white)
400-950 (translucent)

Applications include:

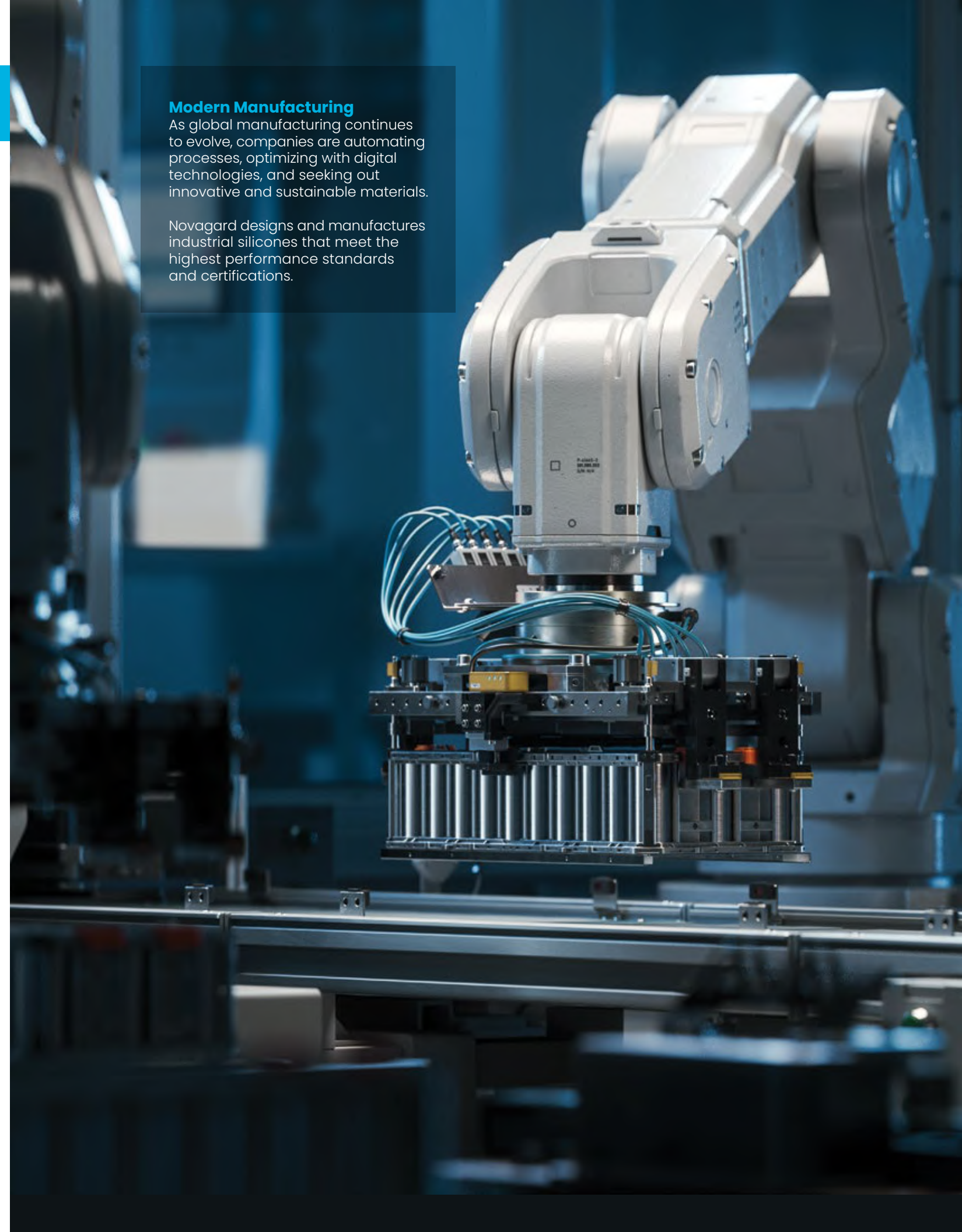
- Removable gaskets
- Temporary seals

	Paste, white	Paste, translucent
Appearance	Paste, white	Paste, translucent
Cure Chemistry	Oxime Silicone	Oxime Silicone
Viscosity (cPs) <small>Brookfield #7 @ 10 rpm</small>	320,000-550,000	150,000-250,000
Skin-Time <small>3/8" @ 50% RH & 77°F</small>	30 - 40 min	30 - 40 min
Through Cure <small>3/8" @ 50% RH & 77°F</small>	24 hrs	24 hrs
Tensile Strength <small>ASTM D412</small>	200 - 250 psi	200 - 250 psi
Elongation <small>ASTM D412</small>	250 - 350%	250 - 350%
Hardness (Shore A) <small>ASTM D2240</small>	35 - 45	35 - 45
Adhesion <small>ASTM C794</small> Glass Aluminum Plastics	no bond	no bond
Specific Gravity <small>ASTM D1875</small>	1.20 - 1.30	1.00 - 1.05
Compliance	PFAS free, 50 state VOC	PFAS free, 50 state VOC

Modern Manufacturing

As global manufacturing continues to evolve, companies are automating processes, optimizing with digital technologies, and seeking out innovative and sustainable materials.

Novagard designs and manufactures industrial silicones that meet the highest performance standards and certifications.



Gasketing Materials

	800-230 page 20	200-273 page 20	400-195 page 21	800-400 800-401* page 22	400-900 400-950 page 23
Essential Attributes	Self-Leveling		Pastes		
	PHYSICAL PROPERTIES				
Appearance	Self-leveling, translucent	Fluid, iron oxide red	Paste, translucent	Paste, translucent	Paste, white and translucent
Cure Chemistry	UV Only Silicone (1-part)	Oxime Silicone (1-part)	Oxime Silicone (1-part)	UV Only Silicone (1-part)	Oxime Silicone (1-part)
Viscosity (cPs)	17,500	19,000-24,000	350,000-800,000	300,000	320,000-550,000 150,000-250,000
Skin-Time	-	15 - 60 min	4 - 7 min	-	30 - 40 min
Through Cure	-	-	<72 hrs	-	24 hrs
Tensile Strength	75 psi	50 - 100 psi	>150 psi	370 psi 150 psi	200 - 250 psi
Elongation	380%	200 - 350%	>300%	1,200% 1,000%	250 - 350%
Hardness (Shore A)	20	5 - 15	15 - 35	20	35 - 45
Adhesion	-	-	glass, aluminum, wood	-	no bond

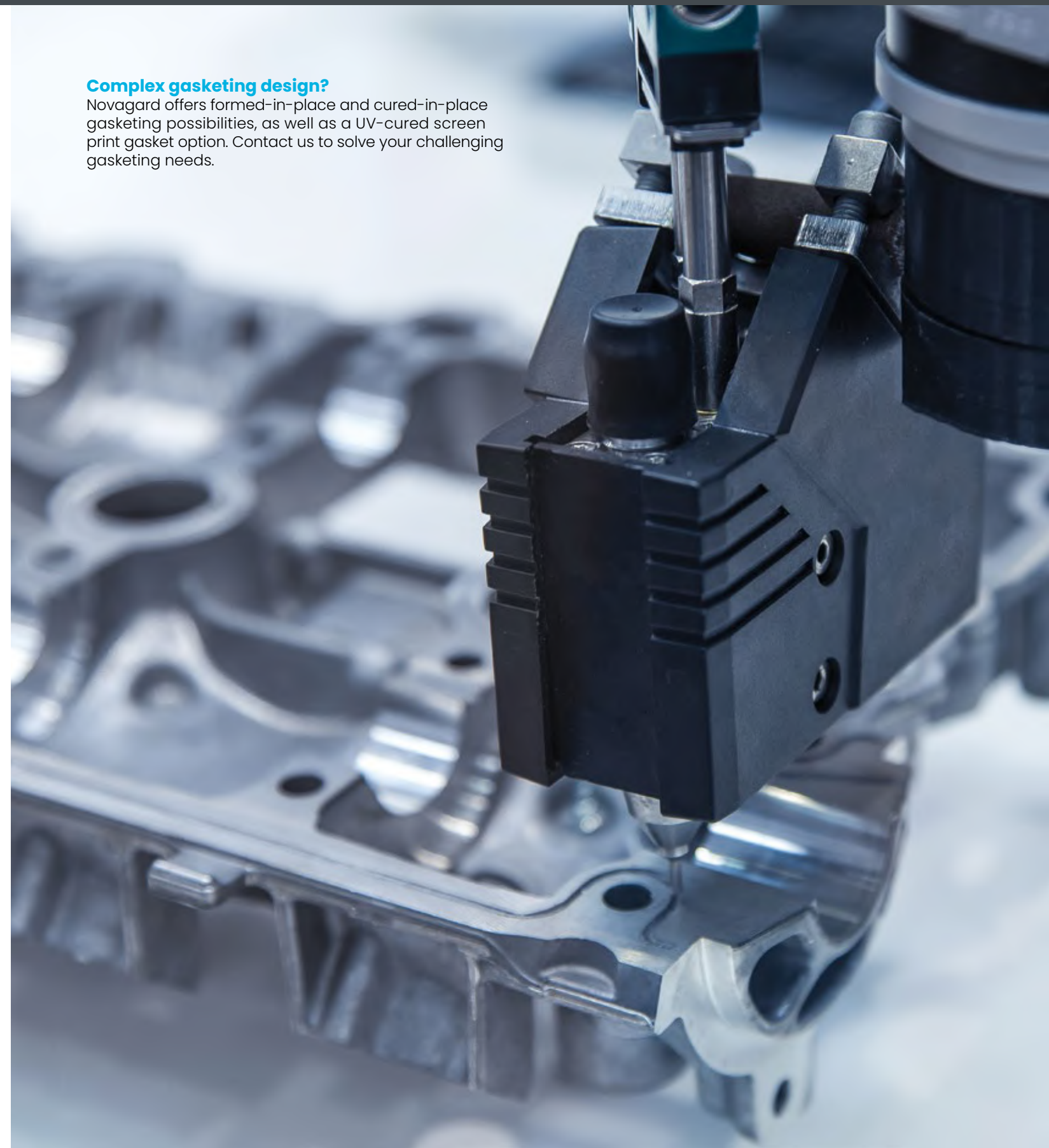
*Lab preliminary data

Looking to properly seal joints to limit vibration, prevent leaks, enhance mounting, and increase throughput? Silicone is an excellent solution for complex formed-in-place (FIPG) or cured-in-place (CIPG) gaskets.

Novagard's high performance silicones are all low VOC, making them better for your manufacturing environment and our planet overall.

Complex gasketing design?

Novagard offers formed-in-place and cured-in-place gasketing possibilities, as well as a UV-cured screen print gasket option. Contact us to solve your challenging gasketing needs.



Self-Leveling Gasketing

800-230 200-273

UV Cure Self-Leveling Silicone (1-part silicone) 800-230

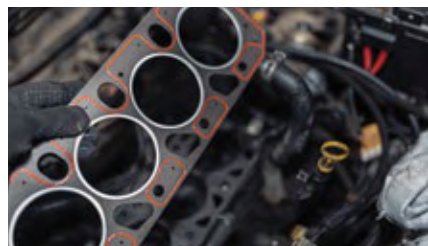
800-230 is a UV curable silicone pottant that offers a higher viscosity coating option, while still remaining flowable. With a viscosity of ~17,500 cPs, 800-230 is an ideal cure-in-place gasketing material that offers limited adhesion for simplified re-work. When dispensed into a channel or gasket groove, this non-corrosive material will self-level to provide a smooth mating surface for the enclosure lid. This single component silicone will cure in seconds upon exposure to ultraviolet light.

Applications include:

- Cured-in-place gasketing
- Printed circuit/wiring boards
- Flexible hybrid electronics
- Rigid electronics
- Additive manufacturing and 3D printing
- Sensitive components and harsh environments
- Gasketing, sealing, potting, and coating

Screen Printable Engine Gasket (1-part silicone) 200-273

This is a single component, moisture cure oxime silicone designed to simplify the creation of complex gaskets. Formulated with industry standard iron oxide red pigmentation for rapid identification of gasketing surface and defect monitoring, 200-273 simplifies the curing process by utilizing atmospheric moisture – no other processing or treatment required. It offers good adhesion to allow the newly printed gasket to remain firmly in place until the next assembly step.



Applications include:

- Engine gaskets
- High stress gasketing applications

Appearance	Self-leveling, translucent	Fluid, iron oxide red
Cure Chemistry	UV Only Silicone	Oxime Silicone
Viscosity (cPs)	17,500 Brookfield RV #4 @ 20 rpm	19,000-24,000 Brookfield RV #6 @ 10 rpm
Skin-Time 50% RH & 77°F	-	15 - 60 min
Tensile Strength ASTM D412	75 psi	50 - 100 psi
Elongation ASTM D412	380%	200 - 350%
Hardness (Shore A) ASTM D2240	20	5 - 15
Specific Gravity ASTM D1875	0.98	-
Dielectric Strength ASTM D149 10 mil gap	>14.5 kV/mm (>370 V/mil)	-
Dielectric Constant (100Hz) ASTM D150	2.45	-
Dielectric Constant (100kHz) ASTM D150	2.45	-
Dissipation Factor (100Hz) ASTM D150	0.0013	-
Dissipation Factor (100kHz) ASTM D150	0.0005	-
Volume Resistivity ASTM D257	2.10x10 ¹⁴ Ω-cm	-
Compliance	PFAS free, 50 state VOC	PFAS free, 50 state VOC

Gasketing Pastes

400-195

Fast-Cure Oxime-Cure Silicone Paste (1-part adhesive) 400-195

400-195 is a non-flowable, non-sagging paste that provides a fast tack free time and high green strength. The fast tack and early strength combine to hold the assembly together as a unit moves from station to station, outperforming slower materials in multi-step assembly applications.

The cure mechanism is neutral (oxime), curing on exposure to moisture in room temperature air. It is non-corrosive to metal substrates such as aluminum and ferrous metals (with adequate ventilation), and offers excellent adhesion to numerous substrates including metals and plastics. This smooth paste cures to a low to medium modulus, rubber-like solid, and is ideal for applications that require superior bond strength and moisture resistance.

This translucent paste can serve as a drop-in replacement for DOWSIL™ 737 Neutral Cure Sealant.

Applications include:

- Component assembly
- Component staking
- Formed-in-place gaskets



Lighten up your automotive application

By injecting 400-195 with nitrogen, manufacturers are extending the coverage of each ounce of silicone while reducing the weight by up to 50%. Spec'd for use in GMW17356.

Appearance	Paste, translucent
Cure Chemistry	Oxime Silicone
Viscosity (cPs) Brookfield #7 @ 10 rpm	350,000-800,000
Skin-Time 3/8" @ 50% RH & 77°F	4 - 7 min
Through Cure 3/8" @ 50% RH & 77°F	<72 hrs
Tensile Strength ASTM D412	>150 psi
Elongation ASTM D412	>300%
Hardness (Shore A) ASTM D2240	15 - 35
Adhesion ASTM C794 Glass Aluminum Wood	12 - 15 pli 10 - 14 pli 12 - 15 pli
Specific Gravity ASTM D1875	1.00 - 1.06
Tear Resistance ASTM D624	30 - 35 pli
Dielectric Strength ASTM D149	>27.9 kV/mm (708 V/mil)
Volume Resistivity ASTM D257	1.5x10 ¹⁵ Ω-cm
Listings/Specifications	GM 9985557 GMW18180 GMW17356
Compliance	PFAS free, 50 state VOC

Typical Properties for Foamed 400-195

Attribute	Density	Compression Deflection	Water Absorption	Tensile	Elongation	Compression Set
Method	ISO 845	ISO 3386-1	GMW17356	ISO 1798	ISO 1798	ISO 815-1
Value	30 - 40	40 - 60	<1.5	90 - 120	400 - 600	30 - 60

Results dependent on amount of gas used to foam silicone paste.

Gasketing Pastes

800-400 **800-401**

UV Cure Silicone Paste (1-part sealant)

800-400
800-401 *Product Development Pipeline*

With typical viscosity of ~300,000 cPs, 800-400 and 800-401 are UV-only, fast-curing pastes that consistently hold their shape even when dispensed into complex patterns. With its nearly instant UV cure, these are widely used for automated dispensing and cured-in-place gaskets (CIPG). These non-corrosive, single component silicones offer a room temperature cure in seconds upon exposure to ultraviolet (UV) light.

100% solids with no solvents, both are thermally stable from -40°F to 392°F (-40°C to 200°C). These materials will cure a 1/2" bead with a Mercury H bulb, or a 3/4" bead with a 365nm LED bulb. They can be applied by automated needle dispense, jetting, or hand dispense.

800-400 (non-adhesive)
800-401 (adheres to plastic)

Applications include:

- Medical device electronics
- Printed circuit/wiring boards
- Flexible hybrid electronics
- Rigid electronics
- Sensitive components in harsh environments
- Gasketing and sealing

	800-400	800-401
Appearance	Paste, translucent	Paste, translucent
Cure Chemistry	UV Only Silicone	UV Only Silicone
Viscosity (cPs) <small>Brookfield HB #6 @ 10 rpm</small>	300,000	300,000
Tensile Strength <small>ASTM D412</small>	370 psi	150 psi
Elongation <small>ASTM D412</small>	1,200%	1,000%
Hardness (Shore A) <small>ASTM D2240</small>	20	20
Specific Gravity <small>ASTM D1875</small>	1.11	1.11
Extrusion Rate <small>1/8" orifice @ 50 psi</small>	>200 g/min	>200 g/min
Dielectric Strength <small>ASTM D149</small>	14.1 kV/mm (355 V/mil)	-
Dielectric Constant (100Hz) <small>ASTM D150</small>	3.34	-
Dielectric Constant (100kHz) <small>ASTM D150</small>	3.33	-
Dissipation Factor (100Hz) <small>ASTM D150</small>	0.0011	-
Dissipation Factor (100kHz) <small>ASTM D150</small>	0.0021	-
Volume Resistivity <small>ASTM D257</small>	3.01 x10 ¹³ Ω-cm	3.01 x10 ¹³ Ω-cm
Compliance	REACH, PFAS free, 50 state VOC	PFAS free, 50 state VOC

Lab preliminary data

Low Adhesion Oxime-Cure Removable Silicone Paste (1-part sealant)

400-900 / 400-950

400-900 and 400-950 are single-component, moisture-curing silicone pastes that cure to a rubber-like solid and are easily removed. These ready-to-use sealants skin over in 30 – 40 minutes.

The cure mechanism is neutral (oxime), curing on exposure to moisture in room temperature air. These non-flowable, non-sagging low-adhesion pastes are ideal for creating formed-in-place gaskets where re-entry or post production disassembly is necessary. It is non-corrosive to metal substrates such as aluminum and ferrous metals (with adequate ventilation).

400-900 (white)
400-950 (translucent)

Applications include:

- Removable seals
- Temporary seals

Two approaches to gasketing



CIPG: Adheres to one side of substrate



FIPG: Adheres to both sides of substrate

CIPG (Cured-in-Place Gasket) provides greater gasket design flexibility and allows the opening and closing of lids to repair components inside.

FIPG (Formed-in-Place Gasket) adheres to both substrates, ideal for non-reenterable enclosures.

400-900 **400-950**

	400-900	400-950
Appearance	Paste, white	Paste, translucent
Cure Chemistry	Oxime Silicone	Oxime Silicone
Viscosity (cPs) <small>Brookfield #7 @ 10 rpm</small>	320,000-550,000	150,000-250,000
Skin-Time <small>3/8" @ 50% RH & 77°F</small>	30 - 40 min	30 - 40 min
Through Cure <small>3/8" @ 50% RH & 77°F</small>	24 hrs	24 hrs
Tensile Strength <small>ASTM D412</small>	200 - 250 psi	200 - 250 psi
Elongation <small>ASTM D412</small>	250 - 350%	250 - 350%
Hardness (Shore A) <small>ASTM D2240</small>	35 - 45	35 - 45
Adhesion <small>ASTM C794</small> Glass Aluminum Plastics	no bond	no bond
Specific Gravity <small>ASTM D1875</small>	1.20 - 1.30	1.00 - 1.05
Extrusion Rate <small>1/8" orifice @ 50 psi</small>	>100 g/min	-
Compliance	PFAS free, 50 state VOC	PFAS free, 50 state VOC

Protective Coatings & Sealants

	200-202 page 26	200-257 page 26	200-107 page 27	900-92x* page 27	200-252 page 28	600-200 (Part A/Part B) page 29
Essential Attributes	PHYSICAL PROPERTIES					
Appearance	Fluid, black	Fluid, translucent	Fluid, white	Fluid, black, gray, white	Fluid, translucent	Fluid, clear
Cure Chemistry	Oxime Silicone (1-part)	Oxime Silicone (1-part)	Oxime Silicone (1-part)	Alkoxy Hybrid (1-part)	Oxime Silicone (1-part)	Platinum Silicone (2-part)
Viscosity (cPs)	20,000-35,000	70,000-110,000	70,000-110,000	-	8,000-12,000	2,000-4,000 2,000-4,000
Skin-Time	<20 min	5 - 20 min	10 - 30 min	10 - 45 min	<20 min	-
Through Cure	57 - 63 hrs	57 - 63 hrs	24 - 30 hrs	7 days	<24 hrs	3 - 24 hrs
Tensile Strength	50 - 100 psi	50 - 100 psi	200 psi	175 - 225 psi	30 - 50 psi	-
Elongation	245 - 300%	245 - 300%	250%	250 - 300%	80 - 120%	-
Hardness (Shore A)	10 - 20	10 - 20	20 - 30	40 - 50	15 - 25	-
Adhesion	-	-	glass, aluminum	glass, aluminum, wood, PVC	-	-

*Lab preliminary data

Whether it's a delicate circuit board, the sturdy steel joint on the frame of an RV, or the fabric of a stitched seam, applying the right material to protect it is essential.

Novagard offers you advanced silicone-based solutions developed by our R&D center of excellence. Our scientists are focused on innovative and eco-friendly products that meet your needs and fit seamlessly into your manufacturing process.



Protective Coatings & Sealants

200-202 200-257

Oxime-Cure Self-Leveling Silicone (Mil spec) (1-part sealant) 200-202

200-202 is a single-component, conformal coating that is preferable to paste-consistency products where flow coating is the chosen application method and when flow into small crevices and hard-to-reach places is desired. It utilizes a moisture cure system at room temperature to result in a tough, resilient, silicone rubber that has good adhesion to most common industrial substrates, and will not corrode aluminum and ferrous metals (with adequate ventilation).

This oxime-cured silicone has a viscosity of 20,000 – 35,000 cPs and skins over in less than 20 minutes.

Applications include:

- Coating intricate electrical and mechanical devices
- Insulating electrical terminals
- Pin/solder joint coverage
- Thin section potting/encapsulation
- Sealing and bonding applications where low viscosity and self-leveling properties are required

Oxime-Cure Semi-Flowable Silicone (1-part sealant) 200-257

200-257 is a single-component, oxime-cure silicone for use in applications where the coating needs to settle into small crevices and hard to reach areas. 200-257 utilizes a moisture cure system at room temperature to result in a tough, resilient, silicone rubber that retains enough thixotropy to prevent leakage during the cure cycle.

200-257 has a viscosity of 70,000 – 110,000 cPs and skins over in less than 20 minutes. This semi-flowable silicone's gap-filling properties offer superior quality and long-term durability, particularly upon exposure to hostile environmental conditions.

Applications include:

- Coating intricate electrical and mechanical devices
- Insulating electrical terminals
- Pin/solder joint coverage
- Thin section potting/encapsulation and sealing
- Bonding applications where low viscosity and self-leveling properties are required
- Can be used as a low-profile dam in dam-and-fill applications

Appearance	Fluid, black	Fluid, translucent
Cure Chemistry	Oxime Silicone	Oxime Silicone
Viscosity (cPs) <small>Brookfield #6 @ 10 rpm</small>	20,000-35,000	70,000-110,000 <small>RVT #7 @ 10 rpm</small>
Skin-Time <small>3/8" @ 50% RH & 77°F</small>	<20 min	5 - 20 min
Through Cure <small>3/8" @ 50% RH & 77°F</small>	57 - 63 hrs	57 - 63 hrs
Tensile Strength <small>ASTM D412</small>	50 - 100 psi	50 - 100 psi
Elongation <small>ASTM D412</small>	245 - 300%	245 - 300%
Hardness (Shore A) <small>ASTM D2240</small>	10 - 20	10 - 20
Specific Gravity <small>ASTM D1875</small>	0.95 - 1.01	0.95 - 1.01
Dielectric Strength <small>ASTM D149</small>	17.5 kV/mm (446 V/mil)	-
Dielectric Constant <small>(100Hz) ASTM D150</small>	2.72	-
Dielectric Constant <small>(100kHz) ASTM D150</small>	2.70	-
Dissipation Factor <small>(100Hz) ASTM D150</small>	0.0034	-
Dissipation Factor <small>(100kHz) ASTM D150</small>	0.0021	-
Volume Resistivity <small>ASTM D257</small>	$5.74 \times 10^{12} \Omega\text{-cm}$ (20v)	-
	$2.92 \times 10^{13} \Omega\text{-cm}$ (100v)	-
Compliance	PFAS free, 50 state VOC	PFAS free, 50 state VOC

Oxime-Cure Semi-Flowable Silicone (1-part sealant) 200-107

200-107 is a single-component, oxime-cure silicone for use in applications where the coating needs to settle into small crevices and hard to reach areas while maintaining consistency.

200-107 has a viscosity of 70,000 – 110,000 cPs, and skins over in less than 30 minutes. This semi-flowable silicone's gap-filling properties offer superior quality and long-term durability, particularly upon exposure to hostile environmental conditions.

Applications include:

- Coating intricate electrical and mechanical devices
- Insulating electrical terminals
- Pin/solder joint coverage
- Thin section potting/encapsulation
- Sealing and bonding applications where low viscosity and self-leveling properties are required

Semi Self-Leveling Silicone-Free Hybrid (1-part sealant) 900-92x

Product Development Pipeline

A single component, silicone-free, semi self-leveling hybrid sealant, 900-92x is designed for sealing roofing components and mechanically fixed joints, typically for vehicles like RVs and buses. It can also be used as a body-in-white sealant. 900-92x offers a controlled flow into joints and cracks to provide a durable protective seal while moving and flexing with the substrate. This hybrid is paintable after 1 hour.

Applications include:

- Roof sealing of RVs, buses, trailers, and other road and off-road vehicles
- Exterior waterproofing for masonry

200-107 900-92x

Appearance	Fluid, white	Fluid, black, gray, white
Cure Chemistry	Oxime Silicone	Alkoxy Hybrid
Viscosity (cPs) <small>RV #7 @ 10 rpm</small>	70,000-110,000	-
Skin-Time <small>3/8" @ 50% RH & 77°F</small>	10 - 30 min	10 - 45 min
Through Cure <small>3/8" @ 50% RH & 77°F</small>	24 - 30 hrs	7 days
Tensile Strength <small>ASTM D412</small>	200 psi	175 - 225 psi
Elongation <small>ASTM D412</small>	250%	250 - 300%
Hardness (Shore A) <small>ASTM D2240</small>	20 - 30	40 - 50
Adhesion <small>ASTM C794 Glass Aluminum Wood PVC</small>	>15 pli >15 pli - -	13 pli 15 pli 15 pli 14 pli
Specific Gravity <small>ASTM D1875</small>	1.10 - 1.20	1.45 - 1.55
UV Exposure <small>ASTM G154 (2,000 hours UV-A)</small>	-	pass
Compliance	PFAS free, 50 state VOC	PFAS free, 50 state VOC

Lab preliminary data.

Flowable Silicone Waterproofing Seam Sealer (1-part sealant) 200-252

200-252 is a single component, low viscosity, highly flowable silicone sealant. It easily flows into small spaces, providing a flexible, robust waterproofing of finished components. Maintains sufficient thixotropy so as to remain in place during cure (no drop-outs). Skins quickly to avoid mess, fully cured within 24 hours. Waterproof formula works well and maintains flexibility in extreme temperatures, filling voids and irregularities so that water can run off easily.

Applications include:

- Sealing and waterproofing stitched seams in outdoor products such as tents
- Sealing and waterproofing the seams of engineered fabric buildings and other semi-permanent structures



Appearance	Fluid, translucent
Cure Chemistry	Oxime Silicone
Viscosity (cPs) Brookfield #5 @ 10 rpm	8,000-12,000
Skin-Time 3/8" @ 50% RH & 77°F	<20 min
Through Cure 3/8" @ 50% RH & 77°F	<24 hrs
Tensile Strength ASTM D412	30 - 50 psi
Elongation ASTM D412	80 - 120%
Hardness (Shore A) ASTM D2240	15 - 25
Specific Gravity ASTM D1875	0.95 - 1.01
Compliance	PFAS free, 50 state VOC

Addition Cure Silicone (2-part gel) 600-200

600-200 is a two-component, addition-cure silicone that, when mixed, cures to a soft, self-adhering flexible gel. This material is often used for deep section cure applications.

It offers an exceptionally fast cure time, convenient mix ratio, is solvent free, and non-corrosive. 600-200 ships in separate containers that are labeled Part A and Part B. This silicone is mix ratio sensitive and requires accurate metering (1 part A: 1 part B v/v).



600-200 (working time of <15 minutes, and a cure time of 2-3 hours after mixing)

Applications include:

- General potting and encapsulation
- Junction box enclosures
- Clam shell connectors
- Cable splice kits
- Waterproof connectors and sensors
- Electrical insulation
- Amplifiers and relays

Appearance	Fluid, clear
Cure Chemistry	2-Component Platinum Silicone
Viscosity (cPs) Brookfield #5 @ 20 rpm	2,000-4,000 2,000-4,000
Mixed Specific Gravity ASTM D1875	1.00
Service Temp	-40°F to 392°F (-40°C to 200°C)
Mix Ratio v/v	1:1
Working Time	15 min
Through Cure 3/8" @ 50% RH & 77°F	3 - 24 hrs
Penetration Novagard Test Method After cure, 7 days @ 25°C/50% RH	4.0 mm
Pull Novagard Test Method After cure, 7 days @ 25°C/50% RH	3.0"
Compliance	PFAS free, 50 state VOC



Looking for a UV/dual cure silicone?

Ask your Novagard Sales Rep for our Electronics Grade brochure.

Greases & Lubricants

Silicone Greases

Lithium soap thickened greases to reduce friction and wear under loads, slow speeds, and variable environmental conditions.

G321
Ultra-low operating temperature
 Meets spec CID A-A-59173 Type II (formerly MIL-G-46886B)
 Temp: -99°F to 399°F (-73°C to 204°C)

G322L
Outstanding corrosion protection
 Temp: -67°F to 302°F (-55°C to 150°C)

G326
Enhanced corrosion protection
 Temp: -67°F to 302°F (-55°C to 150°C)

G330M
General purpose lubricant
 Temp: -67°F to 302°F (-55°C to 150°C)

G351
Oxidation and radiation resistant
 Meets spec MIL-PRF-15719B (formerly MIL-L-15719A)
 Temp: -99°F to 399°F (-73°C to 204°C)

General Purpose/Dielectric Compounds

Silicones thickened with inorganic fillers provide lubrication and insulation, and are resistant to oxidation and thermal degradation.

G624
Superior dielectric strength
 Meets spec SAE AMS-8660 (formerly SAEAS-8660)
 Temp: -40°F to 401°F (-40°C to 205°C)

G635
Lower operating temperatures
 Temp: -71°F to 392°F (-57°C to 200°C)

G661
Seals and protects electrical connections above and below ground; excellent plastic and rubber lubricant
 Temp: -40°F to 401°F (-40°C to 205°C)

G662
Certified to NSF Standard 61 for drinking water system components
 Temp: -40°F to 401°F (-40°C to 205°C)

G687
Ideal for high voltage insulators to prevent flashover
 Temp: -40°F to 401°F (-40°C to 205°C)

G697
Inhibitor fights galvanic corrosion
 Meets spec MIL-DTL-21567B (formerly MIL-C-21567C)
 Temp: -67°F to 302°F (-55°C to 150°C)

Thermally Conductive Compounds

Non-curing materials offering excellent heat transfer in large and small electrical and electronic components. Our thermally conductive compounds provide cost effective thermal management in a wide variety of applications.

G641
Ideal for thermocouple wells, power diodes, transistors, semiconductors, and ballasts
 TC=0.7 W/mK
 Temp: -40°F to 401°F (-40°C to 205°C)

G644
A softer and lower viscosity version of G641
 TC=0.7 W/mK
 Temp: -40°F to 401°F (-40°C to 205°C)

Tough conditions need silicone-based lubricants. Silicone's unique properties work in extreme environments to offer a longer service life. Within a wide operating temperature range, these greases maintain consistency without smoking, melting, or charring. They are non-corrosive, chemically inert, and compatible with plastic and most organics.

Silicone greases may be wiped on, brushed on, dispensed from a grease gun, or applied by automated equipment. When dispersed in a non-polar solvent, they may be applied by brushing, spraying, or dip coating (caution is required when selecting solvents).

	G321	G322L	G326	G330M	G351	G624	G635	G661	G662	G687	G697	G641	G644
offset	DC33 DC55				DC44	DC4	DC5	DC111	DC111	HV3099		DC340	DC340
oxidation resistant	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
water resistant	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
non-polar solvent soluble	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
dielectric	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
corrosion protection	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
galvanic corrosion inhibitors		✓	✓								✓		
vacuum resistant						✓		✓	✓	✓	✓		
radiation resistant	✓				✓								
metal to metal	✓	✓	✓	✓	✓								
aluminum lubrication		✓	✓	✓									
ball bearings	✓	✓	✓	✓	✓								
roller & sleeve bearings		✓	✓	✓									
chassis lubrication		✓	✓	✓		✓		✓					
high temp chains/gears/linkages		✓	✓	✓									
swivel joints		✓	✓	✓									
light & medium loads	✓	✓	✓	✓	✓								
low speed/movement	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
thread protector						✓		✓	✓	✓	✓		
metal to rubber/metal to plastic	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		
rubber to plastic				✓		✓		✓	✓	✓	✓		
low & high temp operation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
electrical insulators & connectors						✓	✓	✓		✓			
telecommunication connectors						✓		✓					
relays & switches		✓	✓			✓		✓			✓		
conveyors & well drilling		✓	✓	✓									

Clean up with non-polar solvents such as mineral spirits. They are soluble in Stoddard solvents, toluene, and xylene. Silicone greases are not suitable for use in contact with high concentrations of oxygen or highly oxidative materials. Contact with high pressure oxygen, ozone, peroxides, or fuming nitric acid can result in fire or explosion. Silicone materials are damaged by exposure to strong mineral acids (e.g. sulfuric, hydrochloric, nitric), strong alkaline solutions (e.g. sodium or potassium hydroxides), nitrates, or peroxides. Novagard silicone greases and compounds are not recommended for bearings with a D/N ratio exceeding 200,000. D/N ratio is calculated by multiplying the diameter (mm) times the bearing speed (rpm).

Best-in-Class R&D

Combine over 35 years of silicone expertise with a \$30 million investment in research, facility, people & processes, and innovative manufacturing solutions are sure to follow.

Formulated to succeed

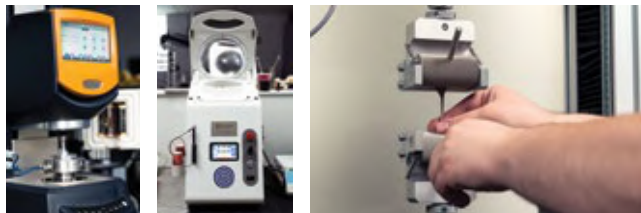
Our scientists work best when armed with raw materials that meet our high standards and equipment that allows them to identify, analyze, quantify, and qualify. With 100+ variations of tests available that measure every aspect of a material, we will go to any length to assure that each innovative product we produce performs to your exacting specifications.

Aged to perfection

Even in a lab stocked with the newest, most advanced, intricate testing equipment, that trusty old oven is still a time tested favorite. We use it to subject our silicones to the harshest of environments in the shortest amount of time. We simulate the aging process to evaluate and assure the shelf life and long term performance of the materials you trust to protect your product.

Listen, learn, then innovate

All the best lab equipment being used by the smartest silicone engineers in the world won't make a difference unless there is absolute clarity as to what the silicone material needs to do, where is needs to do it, and why. And that's why any project must start with a meeting of the minds—yours and ours.



Clean and Green

Low odor, solvent free, no harmful VOC emissions or outgassing, no isocyanates, PFAS free - regardless of the industry, Novagard's products provide exceptional performance AND are eco-friendly. Helping you best meet your responsibilities to your customers, your co-workers, and our planet.



World Class Products

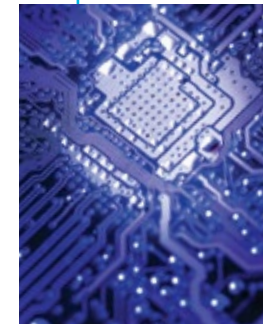
In addition to the products offered in this catalog, Novagard manufactures silicone sealants, coatings, and PVC foams for a wide variety of markets.



Building Systems Silicones & Hybrids

We manufacture a complete line of professional grade one-part, two-part, and hybrid silicone sealants designed to meet the needs of window, door, siding, and metal roof manufacturers, dealers, building material wholesalers, and contractors. Novagard silicone sealants and adhesives are permanently flexible, solvent-free, impervious to UV light, and adhere without primers to most common building substrates.

Within the OEM window manufacturing sector, our products meet or surpass all industry standards for window and door fabrication applications. Window and Door manufacturers trust our AAMA/FGIA-approved formulations for their high tensile strength, quick cure rates, and excellent adhesion to most substrates.



For the building industry, we offer a complete line of sealants and mastics for roofing installations and maintenance. Our products are easily gunned at all temperatures, VOC compliant in all 50 states, and available in all major siding, trim coil, window, and metal roof manufacturer colors.

Electronics Grade Silicones

When a non-corrosive product is required, we offer unprimed adhesive solutions that provide excellent insulation properties, vibration damping, and barrier protection against weather and other intrusions in electronics applications. Novagard's electronics grade alkoxy sealants combine increased flexibility and high temperature resistance, allowing you more versatility in the design and assembly process. Our silicones reliably seal, bond, coat, gasket, and encapsulate to protect sensitive components and modules, increase the reliability, and extend the useful life of your product.



PVC Foam

We manufacture PVC foam in a variety of colors, densities, and dimensions to meet the ever-growing needs of our customers in the transportation, HVAC, appliance, automotive, and healthcare industries. Our foams cushion against shock and vibration, and its closed cell structure seals out light, air, dust, and moisture. Foam Seal foams are sulfur free, low VOC, and certified Prop 65 compliant.

Learn more about everything
Novagard can do for you



Our **innovative** labs produce an **extensive** line of quality products.

NOVAGARD®

*Engineering high performance and sustainable solutions
today for the needs and opportunities of tomorrow.*

*We do so with respect for our people, our customers,
our supplier partners, our community, and our environment.*

Featured Products

200-107.....	p27
200-202.....	p26
200-252.....	p28
200-257.....	p26
200-273.....	p20
400-1xx.....	p8
400-110.....	p14
400-118.....	p14
400-155.....	p14
400-195.....	p10, 21
400-196.....	p10
400-202.....	p10
400-590.....	p12
400-900.....	p16, 23
400-950.....	p16, 23
500-09x.....	p9
500-600.....	p11
500-642.....	p15
600-200.....	p29
800-230.....	p20
800-400.....	p22
800-401.....	p22
900-1xx.....	p9
900-5xx.....	p13
900-92x.....	p27



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