Dear Customer/Future Customer,

I am pleased to introduce you to our General Industrial catalog featuring our current product offerings. Novagard Solutions™ has a 30 year history of producing custom engineered adhesive and sealant solutions in addition to our standard product offerings. We offer a broad range of RTV silicones, silicone based greases and compounds, advanced polymer adhesives and sealants, PVC foams.

We pride ourselves in innovation. Our team of adhesive and sealant professional’s are dedicated to meeting and exceeding your challenging requirements. Whether it is a customized or standard solution for your application our team is ready to serve. As an ISO 9001:2000 and ISO/TS 16949:2002 certified company, I give you my personal commitment to delivering quality and consistent products second to none with stringent testing.

In addition, we have been issued several patents for our innovations and have many exciting new products being developed. We will continue to add to our product portfolio in the coming years and stand ready to put our innovation to work for you. Novagard Solutions’ views you as our business partner now and for the long term. If the solution is not available in our existing product line, we will work with you to create one.

Warmest Regards,

Michael S. Sylvester
CEO
Novagard Solutions
The **Novagard® Silicone Advantage**

Silicone based lubricants provide high performance and are more versatile than most materials available today. The unique properties inherent in the molecular backbone of silicone and oxygen contribute to silicone’s attractiveness where service requirements are extreme and/or where minimal maintenance attention is desired. Under many circumstances, silicone based products offer longer service life.

Typical Properties of Novagard Silicone Greases and Compounds Include:
- Wide operating temperature ranges, -100˚F to 400˚F, higher in intermittent operation
- Ability to maintain viscosity, and/or consistency, without solidifying, smoking, melting or charring
- High oxidation resistance
- Good water washout resistance
- Excellent dielectric properties
- Noncorrosive, chemically inert, compatible with plastic and most organics
- Good release properties
- Excellent hydrolytic stability

**Novagard® Versilube® Silicone Greases**

These lithium soap thickened greases designed for metal to metal and non-metallic applications to reduce friction and wear under heavy loads, slow speeds, extreme temperature and variable environmental conditions. They are ideal lubricants for applications requiring extended service intervals.

**G321**
- Good adherence and non-corrosive
- Wide temperature range -73°C to 204°C (-100˚F to 400˚F)
- Chemically inactive and oxidation-resistant
- Conforms to C/D A-A-59173 Type II (formerly Mil-G-46886B)

**G322L**
- Outstanding viscosity-temperature characteristics
- Wide temperature range -55°C to 150°C (-65˚F to 300˚F)
- Corrosion protection
- Good adherence and non-corrosive

**G326**
- Higher load carrying capability
- Formulated for aluminum and steel substrates
- Enhanced corrosion protection
- Safe for a variety of plastics, metals, glass and painted surfaces

**G330M**
- Higher load capacity
- Excellent water washout resistance
- Outstanding shear stability

**G351**
- Offers excellent oxidation resistance, aging and work stability
- Wide temperature range -40°C to 204°C (-40˚F to 400˚F)
- Oxidation and radiation resistant
- Conforms to Mil-L-15719

Versilube greases are not recommended for use on bearings with a D/N ratio exceeding 200,000. D/N ratio is calculated by multiplying the diameter (mm) times the bearing speed (rpm).
Novagard® General Purpose / Dielectric Compounds

Novagard silicone compounds are non-curing, grease-like materials designed for a diverse scope of applications. These silicone compounds are silicone fluids thickened with inorganic fillers. Novagard silicone compounds exhibit excellent adherence to varying materials, often adhering under conditions where a fluid would easily drip or spin off. They offer maximum coverage without requiring excessive amounts of product. These products will function as general purpose compounds, dielectric compounds or thermally conductive compounds.

G624®
- Excellent rubber and plastic lubricant
- Resistance to moisture, corrosion and oxidation
- Wide temperature range -55°C to 150°C (-65°F to 300°F)
- Conforms to SAE AS-8660 (formerly Mil-S-8660C)

G635®
- Outstanding water repellent and dielectric compound
- Wide temperature range -57°C to 204°C (-70°F to 400°F)
- Hydrolytically stable and low toxicity
- Oxidation and radiation resistant

G661®
- Ideal for sealing and protecting electrical connections above and below ground
- Wide temperature range -40°C to 204°C (-40°F to 400°F)
- Hydrolytically stable and low toxicity
- Excellent dielectric and water repellent

G662
- Ideal for valve and O-ring lubrication
- Excellent vacuum capabilities
- Outstanding water resistance
- Certified to NSF Standard 61 for Drinking Water System Components

G687
- Ideal for high voltage insulators to prevent flashover
- Excellent dielectric and water repellent
- Good adherence
- Chemically inactive and low toxicity

G697
- Excellent rubber and plastic lubricant
- Resistant to moisture, corrosion and oxidation
- Wide temperature range -55°C to 150°C (-65°F to 300°F)
- Conforms to Mil-C-21567A

Novagard® Thermally Conductive Compounds

G641
- Ideal for thermocouple wells, power diodes, transistors, semiconductors & ballasts
- Excellent heat transfer compound for electrical and electronic industries
- Outstanding long-term storage stability without oil separation

G644
- Ideal for thermocouple wells, power diodes, transistors, semiconductors & ballasts
- Excellent heat transfer compound for electrical and electronic industries
- Outstanding long-term storage stability without oil separation
- G644 is a lower viscosity or softer version of G641

Material Compatibility
Generally, silicone materials have the following impact on material properties:

- Silicone Rubber – Tends to swell, soften and decrease in tensile strength.
- Fluoro Rubber – No effect.
- Organic Rubber – Slight shrinkage, hardening and loss of physical properties.
- Plastic – No effect on polycarbonate, phenolic, polystyrene nylon, methacrylics or PTFE. Slight swelling or shrinkage may occur in polyacetal, polyethylene, polypropylene or PVC.

Methods of Application
Silicone greases and compounds may be wiped on, brushed on, dispensed from a grease gun or applied by automated equipment. In addition, when dispersed in a non-polar solvent they may be applied by brushing, spraying or dip coating. Caution is required in the selection of solvents.
## Novagard® Silicone Grease & Compounds Applications & Characteristics

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**A-A-59173 (Mil-G-46886B)**
**MIL-L-15719A**
**SAE AS-8660 (formerly Mil-S-8660C)**
**Mil-C-21567C**
**NSF Standard 61**


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### Handling and Safety

**Material Safety Data sheets are available upon request from Novagard Solutions.**

Cleanup of silicone greases and compounds can be accomplished using non-polar solvents such as mineral spirits. They are soluble in stoddard solvent, toluene and xylene. Caution should be observed whenever handling solvents.

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 (e.g. sodium or potassium hydroxides), nitrates or peroxides.
Warranty: Novagard Solutions warrants that products will meet or exceed their specifications. There is no warranty for merchantability or fitness for use, nor any other expressed or implied warranties. All recommendations for use of these products are derived from tests and data believed to be reliable. Novagard Solutions shall not be liable for injury, incidental or consequential damages resulting from use of this product. Manufacturer's only liability shall be to replace that portion of the product proven to be defective.