

# NOVAGARD

*Solutions™*

Engineered Products... Innovative Thinking



**GREASE AND COMPOUNDS**



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 CID 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

	G321	G322	G326	G330M	G351	G624	G635	G641	G644	G661	G662	G687	G697
metal to metal													
aluminum lubrication													
ball bearings													
roller bearings													
sleeve bearings													
chassis lubrication													
chains, high temperature													
swivel joints													
heavy loads													
medium loads													
light loads													
low speed													
thread protector													
metal to rubber													
metal to plastic													
rubber to plastic													
high temperature operation													
low temperature operation													
chemical environment													
moisture													
vacuum													
radiation resistant													
thermal conductors													
corrosion protection													
oxidation resistant													
water resistant													
non-polar solvent soluble													
dielectric													
flashpoint	all	have	flash	points	above	300° F							
release													
electrical insulators & connectors													
electronics													
telecommunication connectors													
relays and switches													
seals													
spindles													
conveyors													
well drilling													
A-A-59173 (Mil-G-46886B)													
Mil-L-15719A													
SAEAS-8660(formerly Mil-S-8660C)													
Mil-C-21567C													
NSF Standard 61													

ISO 9001:2000 ISO/TS 16949:2002

## 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.



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ISO/TS 16949:2002

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.