

NOVAGARD[®] SILICONES

G661[™] Specification Data

DESCRIPTION

Novagard[®] G661 is a grease-like material formulated with select polydimethyl siloxane fluids in combination with inert, amorphous silica fillers. G661 is a stiff, tacky, non-melting silicone compound with good resistance to water and most chemicals.

APPLICATIONS

Novagard G661 is truly a general purpose compound. It is most frequently used as a valve and O-ring lubricant; however, the material's unique dual nature, lubricity and sealing, supports a long list of both past, and current, applications. Applications range from a valve and O-ring lubricant in small, hydraulic piston assemblies to high vacuum sealant in laboratory services.

RESTRICTIONS

Do not use in or around highly oxidative chemicals such as liquid oxygen, or peroxides. Not recommended for surfaces that are to be painted.

AVAILABILITY

Novagard G661 is available in 5.3 ounce tubes, 1-gallon pails, 5-gallon pails, and 55-gallon drums.

STORAGE

Novagard G661 has a shelf-life of eighteen (18) months from the date of manufacture, as indicated by the lot number, when stored in the original, unopened container at, or below, 100°F.

PRODUCT SPECIFICATIONS

Physical Property	Test Method	Performance Range
Appearance		Translucent paste
Penetration (worked 60X)	ASTM D 217	200-300
Bleed	200°C / 24 hours	1.0 % maximum
Evaporation	200°C / 24 hours	2.0 % maximum

PRECAUTIONS

Silicone greases may be cleaned with non-polar solvents such as toluene, hexane and mineral spirits. Whenever using solvents be certain to observe all proper, safety precautions. Not for application on surfaces that are to be painted

Consult and obey all applicable local, state and federal regulations for disposal of solvent and silicone waste. For additional information consult product M.S.D.S.

ADDITIONAL INFORMATION

Novagard believes that the information provided is a true and accurate description of the typical characteristics of the aforementioned product; however, it is the responsibility of the individual user to thoroughly test the product in their specific application to determine performance, efficacy and safety.

TYPICAL PROPERTIES*

Physical Property	Test Method	Typical Value
Specific Gravity		1.02 - 1.06
Water Washout	ASTM D 1264	1.30 %
Low Temperature Torque Start Running	ASTM D 1478 (-54°C / -65°F)	944 gm-cm 885 gm-cm
Volume Resistivity	ASTM D 257	4.0 x 10 ¹⁴ Ω-cm
Dissipation Factor	ASTM D 150	0.0016
Dielectric Constant	ASTM D 150	2.2 (@ 1Khz)
Dielectric Strength 10 mil gap	ASTM D 149	800 volts/mil

*The values outlined reflect testing that was conducted on laboratory prepared specimens, 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.

NOVAGARD SILICONE COMPOUNDS & GREASES
5109 HAMILTON AVENUE
CLEVELAND, OH 44114

Form Name
71G661

Phone: (216) 881-3890 Facsimile: (216) 881-6977

Effective Date
11-19-04

NOVAGARD

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: G 661
GENERIC DESCRIPTION: Silicone Compound
CHEMICAL CLASS: Polysiloxane blend

MANUFACTURED BY: NSCG, Inc.
 5109 Hamilton Avenue
 Cleveland, OH 44114
 216-881-8111

EMERGENCY PHONE NUMBER: CHEMTREC 800-424-9300 (24 hour)

REVISED: 10-03-02 **PREPARED BY:** Brian Chambers

SECTION 2 - HAZARDOUS COMPONENTS

COMPONENT	CAS No.	WT %	OSHA-PEL		ACGIH-TLV	
			TWA	STEL	TWA	STEL
Amorphous Silica	112945-52-5	5-15	10 mg/m ³	NE	10 mg/m ³	NE

SECTION 3 - EFFECTS OF OVEREXPOSURE

Potential Health Effects

Eye: May irritate eyes
Skin: May cause mild skin irritation
Inhalation: Not anticipated during industrial use
Oral: Not anticipated during industrial use

Special Hazards

Carcinogens: This product does not contain any ingredients listed by IARC, NTP or OSHA as chemical carcinogens.
Teratogens: None known
Mutagens: None known
Reproductive Toxins: None known

SECTION 4 - FIRST AID MEASURES

Eye: Contact with the eyes may cause temporary irritation. Flush eyes with copious amounts of water for a minimum of 15 minutes. If chronic irritation develops contact a physician.
Skin: Contact with skin is not expected to cause irritation. Wash contacted areas with soap and water.
Oral: If ingested do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

NOVAGARD

MATERIAL SAFETY DATA SHEET

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point: >200 (C) >400 (F) (COC Method)
Flammability Limits in Air: Upper - Not Determined Lower - Not Determined
Extinguishing Media: Water, CO₂, Dry Chemical, Foam.
Special Fire Fighting Procedures: None
Sensitivity to static discharge: None

This product contains Methylpolysiloxanes which can generate formaldehyde at approximately 300° F and above, in atmospheres which contain oxygen. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant, and potential cancer hazard.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Disposal of collected product, residues and cleanup materials may be governmentally regulated. Observe all applicable local, state and federal waste management regulations. Scrape up and contain for salvage or disposal. Wash all walking surfaces with detergent and water to reduce slipping hazard. Observe all personal and protection equipment recommendations described in Section 5 and 8. Local, state and federal reporting requirements may apply to spills or releases of this matter into the environment. See applicable regulatory compliance information in Section 15.

SECTION 7 - HANDLING AND STORAGE

Precautions: Keep container closed when not in use. Avoid contact with skin and eyes.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Local exhaust: None needed General ventilation: None needed Eyewash stations: Recommended

Personal Protective Equipment for Routine Handling

Eyes: Safety glasses
Skin: Wash after any contact. Cloth/rubber gloves
Inhalation: None should be needed

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical form	Paste	Odor:	Odorless
Specific Gravity @25°C:	1.02	Boiling Point (@ 760 mm Hg)	Not applicable
Freezing/melting point	Not applicable	Vapor pressure:	Not applicable
Evaporation rate:	Not applicable	Volatile content:	Not applicable
Odor threshold	Not applicable	Percent Volatile by volume:	<1.0%
VOC (EPA method 24):	Not applicable	Evaporation Rate	
Solubility in water:	Insoluble	(butyl acetate =1):	Not applicable
Solubility in organic solvent:	Mineral spirits		

NOVAGARD

MATERIAL SAFETY DATA SHEET

SECTION 10 - STABILITY AND REACTIVITY

Chemical stability:	Stable
Hazardous polymerization:	Will not occur
Conditions to avoid:	None known
Materials to avoid:	None known
Conditions to avoid:	None known
Hazardous thermal decomposition and combustion by-products:	Carbon monoxide, carbon dioxide, silicon dioxide, and formaldehyde

SECTION 11 - TOXICOLOGICAL INFORMATION

Ames Test:

Product Information

Acute oral LD 50 (mg/kg)	unknown
Acute dermal LD50 (mg/kg)	unknown
Acute inhalation LC 50 (mg/L)	unknown
Other	None

SECTION 12 - ECOLOGICAL INFORMATION

OPTIONAL SECTION - complete information not yet available

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal method: Disposal should be made in accordance with federal, state and local regulations.

SECTION 14 - TRANSPORTATION INFORMATION

DOT shipping name:	Not Regulated	DOT hazard class	:	Not Regulated
DOT labels:	None	UN/NA number:	:	NA
Placards:	None	IATA:	:	NA
IMO IMDG -code:	NA			

European Class:

RID (OCTI):	NA
ADR (ECE):	NA
RAR(IATA):	NA

NOVAGARD

MATERIAL SAFETY DATA SHEET

SECTION 15 - REGULATORY INFORMATION

TSCA Status:

All chemical substances found in this product comply with the Toxic Substances Control act Inventory reporting requirements

EPA SARA Title III Chemical Listings:

Section 302: None found

Section 312, 311 Hazard Class: None

Section 313 chemical: None

WHMIS Hazard class:

Not regulated

Hazard Rating System:

HMIS: Flammability 0, Reactivity 0, Health 1

NFAPA: Flammability 0, Reactivity 0, Health 1

California Proposition 65:

None

The information presented in this Material Safety Data Sheet relates only to the specific product designated herein, and no warranty, or guarantee, either expressed or implied is made regarding the performance and conditions of this product. This information is based upon information that Novagard believes to be true and accurate; however, it is the responsibility of each user to review this information within the specific context of their intended application.