

## 1. Identification

**Product identifier** GRAFOIL® GTS® Thread Sealant Paste/Lubricant

**Other means of identification**

**SDS number** 0041

**Recommended use of the chemical and restrictions on use**

**Recommended use** Injectable thread sealant or lubricant.

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer/Supplier** NeoGraf Solutions, LLC

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Lakewood, OH 44107

+1 216-529-3777

**Contact person** Product Responsibility Manager +1 216-529-3724

**E-mail** info@neograf.com

**Emergency telephone number** For Chemical Emergency ONLY, call 3E at:

+65-3158-6734

Access Code: 333366

## 2. Hazards identification

**GHS classification**

**Physical hazards** Not classified.

**Health hazards** Not classified.

**Environmental hazards** Not classified.

**GHS label elements, including precautionary statements**

**Pictograms** None.

**Signal word** None.

**Hazard statements** None.

**Precautionary statements**

**Prevention** Observe good industrial hygiene practices.

**Response** Wash hands after handling.

**Storage** Store away from incompatible materials.

**Disposal** Dispose of waste and residues in accordance with local authority requirements.

**Other hazards which do not result in classification** None known.

**Supplemental information** None.

## 3. Composition/information on ingredients

**Substance or mixture** Mixture

Chemical name	Common name and synonyms	CAS Number	Concentration (%)
Graphite		7782-42-5	30 - 60
Petrolatum USP		8009-03-8	20 - 40
White mineral oil (petroleum)		8042-47-5	20 - 40

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## 4. First-aid measures

**Inhalation** Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact** Wash off with soap and water. Get medical attention if irritation develops and persists.

**Eye contact** Rinse with water. Get medical attention if irritation develops and persists.

<b>Ingestion</b>	Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Most important symptoms/effects, acute and delayed</b>	Direct contact with eyes may cause temporary irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Foam. Dry powder. Dry chemicals. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Fire fighting equipment/instructions</b>	Cool containers exposed to heat with water spray and remove container, if no risk is involved.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.
<b>Methods and materials for containment and cleaning up</b>	The product is immiscible with water and will sediment in water systems. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. Use only in well-ventilated areas.
<b>Conditions for safe storage, including any incompatibilities</b>	Keep away from heat and sources of ignition. Store in original tightly closed container. Store away from incompatible materials (see section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### Singapore. PELs. (Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order)

Components	Type	Value	Form
Petrolatum USP (CAS 8009-03-8)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
White mineral oil (petroleum) (CAS 8042-47-5)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.

### Control parameters/Occupational exposure limits

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Graphite (CAS 7782-42-5)	TWA	2 mg/m3	Respirable fraction.
Petrolatum USP (CAS 8009-03-8)	TWA	5 mg/m3	Inhalable fraction.
White mineral oil (petroleum) (CAS 8042-47-5)	TWA	5 mg/m3	Inhalable fraction.

<b>Appropriate engineering control measures</b>	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
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## Individual protection measures, such as personal protective equipment

<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves.
<b>Other</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

<b>Appearance</b>	Black paste.
<b>Physical state</b>	Solid.
<b>Form</b>	Paste.
<b>Colour</b>	Black.
<b>Odour</b>	None.
<b>Odour threshold</b>	Not applicable.
<b>pH</b>	Not applicable.
<b>Melting point/freezing point</b>	Not applicable.
<b>Initial boiling point and boiling range</b>	315.56 - 329.44 °C (600 - 625 °F)
<b>Flash point</b>	160.0 °C (320.0 °F)
<b>Evaporation rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Will burn if involved in a fire.
<b>Flammability limit - lower (%)</b>	Not applicable.
<b>Flammability limit - upper (%)</b>	Not applicable.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapour pressure</b>	Not applicable.
<b>Vapour density</b>	Not applicable.
<b>Relative density</b>	1.5 - 1.7 (21°C (70°F))
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	< 0.1 % Insoluble in water.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Viscosity</b>	Not available.
<b>Other data</b>	
<b>Bulk density</b>	No data available.
<b>Explosive limit</b>	Not applicable.
<b>Explosive properties</b>	Not explosive.
<b>Oxidising properties</b>	Not oxidising.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidising agents. Chlorine.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.

### Acute toxicity

Components	Species	Test Results
Graphite (CAS 7782-42-5)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	> 10000 mg/kg
White mineral oil (petroleum) (CAS 8042-47-5)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 2000 mg/kg
<b>Inhalation</b>		
<i>Aerosol</i>		
LC50	Rat	> 5 mg/l
<b>Oral</b>		
LD50	Rat	> 5000 mg/kg

**Symptoms** Direct contact with eyes may cause temporary irritation.

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation** Direct contact with eyes may cause temporary irritation.

### Respiratory or skin sensitisation

**Respiratory sensitisation** Not a respiratory sensitiser.

**Skin sensitisation** This product is not expected to cause skin sensitisation.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

### Carcinogenicity

#### IARC Monographs. Overall Evaluation of Carcinogenicity

Petrolatum USP (CAS 8009-03-8) 3 Not classifiable as to carcinogenicity to humans.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
White mineral oil (petroleum) (CAS 8042-47-5)		
<b>Aquatic</b>		
<i>Acute</i>		
Crustacea	LL50 Invertebrates (Invertebrates)	100 mg/l
Fish	LL50 Fish	10 mg/l
<b>Persistence and degradability</b>	No data is available on the degradability of any ingredients in the mixture.	
<b>Bioaccumulative potential</b>	No data available.	
<b>Mobility in soil</b>	The product is insoluble in water.	
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	

### 13. Disposal considerations

**Disposal methods/information** Collect and reclaim or dispose in sealed containers at licensed waste disposal site.  
**Special precautions** Dispose in accordance with all applicable regulations.

### 14. Transport information

**ADR**

Not regulated as dangerous goods.

**RID**

Not regulated as dangerous goods.

**ADN**

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

### 15. Regulatory information

**Safety, health and environmental regulations specific for the product in question**

**Controlled Narcotic Drugs (Misuse of Drugs Act, First Schedule, Part I, II & III)**

Not regulated.

**Controlled Specified Drugs (Misuse of Drugs Act, Fourth Schedule)**

Not regulated.

**Prior Informed Consent (PIC) Substances (Environment Protection and Management Act, 2nd Schedule, Part 1, Jul. 1, 2013)**

Not regulated.

**Chemical Weapons Prohibition (Act)**

Not applicable.

**Environmental Protection and Management (Hazardous Substances) Regulations**

Not applicable.

**Environmental Public Health Act**

Not applicable.

**International regulations**

**Montreal Protocol**

Not applicable.

**Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Kyoto Protocol**

Not applicable.

**Basel Convention**

Not applicable.

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information

<b>References</b>	Not available.
<b>Issued by</b>	Not available.
<b>Prepared by</b>	Not available.
<b>Disclaimer</b>	<p>NeoGraf Solutions cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.</p> <p>This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.</p>
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<b>Revision date</b>	-
<b>Key/legend</b>	Not applicable.