

GRAFOIL® GTS Thread Sealant Paste



Grafoil GTS Graphite Thread Sealant is a patented, high-purity paste made from a combination of nuclear grade graphite and a nuclear quality petroleum based carrier. It has all the characteristics required for long-life performance, even under the most severe conditions.

CONTACTS



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1. PRODUCT IDENTIFICATION AND COMPANY

- 1.1. Product name:** GRAFOIL® GTS® Thread Sealant Paste.
- 1.2. Product use/ Application:** GTS Paste is made to seal small diameter, close tolerance threaded pipe joints in critical service applications to 635°C (1175°F) and 16MPa (2300psi)*.
- Grafoil GTS Thread Sealant Paste can also be used as an effective bolt lubricant or anti seize compound, having outperformed many conventional lubricants under test. Because GTS thread sealant paste does not harden or cure with time or temperature, joints sealed with GTS paste will be easy to disassemble even after years of high-temperature service.
- *For Service conditions over 16MPa Novus Sealing Pty Ltd recommends that application testing is undertaken
- 1.3. Company Identification:**
- Distributors and Retailers:** Novus sealing Pty. Ltd.
ADDRESS: 13-15 - Vinnicombe Drive, Canning Vale, WA, 6155
Phone: +61 8 9455 2155 (8.30am to 5.00pm Monday to Friday).

2. HAZARD IDENTIFICATION

- 2.1. Statement Of Hazardous Nature:** Based on available information, this material is not classified as hazardous according to criteria of NOHSC Australia. Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail.
- 2.2. Poisons Schedule (Aust):** Not applicable.
- 2.3. Regulatory information:**

Chemical name	Statement
Graphite	This chemical is listed on the 2002 Australian HVICL, NICNAS, AICS, Australia Exposure Standards, and Australia Hazardous Substances Information System - Consolidated List.
Petrolatum USP	This chemical is listed on the 2002 Australian HVICL, NICNAS, AICS, and Australia Hazardous Substances Information System - Consolidated List.
White Mineral oil	This chemical is listed on the 2002 Australian HVICL, NICNAS, and AICS.

- Physical state:** Solid.
- Appearance:** Black Paste.
- Emergency overview:** CAUTION! May cause eye and skin irritation.

POTENTIAL HEALTH EFFECTS:

- Routes of Exposure:** Eyes, Skin, Inhalation, ingestion.
- Eyes:** May cause eyes irritation.
- Skin:** May cause eye irritation.
- Inhalation:** High concentrations. May cause respiratory tract irritation.
- Ingestion:** May cause discomfort if swallowed.

- Target Organs:** Eyes, Skin.
- Chronic effects:** None Known.
- Sign and symptoms:** Eye contact. Exposed individuals may experience eye tearing, redness discomfort.

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2. HAZARD IDENTIFICATION - continued

2.4. RISK phrases:

R45 May cause cancer.

R38 Irritating to skin.

2.5. Safety information:

2.5.1. SAFETY phrases:

S15 Keep away from heat.

S38 In case of insufficient ventilation, wear suitable respiratory equipment.

S41 In case of fire and or explosion, do not breathe fumes.

2.5.2. Safe handling:

S37 Wear suitable gloves.

S23 Avoid contact with eyes.

R36/37/38 Irritating to eyes, respiratory system and skin.

S20/21 When using, do not eat, drink or smoke.

S24/25 Avoid contact with skin and eyes.

S27/28 After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of... (to be specified by the manufacturer).

2.6. Other hazard information: Since emptied containers retain product residue, follow label warnings even after container is emptied.

2.7. Label elements: Not applicable to these products.

2.8. Potential environmental effects: The product components are 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.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Mixtures

Chemical Name	CAS Number	Present
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.	

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4. FIRST AID MEASURES

4.1.	Description of first aid measures:	
4.2.	Inhalation:	Move injured person into fresh air and keep person calm under observation. Get medical attention if any discomfort continues.
4.3.	Skin contact:	Remove contaminated clothes and rinse skin thoroughly with water for at least 15 minutes. Get medical attention if irritation develops and persists.
4.4.	Eye contact:	Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids wide apart. Get medical attention if irritation develops and persists.
4.5.	Ingestion:	Rinse mouth thoroughly with water. Give one or two glasses of water if patient is alert and able to swallow. Seek immediate medical attention. Do not induce vomiting. Get medical attention if any discomfort continues.
4.6.	symptoms:	Exposed may experience eye tearing, redness, and discomfort.
4.7.	Indications of immediate medical attention being required:	Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1.	General fire Hazards:	The product is non-combustible.
5.2.	Suitable Extinguishing Media:	Extinguish with foam, carbon dioxide or dry powder.
5.3.	Unsuitable Extinguishing Media:	Do not use water jet as an extinguisher, as this will spread the fire.
5.4.	Special Protective equipment And precautions for firefighters:	During fire, gases hazardous to health may be formed.
5.5.	Protective equipment and precautions for firefighters:	Use standard firefighting procedures and consider the hazards of other involved materials.
5.6.	Firefighting equipment/instructions:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
5.7.	Hazardous Combustion Products:	Carbon oxides.

6. ACCIDENTAL RELEASE MEASURES

6.1.	Personal Precautions:	Avoid inhalation of vapours and contact with skin and eyes. Wear suitable protective clothing and gloves. In case of spills, beware of slippery floors and surfaces. See Section 8 of the MSDS for Personal Protective Equipment.
6.2.	Environmental Precautions:	Avoid discharge into drains, watercourses or onto the ground.
6.3.	Methods for containment:	Local authorities should be advised if significant spillages cannot be contained.
6.4.	Cleaning Up:	Spilled and released material should be picked up with a suitable implement. Collect in approved container and seal securely. Containers must be labelled. For waste disposal. See section 13 of this MSDS.

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7. HANDLING AND STORAGE

- 7.1. **Precaution for safe handling:** Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. Use only in well-ventilated areas.
- 7.2. **Conditions for safe storage:** 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).
- 7.3. **Specific end uses:** Refer to appropriate technical data sheet.
Injectable thread sealant or lubricant.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

8.1. Control parameters:

Occupational exposure limits:

AUSTRALIA: Workplace Exposure Standard For Airborne Contaminants:

Components	Type	Value	Form (all forms except fibres)
Graphite (CAS 7782-42-5)	TWA	3 mg/m ³	Respirable dust.
	TWA	3 mg/m ³	Natural & Synthetic.

Biological limit values: No biological exposure limits noted for the ingredient(s).

Recommended monitoring

procedures: Follow standard monitoring procedures.

Derived no-effect level (DNEL):

Components	Type	Route	Value	Form
Graphite (CAS 7782-42-5)	Worker	Inhalation	0.17mg/m ³	Acute Local effects.
		Inhalation	0.17mg/m ³	Acute term Local effects.

Predicted no effect concentrations (PNECs):

Components	Type	Route	Value	Form
Graphite (CAS 7782-42-5)	Aqua (Freshwater)	Water	1mg/l	
		Water	0.1mg/l	
		(Marine water)		
Petrolatum USP (CAS 8009-03-8)	Not applicable	Sewage Treatment Plant	Note applica ble	50mg/l
		Oral		9.33mg/kg

- 8.2. **Engineering controls:** Observe Occupational Exposure Limits and minimize the risk of inhalation. Provide explosion proof ventilation for high concentrations. Provide access to washing facilities including soap, skin cleanser and fatty cream.
- 8.2.1. **Hand Protection:** Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.)
- 8.2.2. **Eye Protection:** Wear safety glasses with side shields (or goggles).
- 8.2.3. **Skin protection/other:** Wear suitable protective clothing.
- 8.2.4. **Thermal hazards:** Wear appropriate thermal protective clothing, when necessary.
- 8.3. **General hygiene considerations:** 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.

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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties.

Appearance:	Black paste.
Physical state:	Solid.
Colour:	Black.
Odour:	None.
Odour threshold:	None.
Form:	Paste.
pH:	N/A.
Melting point /Freezing boiling point:	N/A.
Initial boiling point and boiling range:	315.6 - 329.4 °C (600 - 625 °F).
Flash point:	160 °C (320 °F).
Evaporation rate:	N/A.
Flammability (solid, gas):	N/A.
Upper/lower flammability or explosive limits:	
• Flammability limit - lower (%):	N/A.
• Flammability limit - upper (%):	N/A.
• Explosive limit - lower (%):	N/A.
• Explosive limit - upper (%):	N/A.
Relative density:	1.5 - 1.7 (21°C [70°F]).
Evaporation rate:	N/A.
Solubility in water:	Insoluble in Water.
Partition coefficient(n-octanol/water):	N/A.
Auto ignition temperature:	N/A.
Viscosity:	N/A.
Explosive properties:	N/A.
Other information:	N/A.
• Bulk density:	No data available.
• Explosive limit:	N/A.
• Explosive properties:	Note Explosive.

10. STABILITY AND REACTIVITY

10.1. Reactivity:	Stable at normal conditions.
10.2. Chemical Stability:	Material is stable under normal conditions.
10.3. Possibility of hazardous reaction:	Will not occur.
10.4. Conditions to avoid:	Excessive heat.
10.5. Incompatible materials:	Strong oxidising agents.
10.6. Hazardous decomposition product:	Carbon oxides.

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11. TOXICOLOGICAL INFORMATION

11.1. General information:	Occupational exposure to the substance or mixture may cause adverse effects.	
11.2. Ingestion:	Prolonged inhalation may be harmful.	
11.3. Serious eye damage/ irritation:	May cause eye irritation.	
11.4. Skin Contact:	May cause skin irritation.	
11.5. Symptoms:	Direct contact with eyes may cause temporary irritation.	
11.6. Information on toxicological effect :		
Acute Toxicity		
Component	Species	Test Results
<i>Graphite (CAS 7782-42-5)</i>		
Acute		
Oral		
LD50	Rat	> 10000 mg/kg.
<i>White mineral oil (petroleum) (CAS 8042-47-5)</i>		
Dermal		
LD50	Rabbit	> 2000 mg/kg.
Inhalation		
LD50	Rat	> 5 mg/kg.
Oral		
LD50	Rat	> 5000 mg/kg.
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 sensitization -		
Respiratory sensitization:	Not a respiratory sensitizer.	
Skin sensitization:	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity:	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity:	Not data available.	
ACGIH Carcinogens:		
Petrolatum USP (CAS 8009-03-8)	A4 Not classifiable as a human carcinogen.	
White mineral oil (petroleum) (CAS 8042-47-5)	A4 Not classifiable as a human carcinogen.	
IARC Monographs. Overall Evaluation of Carcinogenicity:		
Petrolatum USP (CAS 8009-03-8):	3 Not classifiable as to carcinogenicity to humans.	
Mutagenicity:	No data available.	
Reproductive effects:	No data available.	
Symptoms and target organs:	Eye contact: Exposed individuals may experience eye tearing, redness, and discomfort.	

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12. ECOLOGICAL INFORMATION

12.1. Toxicity:	The product components are 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.
12.2. Persistence and degradability:	No data available.
12.3. Bioaccumulative potential:	No data available.
12.4. Bioconcentration factor (BCF):	No data available.
12.5. Mobility in soil: Mobility in General:	No data available. The product is insoluble in water and will sediment in water systems.
12.6. Results of PBT and vPvB assessment:	Not a PBT or vPvB substance or mixture.
12.7. Other adverse effects:	No data available.

13. DISPOSAL CONSIDERATIONS

13.1. Disposal instructions:	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
13.2. Local disposal regulations:	All waste should be disposed of in accordance with the requirements of Federal, State, Provincial and Local government.
13.3. Contaminated packaging:	Since empty containers may retain product residue, follow label warnings even after container is empty. Empty containers should be taken to an approved waste-handling site for recycling or disposal.
13.4. Hazardous waste code:	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
13.5. Waste from residues / unused products:	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

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14. TRANSPORT INFORMATION

14.1.	DOT:	Not regulated as dangerous goods.
14.2.	IATA:	Not regulated as dangerous goods.
14.3.	IMDG:	Not regulated as dangerous goods.
14.4.	Transport in bulk in bulk, according to Annex II of MARPOL 73/78 and the IBC	
	Code:	This substance/mixture is not intended to be transported in bulk.

15. REGULATORY INFORMATION

15.1	RISK phrases:	
		R45 May cause cancer.
		R38 Irritating to skin.
15.2	Safety information:	
15.2.1	SAFETY phrases:	
		S15 Keep away from heat.
		S38 In case of insufficient ventilation, wear suitable respiratory equipment.
		S41 In case of fire and or explosion, do not breathe fumes.
15.2.2.	Safe handling:	
		S37 Wear suitable gloves.
		S23 Avoid contact with eyes.
	R36/37/38	Irritating to eyes, respiratory system and skin.
	S20/21	When using, do not eat, drink or smoke.
	S24/25	Avoid contact with skin and eyes.
	S27/28	After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of... (to be specified by the manufacturer).

Chemical name	Statement
Graphite (CAS No: 7782-42-5)	This chemical is listed on the 2002 Australian HVICL, NICNAS, AICS. Australia Exposure Standards, and Australia Hazardous Substances Information System - Consolidated List.
Petrolatum USP (CAS No: 8009-03-8)	This chemical is listed on the 2002 Australian HVICL, NICNAS, AICS, and Australia Hazardous Substances Information System - Consolidated List.
White Mineral oil (CAS No:8042-47-5)	This chemical is listed on the 2002 Australian HVICL, NICNAS, and AICS.

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16. ANY OTHER RELEVANT INFORMATION

16.1. List of abbreviations:

ADR	Accord Dangereux Routier.
HVICL	The Australian high volume industrial chemical list.
IMDGC	International Maritime Dangerous Goods Code.
NNOHSC	NNOHSC-National Occupational Health and Safety Commission.
PBT	Persistent, Bio-accumulative and Toxic.
STOT	Specific Target Organ Toxicity.
vPvB	very Persistent very Bio accumulative.


16.2. SDS report status:

This document has been compiled by Novus Sealing Pty Ltd on behalf of the manufacturer of the product and serves as the manufacturer's Safety Data Sheet ('SDS'). It is based on information concerning the product, which has been provided to Novus Sealing Pty Ltd by the manufacturer and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer.

While Novus Sealing Pty Ltd has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, Novus Sealing Pty Ltd accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

All information and recommendations contained in this publication are based on the present level of knowledge and experience. Since the conditions of use are beyond our control, users must satisfy themselves that products are suitable for the intended processes and applications. No warranty is given or implied in respect of information and recommendations or that any use of the products will not infringe rights belonging to other parties. Our most current General Sales Conditions shall apply.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. This SDS has been transcribed into Info safe NOHSC format from an original issued by the manufacturer on the date shown. DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued.

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Approved by:	Danny Flynn. General Manager. Signature: 
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END OF SAFE DATA SHEET.	