

GTS® Thread Sealant Paste

TECHNICAL DATA SHEET 116

GRAFOIL® GTS® graphite thread sealant paste 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. GTS® paste is made to seal small diameter, close tolerance threaded pipe joints in critical service applications to 635°C (1175°F) and 16MPa (2300 psi).

Applications

- Seal small diameter
- Close tolerance threaded pipe joints in critical service

Directions for Use

- Thoroughly clean threaded surfaces prior to application.
- Knead tube well (for best results, remove cap, squeeze out air, place cap back on tightly, then knead well).
- Apply paste evenly and fill threads completely. Carefully assemble and tighten the threaded joint.
- Close cap tightly after use.
- Joint is ready for immediate use.

GTS® paste can be certified to meet many nuclear specifications because of its purity and thermal stability. Supplied in a form that permits easy application, GTS® paste is an ideal replacement for Teflon® thread sealant tape and other conventional thread sealant materials in critical high temperature and high-pressure service applications.

Each lot of GTS® paste is packaged in 125 gm nuclear grade polyethylene “squeezeable” tubes to protect against contamination.

The purity level of GTS® paste allows it to meet the stringent certification requirements of the nuclear power generation industry such as the General Electric nonmetallic material specification D50YP12 Rev 2.



GTS® paste can also be used as an effective bolt lubricant or anti-seize compound, having outperformed conventional lubricants under tests. Because GTS® 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.

Typical Properties*

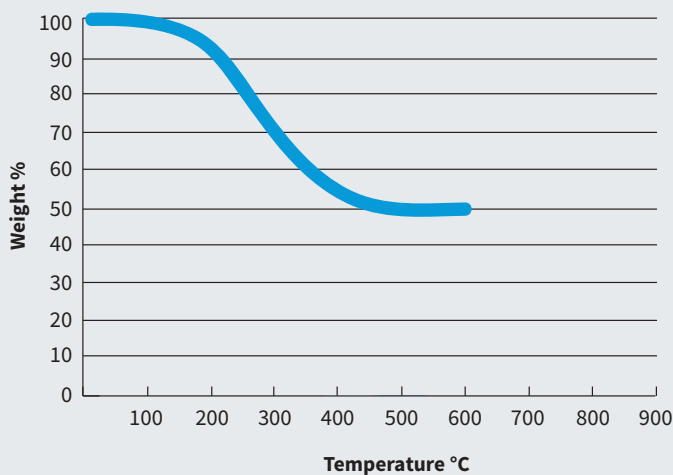
ELEMENT	TYPICAL PROPERTY
Total Halogen (as Cl)	<25 ppm
Leachable Chloride	<10 ppm
Total Chlorine	<10 ppm
Total Fluorine	<25 ppm
Total Nitrite	<1 ppm
Total Nitrate	<10 ppm
Total Sulfur	<150 ppm
Embrittling Metals (No single embrittling metal >200 ppm)	<250 ppm

Notes:

* Properties listed are typical and cannot be used as accept/reject specifications.

SHELF LIFE	2- Year Min from date of first use
STORAGE TEMP	≤38°C (100°F)
PIPE SIZE LIMITATIONS	≤2" (50.8 mm OD close fitting threaded joints)

**TGA OF GTS PIPE THREAD SEALANT PASTE WEIGHT
Loss vs. Temperature**



TGA Analysis

Weight loss begins at about 125°C (255°F), with 6% weight loss at 200°C (390°F). GRAFOIL GTS maintains its seal up to 635°C (1175°F).

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