

ThermoFil TF2418

High Thermally Conductive Interface Filling Material

Typical Properties			
Property	Unit	Value	Test Method
Color / Component A		White	Visual
Color / Component B		Blue	Visual
Mixing Ratio	By weight	1:1	
Density (as mixed)	Gram /cc	2.6	ASTM D792
Viscosity as Mixed at 25°C	Pa.s	150	ASTM D2196
Property as Cured			
Color		Light Blue	Visual
Hardness	Shore OO	46	ASTM D2240
Thermal Conductivity	W/m-K	2.0	ASTM D5470
Heat Capacity at 25°C	J/g-K	0.95	ASTM D1269
Dielectric Constant	@1000Hz	4	ASTM D150
Dielectric Strength	Volt/mil AC	> 400	ASTM D149
Volume Resistivity	Ohm-cm	> 10E+14	ASTM D257
Coefficient of Thermal Expansion	ppm/C	180	IPC-TM-650
Temperature Usage	Degree °C	-50 to 200	TGA
Cure Profile			
Cure at 25°C	Hour	4	DSC
Cure at 125°C	Min	10	DSC
Pot Life at 25°C	Min	30	Viscosity double
Cure out gassing	Weight %	< 0.1%	TGA

These figures are only intended as a guide and should not be used in preparing specifications.

Processing Instruction

Important! ThermoFil® TF2418 is platinum cure system. Please keep applied surface clean and avoid using this material on any surface that contains sulfur, amine, phosphorous, organo-metals, acid, etc. because these containments could inhibit the cure the material.

Only components A and B with the same lot number may be processed together! For the package in a container (not in a cartridge), to ensure homogeneity of the material, the components must be stirred thoroughly before they are removed or processed in order to uniformly disperse any fillers that might have settled during storage.

We recommend running preliminary tests to optimize conditions for the particular application. Comprehensive processing instructions can be obtained by contacting directly to EpoSiL Inc.

Characteristics

ThermoFil® TF2418 is a high thermally conductive interface gap filling material. It is a non-slump, addition-curing, two-component silicone that cures at room temperature or elevated temperature to a very soft rubber with excellent thermal conductivity. The cured material provides extremely low thermal stress for thermal cycles. TF2418 is dispensable and printable.

Special Features and Benefits

- High thermal conductivity
- Almost constant properties from -50 to 180 °C
- Extremely low modulus for stress compliance
- Low bleeding, low volatile
- Pre-added 7 mil glass bead for thickness control

Typical Applications

- Automotive electronics
- Semiconductor and Telecommunications
- Between high heat power device and heat sink
- Thermally conductive vibration dampening
- Couple thermal stress while dissipating heat

ThermoFil® TF2418 has a shelf life of at least 6 months when stored between 5 °C and 30 °C in the originally sealed container. After cure it forms a low modulus "gel-like" material that is not for structure bonding purpose. For bonding thermally conductive adhesive, please select the EpoSiL products TC2817 or TC2808.

Storage

ThermoFil® TF2418 has a shelf life of at least 6 months when stored between 5°C and 30 °C in the originally sealed container. The 'Best use before end' date of each batch appears on the product label. Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

Safety information

According to the latest findings, addition curing ThermoFil® TF2418 silicone gel contains neither toxic nor corrosive substances that might require special handling precautions. General hygiene regulations should be observed. Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from EpoSiL Inc.

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose. For technical, quality, or product safety questions, please contact directly to: EpoSiL Inc. 1888 Commercial Ave Northbrook, IL 60004, USA.