

ThermoFill TF2419

Thermally Conductive Thermal Interface Compound

Typical Properties			
Property	Unit	Value	Test Method
Color		White	Visual
Density (as mixed)	Gram /cc	2.7	ASTM D792
Extrusion Rate (3 mm nozzle, 0.62 Mpa, 24C)	Gram / Min	35	UATM 07005
Typical Minimum Bondline Thickness	um (inch)	175 (0.007)	UATM
Hardness	Shore OO	< 10	ASTM D2240
Compressive Property (%Deflection @ Various Force Levels)	@ 0.05 kg @ 0.10 kg @ 0.20 kg @ 0.30 kg @ 0.40 kg @ 0.50 kg	12% 23% 33% 39% 42% 44%	DMA (Modified ASTM C165-07) Sample size: 2.3 mm thick 22 mm diameter. Compress rate: 1N / min
Thermal Conductivity	W/m-K	1.8	ASTM D5470
Heat Capacity at 25°C	J/g-K	1.0	ASTM D1269
Dielectric Constant	@1000Hz	4	ASTM D150
Dielectric Strength	Volt/mil AC	> 450	ASTM D149
Volume Resistivity	Ohm-cm	> 10E+14	ASTM D257
Coefficient of Thermal Expansion	ppm/C	320	ASTM E831
Shelf Life at 25°C	Month	12	UATM
Out-gassing in a Vacuum Environment	Weight %	< 0.5%	ASTM E595
Temperature Usage	°C	-55 to 200	TGA

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

Processing Instruction

For package in Semco cartridges less than 10 oz, a manual or pneumatic dispensing gun can be used for dispensing. For larger Semoc cartridges (> 20 oz), or gallon pails, automatic pumping equipment may be applied.

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

This low modulus flexible material is not for structure bonding purpose. For bonding thermally conductive adhesive, please select the United Adhesives' "ThermoBond" products.

The figures listed in this datasheet are in good faith with the present state of our knowledge, but should not be used in substitution for user's tests. We reserve the right to alter product constants within the scope of technical progress or new developments. The suggestions for use in this sheet should be checked by preliminary trials because the user's processing conditions are out of our control. The suggestions for use should not be in substitution of user from the obligation of investigating the possibility of infringement of third parties' patents or rights. This datasheet does 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 United Adhesives Inc.

Characteristics

TF2419 is a thermally conductive filling and interfacing compound. As a pre-formed visco-elastic gel type material, it does not need to cure. It is very soft and flexible like chewing gum and readily able to extrude out from syringe and auto pump, and not running after dispense. It can be stored for long time at ambient conditions. After applied to thermal powder devices, it maintains very low thermal stress in thermal cycles. It also provides superior resistance to moisture and media corrosions.

Special Features and Benefits

- Extremely soft and flexible
- Good thermal performance
- High purity for electrical insulation
- Preformed and no need to mix
- No need to thermal cure
- Properties stable from -55 to 180 °C
- Ambient storage, no filler settling
- Easily reworkable
- 7 mil glass beads added for thickness control

Typical Applications

- Automotive electronics and controls
- Semiconductor and Telecommunications
- Power devices and equipment
- Heat dissipation applications
- Thermally conductive vibration dampening
- Couple thermal stress while dissipating heat

TF2419 has a shelf life of at least 18 months when stored between 5°C and 30°C in the originally sealed container.

Storage

TF2419 has a shelf life of at least 12 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

TF2419 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 United Adhesives Inc.