Laird TECHNOLOGIES

Innovative **Technology** for a **Connected** World

Tputty™ 504 Series

SOFT, SILICONE GEL

Tputty™ 504 is a soft silicone gel thermal gap filler ideal for applications where large gap tolerances are present.

The silicone gel is filled with a complex matrix of ceramic fillers to yield superior thermal performance.

Tputty™ 504 is soft and compliant transferring little to no pressure between interfaces. Because Tputty™ 504 has a higher viscosity than grease, it eliminates the bleed and pump-out usually associated with grease. Bond line variances can also be more easily controlled than with traditional thermal pads.

Tputty™ 504 can be applied like grease and is easily dispensable from a wide range of commercially available equipment including screen print, syringe and automated equipment.

FEATURES AND BENEFITS

- Soft and compliant transferring little to no pressure between interfaces
- 1.8 W/mK thermal conductivity
- Available in 10cc, 30cc and 55cc syringes
- Available in 100cc,170cc and 305cc auto dispense cartridges
- Available in bulk containers from sample jars through 20 kg pails
- Applies like grease and is easily dispensable from a wide range of commercially available equipment including screen print, syringe and automated equipment

APPLICATIONS

- Flip chip microprocessors
- PPGAs, micro BGAs, BGAs
- DSP chips, graphic accelerator chips
- Other high-wattage electronic components
- LED lighting

global solutions: local support™

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	Tputty™ 504	TEST METHOD
Construction & Composition	Ceramic-filled dispensable silicone gel	
Color	Light Grey	Visual
Viscocity @ 23°C, mPa.s (cP) Brookfield RV, TC spindle, Helipath @ 0.5 rpm	6,000,000 to 8,000,000	
Temperature Range	-45°C to 200°C	
Thermal Conductivity	1.8 W/mK	ASTM D5470
Density	2.7 g/cc	
Thermal Impendance Final Thickness @ 0.010	0.15°C-in²/W (0.97°C-cm²/W)	ASTM D5470 (modified)
Thermal Impendance Final Thickness @ 0.020	0.27°C-in²/W (1.74°C-cm²/W)	ASTM D5470 (modified)
Dielectric Strength	500 VAC/mil	ASTM D149
Volume Resistivity	$>10^{14}$ ohm-cm	ASTM D2240
MSDS	Available upon request	
Outgassing TML	0.34%	ASTM E595
Outgassing CVCM	0.09%	ASTM E595

Data for design engineer guidance only. Observed performance varies in application. Engineers are reminded to test the material in application.

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