

T-work8000

Ultra Soft & Highly Thermally Conductive Gap Filler

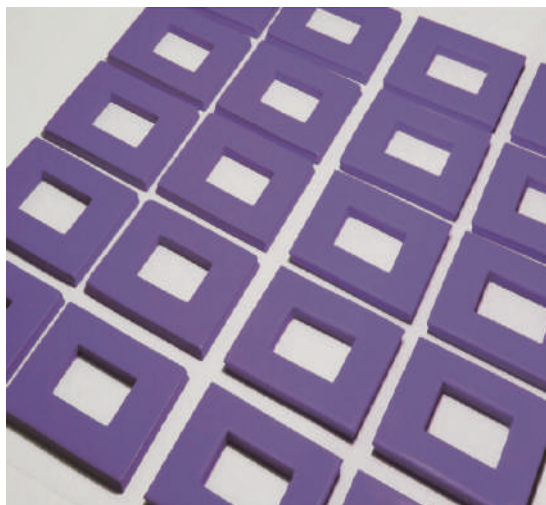
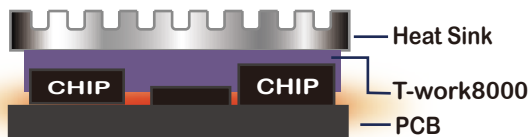
LiPOLY T-work8000 is a high performance thermally conductive interface pad. T-work8000 offers outstanding thermal conductivity at 15.0 W/m*K and extremely low thermal resistance under minimal-force. T-work8000 offers excellent compression, filling small air gaps and uneven surfaces, ensuring an efficient and consistent transfer of heat. T-work8000 is designed for the most demanding of applications.

Features-

- Thermal conductivity: 15.0 W/m*K
- High compression rate
- Extremely low thermal impedance

Typical Applications-

- Between CPU and heat sink.
- Between a component and heat sink.
- Flat-panel displays
- Power supplies
- High speed mass storage drives
- Telecommunication hardware



Construction-

Series	Characteristics	Configurations
T-work8000	Silicone compound with weak sticky surfaces.	Sheets form, Die-cuts parts

Typical Properties-

PROPERTY	T-work8000	TEST METHOD	UNIT
Color	Purple	Visual	-
Surface tack 2-side/1-side	2	-	-
Thickness	Customized	ASTM D374	mm
Density	3.3	ASTM D792	g/cm ³
Hardness	65	ASTM D2240	Shore OOO
TML	<0.1	By LiPOLY	%
Application temperature	-60~150	-	°C

COMPRESSION

Deflection @10 psi	10	ASTM D5470 modify	%
Deflection @20 psi	42	ASTM D5470 modify	%
Deflection @30 psi	64	ASTM D5470 modify	%
Deflection @40 psi	71	ASTM D5470 modify	%
Deflection @50 psi	79	ASTM D5470 modify	%

ELECTRICAL

Dielectric breakdown	8	ASTM D149	KV/mm
Surface resistivity	>10 ¹¹	ASTM D257	Ohm
Volume resistivity	>10 ¹⁰	ASTM D257	Ohm-m
Dielectric constant@10M Dk	9.4	ASTM D150	-
Dielectric constant@1G Dk	9.3	ASTM D150	-
Dielectric constant@1.8G Dk	10.3	ASTM D150	-
Dielectric factor@10M Dk	0.006	ASTM D150	-
Dielectric factor@1G Dk	0.009	ASTM D150	-
Dielectric factor@1.8G Dk	0.028	ASTM D150	-

THERMAL

Thermal Conductivity	15.0	ASTM D5470	W/m*K
Thermal impedance@10psi	0.185	ASTM D5470	°C-in ² /W
Thermal impedance@20psi	0.122	ASTM D5470	°C-in ² /W
Thermal impedance@30psi	0.074	ASTM D5470	°C-in ² /W
Thermal impedance@40psi	0.054	ASTM D5470	°C-in ² /W
Thermal impedance@50psi	0.046	ASTM D5470	°C-in ² /W
Coefficient of thermal expansion	-89.56x 10 ⁻⁶	ASTM E228	1/K

FLAME RATING

UL Flammability class	V-0	UL94	-
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Thermal Impedance & Compression-

Compression Force(psi)	Thermal Impedance(°C-in ² /W)			Compression(%)		
	1.0mm	2.0mm	3.0mm	1.0mm	2.0mm	3.0mm
10	0.185	0.293	0.335	10	20	41
20	0.122	0.167	0.174	42	60	72
30	0.074	0.106	0.115	64	74	82
40	0.054	0.076	0.083	71	82	87
50	0.046	0.059	0.064	79	86	90

Reliability-

Test Property	Compression Force (psi)	70 °C				
		Initial	100hrs	250hrs	500hrs	1000hrs
Thermal	10	0.185	0.183	0.184	0.185	0.187
	30	0.074	0.076	0.076	0.075	0.077
Resistance	50	0.046	0.048	0.047	0.046	0.048

Test Property	Compression Force (psi)	150 °C				
		Initial	100hrs	250hrs	500hrs	1000hrs
Thermal	10	0.185	0.186	0.187	0.186	0.187
	30	0.074	0.076	0.077	0.077	0.078
Resistance	50	0.046	0.048	0.047	0.047	0.048

Test Property	Compression Force (psi)	60 °C / 90%RH				
		Initial	100hrs	250hrs	500hrs	1000hrs
Thermal	10	0.185	0.186	0.185	0.184	0.183
	30	0.074	0.076	0.077	0.076	0.075
Resistance	50	0.046	0.047	0.046	0.045	0.045

Test Property	Compression Force (psi)	-40°C (30min) ↔ +125 °C (30min)					
		0 cycles	100 cycles	200 cycles	300 cycles	400 cycles	500 cycles
Thermal	10	0.185	0.183	0.184	0.186	0.185	0.186
	30	0.074	0.073	0.074	0.077	0.076	0.076
Resistance	50	0.046	0.047	0.045	0.048	0.047	0.047

Test Property	Compression Force (psi)	Ultra Low Temp(-60°C)					
		Initial	100hrs	200hrs	300hrs	400hrs	500hrs
Thermal	10	0.185	0.186	0.185	0.184	0.185	0.186
	30	0.074	0.075	0.075	0.073	0.074	0.075
Resistance	50	0.046	0.047	0.046	0.045	0.047	0.047

Test method: ASTM D5470 , Specimen thickness = 1.0mm , Unit:°C-in²/W