



| Selection Guide |

Thermal Interface Material

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Q&A

Company Profile



Leading Company in Thermal Management Materials

The first national high-tech enterprise, dedicated to the R&D, production and sales of electronic thermal management materials in China.

Shenzhen Aochuan Technology Co., Ltd. was established in 2004 and is headquartered in Guanlan, Shenzhen. We are committed to providing customers with thermal management solutions and thermal interface materials. The thermal conductive silicone materials developed and produced are of stable and reliable quality, which can meet the up-to-date needs of various industries.

Aochuan Technology has an independent park of more than 20,000 square meters, equipped with complete production equipment and strict management system. The company has passed ISO9001, ISO14001 and IATF16949 quality management system certification, and its products also meet RoHS, REACH and UL specifications.

Comprehensive thermal management solutions

Based on our deep understanding of thermal materials, we are targeted to provide customers with comprehensive solutions for thermal management.

After 18 years of growth and precipitation, Aochuan has successively won the title of Shenzhen High-tech Enterprise and National High-tech Enterprise.

In order to meet the strict requirements for high quality and high reliability of related application products in integrated circuits, semiconductors, precision manufacturing, aerospace and other industries, Aochuan has built a clean and dust-free workshop, eliminating the hidden quality hazards on the product surface caused by dust, and further improve the quality of produced products.

Internationally Competitive R&D System

With strong scientific research strength, we have gathered a team of scientific research experts and senior engineers in thermal management materials, forming a cohesive professional R&D team.

Aochuan has a complete thermal and material performance laboratory, a first-class R&D and service team, and always adheres to the pursuit of perfect quality with innovation as the driving force and is committed to providing customers with high-quality products and innovative thermal management solutions. Benchmark customers have established close cooperative relationships and are recognized as leading companies in the thermal conductive materials industry.



Company Benchmarks

Year 2020

Workshop upgraded to GMP
10,000 Grade Clean Room

Year 2018

Achilles Certified

Year 2017

Manufacturing relocated to AOK Heyuan
North America office Established

Year 2016

TS16949 Certified

Year 2015

AOK Taiwan Established

Year 2014

Entitled National High Tech
Enterprise of China

Year 2010

LED, Power Supply and Flat Display Divisions
Established to provide customers one-stop
thermal management solution.

Year 2009

The Permit of Import and Export,
Taiwan Liaison Office Established

Year 2008

Entitled High Tech Enterprise of Shenzhen

Year 2007

IOS14001 Certified

Year 2006

ISO9001 Certified by GIC China

Year 2004

Company Established in Guanlan, Shenzhen



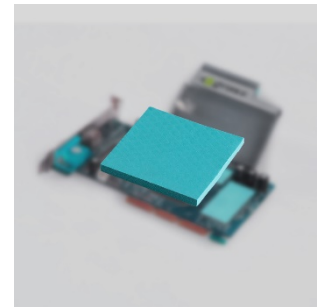
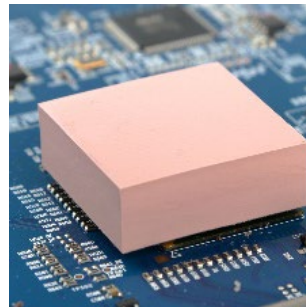
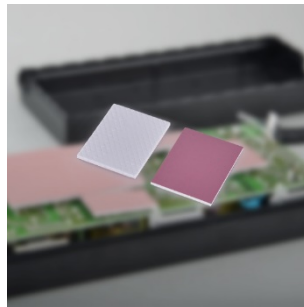
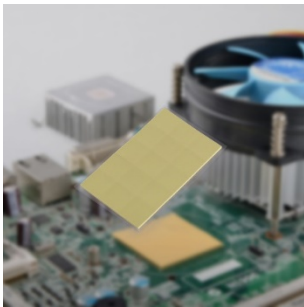
TP Series Thermal Pad

Thermal Management Solutions for Electronic Devices

All products in the TP series can be used to fill gap and enhance thermal conductivity

Aochuan Technology is a leading brand of thermal interface materials in China. In order to adapt to the rapid development of the modern electronic industry, we have developed a series of products with low thermal resistance, high performance, high compliance and high ease of use.

Aochuan Technology thermal pad series products provide an effective thermal conduction path for the gap and rough surface texture between the radiator and the heat source. The application experts of Aochuan Technology will closely provide feasible thermal management solutions for each application of customers.



Features

To meet the needs of different applications, we have developed thermal pads with different properties and functions.

- low modulus polymer material
- Fiberglass reinforced /rubber/non-reinforced options
- Special fillers to achieve specific thermal conductivity
- Ideal for uneven and rough surfaces
- Electrical insulation
- Naturally Tacky on Single-sided/double-sided
- Various Thickness and Hardness
- Various Thermal Conductivity
- Sheets and Die Cuts Available

Benefits

In addition to reducing thermal resistance and improving thermal conductivity, our thermal pads also consider economic benefits by saving time and effort.

- Eliminates air gaps to reduce thermal resistance
- High compliance reduces interfacial resistance
- Low stress shock absorption
- easy to process
- Simplified application
- Puncture-resistant, good mechanical properties
- Improve the performance of thermal components

Customization

Some of our thermal pads can meet the special application of customers.

- Single-sided/double-sided debonding
- Single-sided/double-sided tacky
- Fiberglass reinforcement
- Provide die-cut parts/sheets/rolls according to customer needs
- Ultra-thin
- Automated installation solution
- Customized thickness

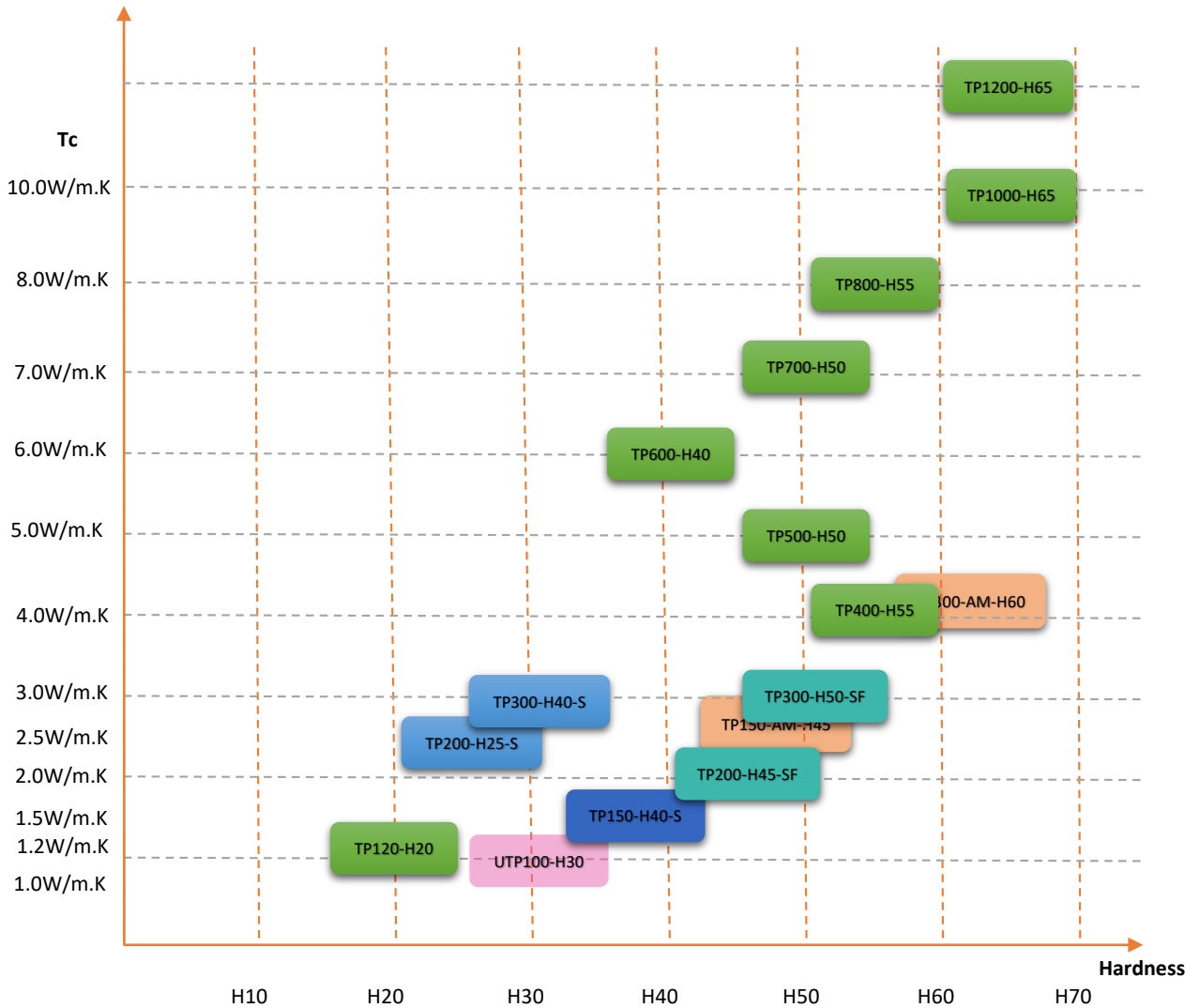
Application

AOK Thermal Pads are widely used in network communications, automotive electronics, consumer electronics, security, power supplies, IT and other industries.

- Between IC and heat sink or chassis
- Graphics card cooling module
- Modules require high thermal conductivity
- High-speed high volume storage drive
- ECU of Automotive
- Hard drives
- Network communication equipment
- Heat Pipes

TP Series Thermal Pad

Thermal Conductivity vs. Hardness Chart



Conventional
Ultra Soft
UTP
Low Oil Bleeding
Silicon Free
EM Absorber Combo

UTP100

Ultra Soft, Reinforced Gap Filler Pad

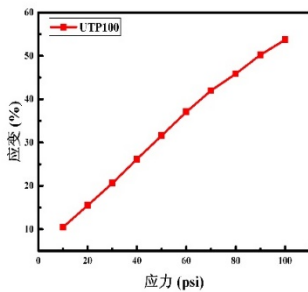
Features and Benefits

- Thermal Conductivity 1.0W/m.K
- Ultra Soft, Excellent Compressibility up to 50%
- Naturally Tacky Single Sided
- Fiberglass Reinforced, No Deformation after Puncture
- Puncture Resistance
- High Voltage Resistance

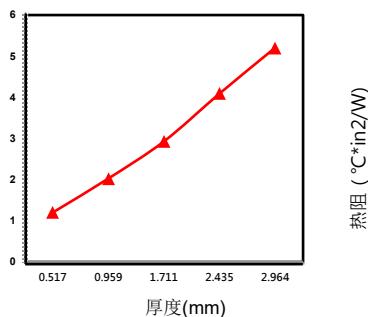


UTP100-H10-9 is a multi-functional thermally conductive pad reinforced with fiberglass. The material is naturally tacky on single side, puncture resistance, enhancing voltage resistance, ultra soft, and excellent compression. It can work stably at $-40^{\circ}\text{C}\sim 150^{\circ}\text{C}$ and meet UL94 V-0 anti flame grade.

Compression vs. Pressure



Thermal Resistance vs. Thickness



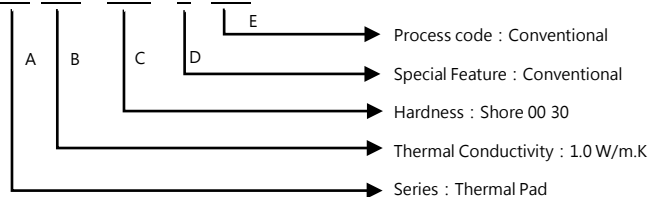
UTP 100 Typical Properties		
Attributes	Values	Test Methods
Composition	Silicone Rubber +Fiberglass	-
Color	White + Brown	Visual
Thickness(mm)	0.5~12	ASTM D374
Density (g/cc)	2.5	ASTM D792
Hardness (Shore OO)	30	ASTM D2240
Tensile Strength(Mpa)	2.5	ASTM D412
Elongation (%)	60	ASTM D412
Usage Temperature (°C)	-40~150	-
Electrical		
Breakdown Voltage (KV/mm)	≥ 8.0	ASTM D149
Dielectric Constance (@1MHz)	5.3	ASTM D150
Volume Resistance ($\Omega\cdot\text{cm}$)	10^{13}	ASTM D257
Flammability	V-0	UL 94
Thermal		
Thermal Conductivity (W/m.K)	1.0	ISO 22007-02

Typical Applications

- MOSFET
- Between cooling device to chassis or frame
- High speed mass drive
- Flat Panel Display
- Memory Module
- Power Supply
- LED

Part Number System

UTP 100 - H30 - 9 - 000



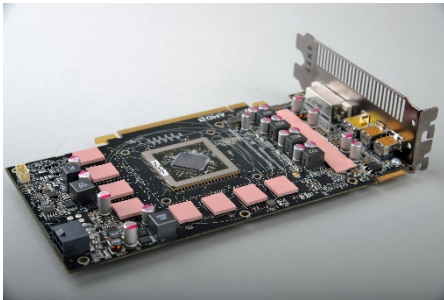
Standard Sheet: size 200x400mm or custom die cut parts.
Thickness available in 0.25mm increments.

TP120

Ultra Soft Gap Filler Pad

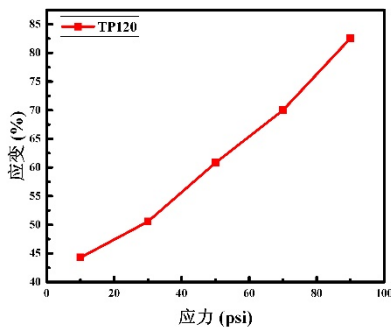
Features and Benefits

- Thermal Conductivity : 1.2 W/m.K
- High Compression Ratio
- Naturally Tacky on both side
- High Electrical Insulation
- Good Performance in wide Temperature Range
- High flexibility and compliant applications

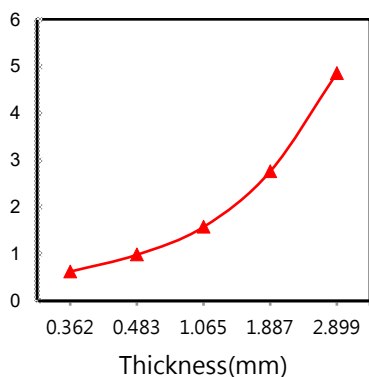


TP120 is a thermally conductive gap filler pad for low compression, low thermal resistance, high flexibility and compliant applications. It can work stably at -40°C~150°C and meet UL94 V-0 flame retardant grade.

Compression vs. Pressure



Thermal Resistance vs. Thickness



热阻 (°C*in2/W)

TP 120 Typical Properties

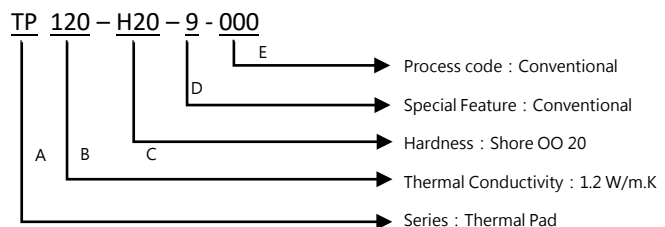
Attributes	Values	Test Methods
Composition	Silicone+ Ceramic	-
Color	Light Red	Visual
Thickness(mm)	0.5~12.0	ASTM D374
Density (g/cc)	2.3	ASTM D792
Hardness (Shore OO)	20	ASTM D2240
Tear Strength (KN/m)	1.0	ASTM D624
Tensile Strength (MPa)	0.13	ASTM D412
Elongation (%)	52	ASTM D412
Usage Temperature (°C)	-40~150	-
Electrical		
Breakdown Voltage (KV/mm)	≥6.5	ASTM D149
Dielectric Constance (@1MHz)	5.3	ASTM D150
Volume Resistance (Ω.cm)	10 ¹²	ASTM D257
Flammability	V-0	UL 94
Thermal		
Thermal Conductivity (W/m.K)	1.2	ISO 22007-02

*Thickness $T \leq 1.0$ mm, Hardness $H = \text{Shore OO } 35$

Typical Applications

- Flat Panel Display
- Power Module
- LED Lighting
- GPU
- High Speed Hard Drive
- ECU
- Between cooling device to chassis or frame

Part Number System



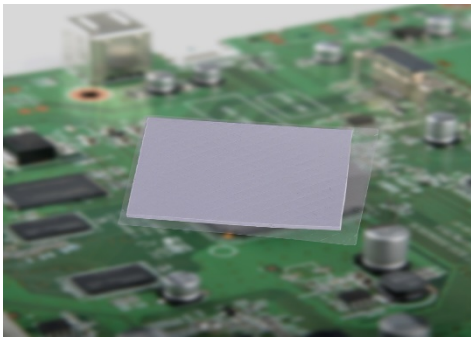
Standard Sheetsize: 200x400mm or custom die cut parts.
Thickness available in 0.25mm increments.

TP150

Ultra Soft Gap Filler Pad

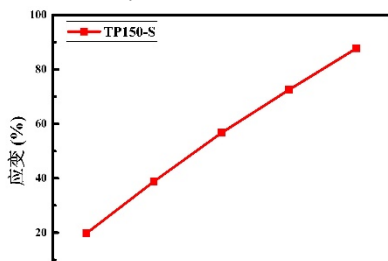
Features and Benefits

- Thermal Conductivity: 1.5 W/m.K
- Ultra Soft
- Naturally Tacky both Side
- High Breakdown Voltage
- Fiberglass and PI Film Reinforcement available
- High Compression Ratio at Low Pressure

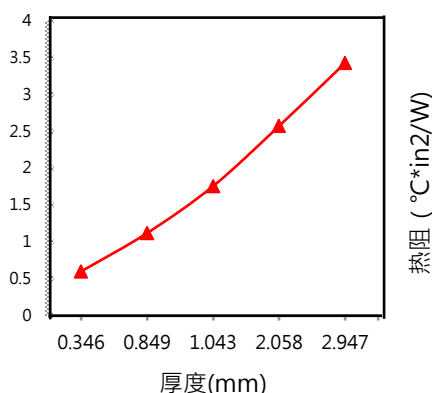


TP150 silicone thermal pad is a product that balance performance and economy. It is a unique thermal pad with low thermal resistance, high softness and high compliance. It can work stably at $-40^{\circ}\text{C}\sim 150^{\circ}\text{C}$ and meet the flame retardant grade requirements of UL94 V-0.

Compression vs. Pressure



Thermal Resistance vs. Thickness



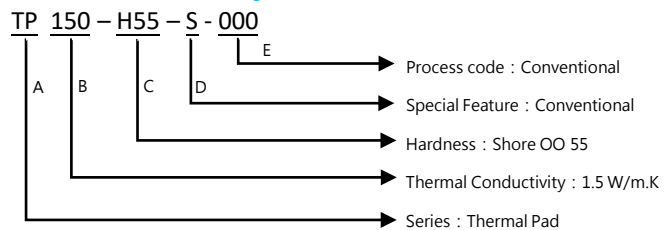
TP 150 Typical Properties		
Attributes	Values	Test Methods
Composition	Silicone+ Ceramic	-
Color	Light Grey	Visual
Thickness(mm)	0.5~10.0	ASTM D374
Density (g/cc)	2.5	ASTM D792
Hardness (Shore OO)	55	ASTM D2240
Usage Temperature ($^{\circ}\text{C}$)	$-40\sim 150$	-
Electrical		
Breakdown Voltage (KV/mm)	≥ 10	ASTM D149
Dielectric Constance (@1MHz)	7.0	ASTM D150
Volume Resistance ($\Omega\cdot\text{cm}$)	10^{13}	ASTM D257
Flammability	V-0	UL 94
Thermal		
Thermal Conductivity (W/m.K)	1.5	ISO 22007-02

*Thickness $T \leq 0.75$ mm, Hardness $H = \text{Shore OO } 55$

Typical Applications

- Flat Panel Display
- Power Supply
- LED Lighting
- GPU
- LCD Backlight
- High Speed Hard Drive
- ECU
- Between cooling device to chassis or frame

Part Number System



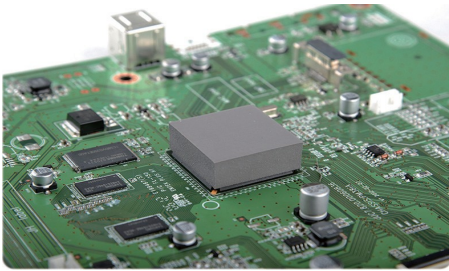
Standard Sheet: size 200x400mm or custom die cut parts.
Thickness : available in 0.25mm increments.

TP200

Ultra Soft Gap Filler Pad

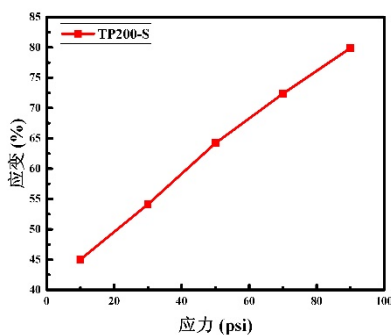
Features and Benefits

- Thermal Conductivity: 2.0W/m.K
- Low Compression Pressure
- Naturally Tacky both Side
- High Breakdown Voltage
- Good Stability in Wide Temperature Range
- Fiberglass and PI Film Reinforcement available
- Easy to use

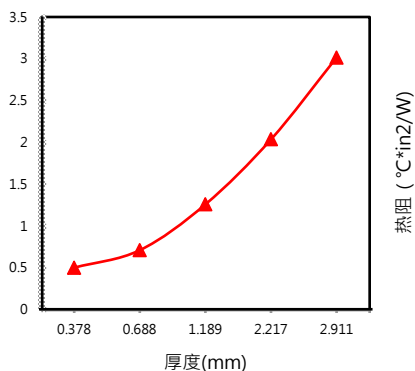


TP200 Silicone based Thermal Pad is naturally tacky on both sides and it has good thermal and electrical performances in wide temperature range at very low compression pressure. It can work stably at -40°C~150°C and meet UL94 V-0 anti flame grade.

Compression vs. Pressure



Thermal Resistance vs. Thickness



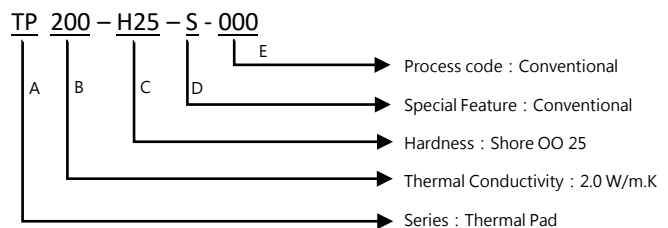
TP200 Typical Properties		
Attributes	Values	Test Methods
Composition	Silicone + Ceramic	-
Color	Grey	Visual
Thickness (mm)	1~12.0	ASTM D374
Density (g/cc)	2.82	ASTM D792
Hardness (Shore OO)	25	ASTM D2240
Elongation (%)	>100	ASTM D412
Usage Temperature (°C)	-40~150	-
Electrical		
Breakdown Voltage (Kv/mm)	≥6.0	ASTM D149
Dielectric Constance (@10MHz)	7.0	ASTM D150
Flammability	V-0	UL 94
Thermal		
Thermal Conductivity (W/m.K)	2.0	ISO 22007-02

*Thickness $T \leq 1.0$ mm, Hardness $H = \text{Shore OO } 25$

Typical Applications

- Personal Computer
- Between cooling device to chassis or frame
- High Speed Massive Storage Drive
- ECU
- Flat Panel Display
- Power Conversion Modules
- LED Lighting
- LCD Back Light
- Network Communication
- Power

Part Number System



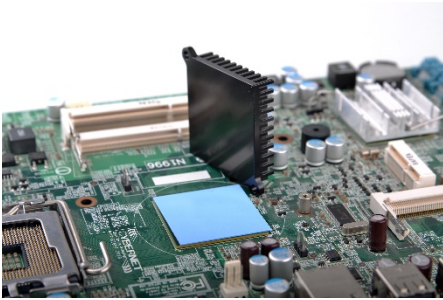
Standard Sheet: size 200x400mm or custom die cut parts.
Thickness available in 0.25mm increments.

TP300

Ultra Soft Gap Filler Pad

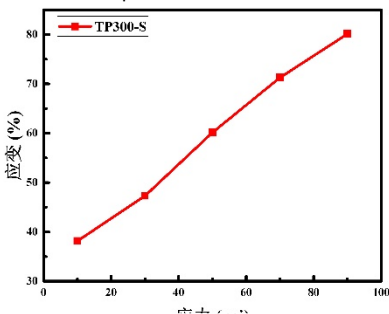
Features and Benefits

- Thermal Conductivity : 3.0 W/m.K
- Naturally Tacky both Side
- High Electrical Insulation
- Good temperature resistance
- Fiberglass and PI Film Reinforcement available
- High Compression Ratio at Low Pressure

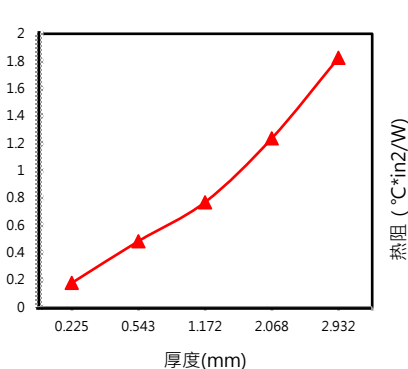


TP300 silicone thermal pad a unique thermal pad with low thermal resistance and high compression at low pressure. The ultra softness lends the product filling gaps with big tolerances. It is natural tacky no back adhesives needed, which might increase thermal resistance.

Compression vs. Pressure



Thermal Resistance vs. Thickness



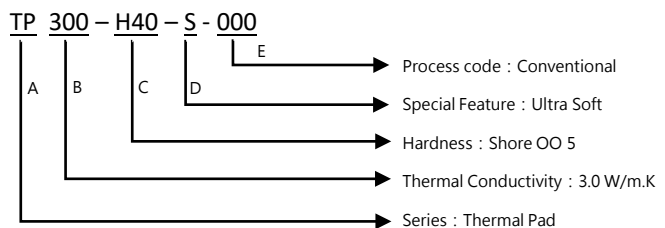
TP 300 Typical Properties		
Attributes	Values	Test Methods
Composition	Silicone+ Ceramic	-
Color	Light Blue	Visual
Thickness(mm)	1.0 ~10.0	ASTM D374
Density (g/cc)	3.0	ASTM D792
Hardness (Shore OO)	50	ASTM D2240
Usage Temperature (°C)	-40~150	-
Electrical		
Breakdown Voltage (KV/mm)	>5.0	ASTM D149
Dielectric Constance (@1MHz)	5.0	ASTM D150
Volume Resistance (Ω.cm)	10 ¹³	ASTM D257
Flammability	V-0	UL 94
Thermal		
Thermal Conductivity (W/m.K)	3.0	ISO 22007-02

* Thickness $T \leq 0.75$ mm, Hardness $H = \text{Shore OO } 50$

Typical Applications

- GPU
- LCD Back Light
- Network Communication
- High Speed Massive Hard Drive
- Modules Require High Thermal Conductivity
- ECU of Automotive
- DVD Player
- Notebook and Desktop PC

Part Number System



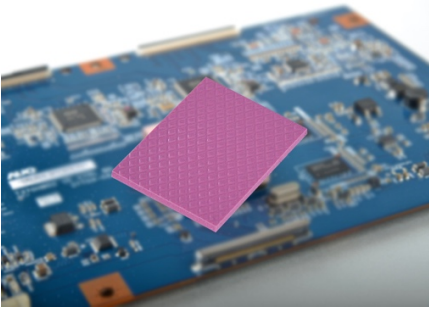
Standard Sheet size 200x400mm or custom die cut parts.
Thickness available in 0.25mm increments.

TP400

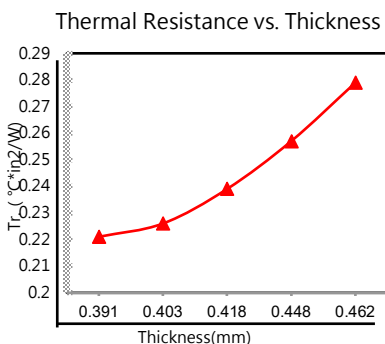
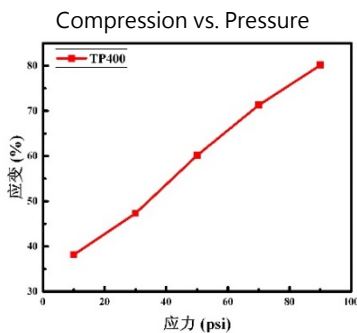
Performance Gap Filler Pad

Features and Benefits

- Thermal Conductivity: 4.0 W/m.K
- High Compression Ratio at Low Pressure
- Naturally Tacky on Both Sides
- Low Oil Bleeding
- High Electrical Insulation
- Good Temperature Resistance
- Thermal Conductivity and Effectiveness Balance



TP400 silicone thermal pad is a material with high thermal conductivity, naturally tacky on both sides. Good electrical insulation, low thermal resistance at low compression pressure. It meets UL94 V-0 flame retardant grade.



TP 400 Typical Properties

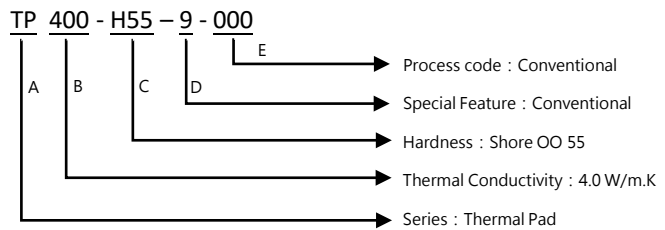
Attributes	Values	Test Methods
Composition	Silicone+ Ceramic	-
Color	Purple	Visual
Thickness(mm)	0.5~1.0	ASTM D374
Density (g/cc)	3.1	ASTM D792
Hardness (Shore OO)	60	ASTM D2240
Usage Temperature (°C)	-40~150	-
Electrical		
Breakdown Voltage (KV/mm)	>6.0	ASTM D149
Dielectric Constance (@1MHz)	7.5	ASTM D150
Volume Resistance (Ω.cm)	> 10 ¹²	ASTM D257
Flammability	V-0	UL 94
Thermal		
Thermal Conductivity (W/m.K)	4.0	ISO 22007-2

*Thickness $T \leq 0.75$ mm, Hardness $H = \text{Shore OO } 60$

Typical Applications

- Notebook and Desktop PC
- GPU
- Modules Require High Thermal Conductivity
- High Speed Massive Hard Drive
- ECU of Automotive
- DVD Player
- LCD Back Light
- Network Communication Equipment

Part Number System



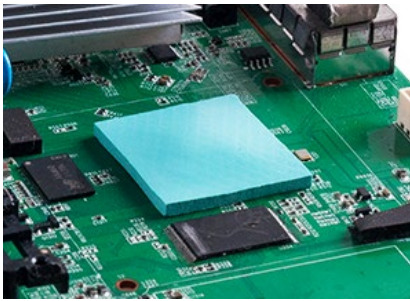
Standard Sheet: size 200x400mm or custom die cut parts.
Thickness available in 0.25mm increments.

TP500

Elevated Performance Gap Filler Pad

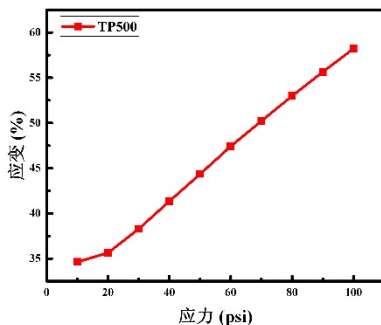
Features and Benefits

- Thermal Conductivity: 5.0 W/m.K
- High Thermal Conductivity
- High Compression Ratio
- High Electrical Insulation
- Good Temperature Resistance
- Good Toughness and Easy to use

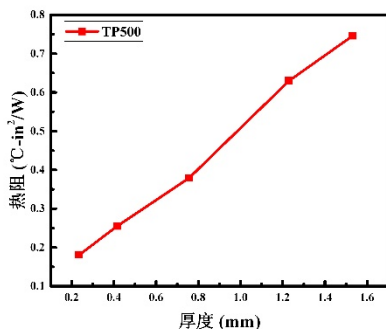


TP500 is silicone thermal pad with high thermal conductivity, naturally tacky on both sides. Good electrical insulation, low thermal resistance at low compression pressure. It meets UL94 V-0 flame retardant grade.

Compression vs. Pressure



Thermal Resistance vs. Thickness



TP 500 Typical Properties

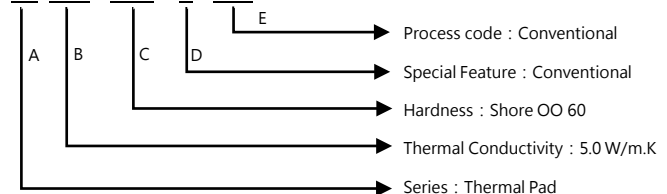
Attributes	Values	Test Methods
Composition	Silicone+ Ceramic	-
Color	Green	Visual
Thickness(mm)	0.5~1.0	ASTM D374
Density (g/cc)	3.2	ASTM D792
Hardness (Shore OO)	60	ASTM D2240
Usage Temperature (°C)	-40~150°C	-
Electrical		
Breakdown Voltage (KV/mm)	>6.0	ASTM D149
Dielectric Constance (@1MHz)	7.4	ASTM D150
Volume Resistance (Ω.cm)	1.47×10^{10}	ASTM D257
Flammability	V-0	UL 94
Thermal		
Thermal Conductivity (W/m.K)	5.0	ISO 22007-2

Typical Applications

- VRMs
- ASICs and DSPs
- Modules Require High Thermal Conductivity
- High Speed Massive Hard Drive
- Modules with BGAs
- CD ROM/DVD ROM
- Network Communication Equipment

Part Number System

TP 500 - H50 - 9 - 000



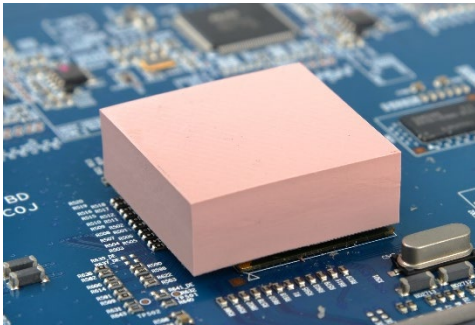
Standard Sheet: size 200x400mm or custom die cut parts.
Thickness available in 0.25mm increments.

TP600

High Performance Gap Filler Pad

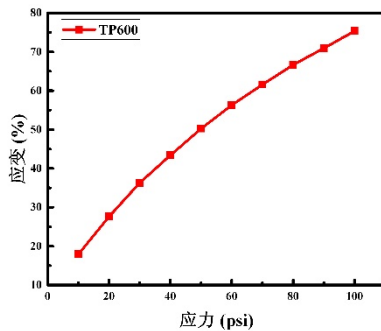
Features and Benefits

- Thermal Conductivity: 6.0 W/m.K
- High Thermal Conductivity
- High Compression Ratio
- High Electrical Insulation
- Good Temperature Resistance
- Good Toughness and Easy to use

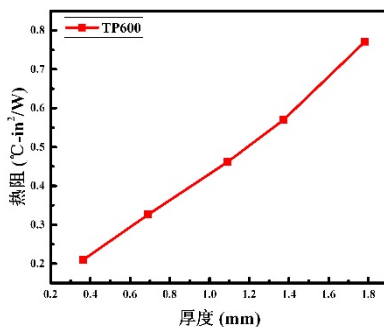


TP600 is silicone thermal pad with high thermal conductivity, naturally tacky on both sides. Good electrical insulation, low thermal resistance at low compression pressure. It meets UL94 V-0 flame retardant grade.

Compression vs. Pressure



Thermal Resistance vs. Thickness



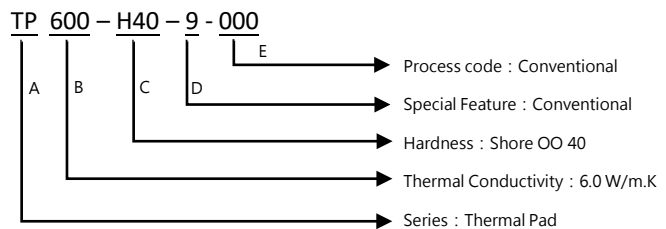
TP 600 Typical Properties

Attributes	Values	Test Methods
Composition	Silicone+ Ceramic	-
Color	Warm Red	Visual
Thickness(mm)	1.0~10.0	ASTM D374
Density (g/cc)	3.3	ASTM D792
Hardness (Shore OO)	40	ASTM D2240
Usage Temperature (°C)	-40~150	-
Electrical		
Breakdown Voltage (KV/mm)	>5.0	ASTM D149
Dielectric Constance (@1MHz)	7.9	ASTM D150
Volume Resistance (Ω.cm)	10 ¹²	ASTM D257
Flammability	V-0	UL 94
Thermal		
Thermal Conductivity (W/m.K)	6.0	ISO 22007-2

Typical Applications

- VRMs
- ASICs and DSPs
- Modules Require High Thermal Conductivity
- High Speed Massive Hard Drive
- Modules with BGAs
- CD ROM/DVD ROM
- Network Communication Equipment

Part Number System



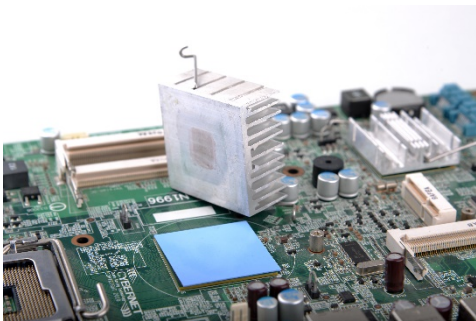
Standard Sheet: size 200x400mm or custom die cut parts.
Thickness available in 0.25mm increments.

TP700

High Performance Gap Filler Pad

Features and Benefits

- Thermal Conductivity: 7.0 W/m.K
- High Thermal Conductivity
- High Compression Ratio
- High Electrical Insulation
- Good Temperature Resistance
- Good Toughness and Easy to use



TP700 is silicone thermal pad with high thermal conductivity, naturally tacky on both sides. Good electrical insulation, low thermal resistance at low compression pressure. It meets UL94 V-0 flame retardant grade.

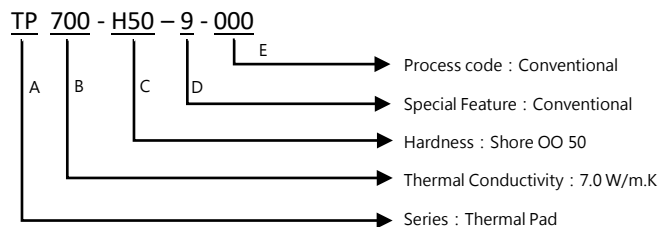
TP 700 Typical Properties		
Attributes	Values	Test Methods
Composition	Silicone+ Ceramic	-
Color	Light Blue	Visual
Thickness(mm)	0.5~10.0	ASTM D374
Density (g/cc)	3.3	ASTM D792
Hardness (Shore OO)	50	ASTM D2240
Usage Temperature (°C)	-40~150	-
Electrical		
Breakdown Voltage (KV/mm)	>6.0	ASTM D149
Dielectric Constance (@1MHz)	7.1	ASTM D150
Volume Resistance (Ω.cm)	10 ¹²	ASTM D257
Flammability	V-0	UL 94
Thermal		
Thermal Conductivity (W/m.K)	7.0	ISO 22007-2

*Thickness $T \leq 0.75$ mm, Hardness $H = \text{Shore OO } 55$

Typical Applications

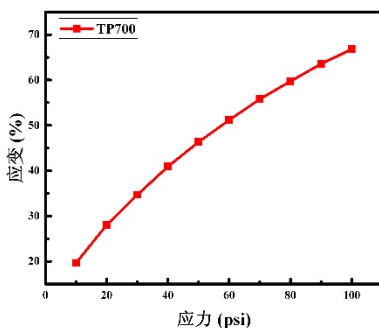
- VRMs
- ASICs and DSPs
- Modules Require High Thermal Conductivity
- High Speed Massive Hard Drive
- Modules with BGAs
- CD ROM/DVD ROM
- Network Communication Equipment

Part Number System

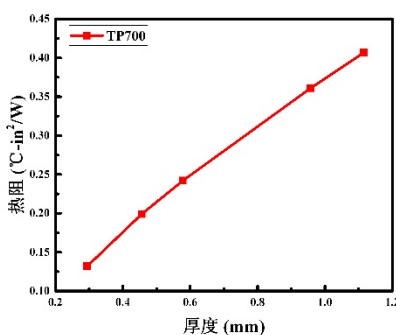


Standard Sheet: size 200x400mm or custom die cut parts.
Thickness available in 0.25mm increments.

Compression vs. Pressure



Thermal Resistance vs. Thickness



TP800

High Performance Gap Filler Pad

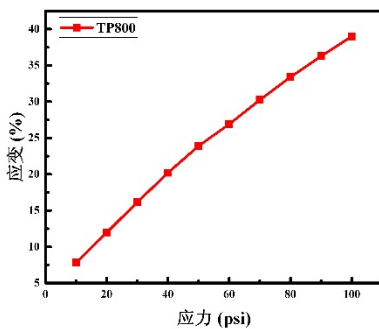
Features and Benefits

- Thermal Conductivity: 8.0 W/m.K
- High Thermal Conductivity
- High Compression Ratio
- High Electrical Insulation
- Good Temperature Resistance
- Good Toughness and Easy to use

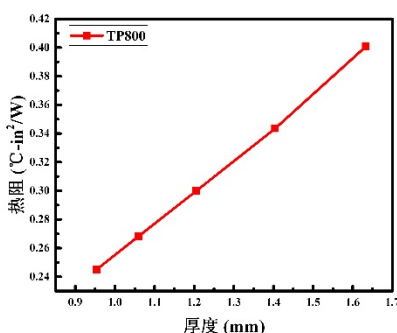


TP800 is silicone thermal pad with high thermal conductivity, naturally tacky on both sides. Good electrical insulation, low thermal resistance at low compression pressure. It meets UL94 V-0 flame retardant grade.

Compression vs. Pressure



Thermal Resistance vs. Thickness



TP 800 Typical Properties		
Attributes	Values	Test Methods
Composition	Silicone+ Ceramic	-
Color	Red	Visual
Thickness(mm)	0.5~10.0	ASTM D374
Density (g/cc)	3.35	ASTM D792
Hardness (Shore OO)	55	ASTM D2240
Usage Temperature (°C)	-40~150	-
Electrical		
Breakdown Voltage (KV/mm)	>6.0	ASTM D149
Dielectric Constance (@1MHz)	7.2	ASTM D150
Volume Resistance (Ω.cm)	10 ¹²	ASTM D257
Flammability	V-0	UL 94
Thermal		
Thermal Conductivity (W/m.K)	8.0	ISO 22007-2

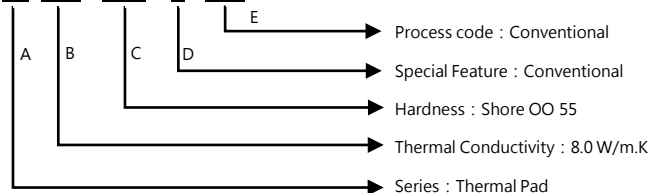
*Thickness $T \leq 0.75$ mm, Hardness $H = \text{Shore OO } 60$

Typical Applications

- VRMs
- ASICs and DSPs
- Modules Require High Thermal Conductivity
- High Speed Massive Hard Drive
- Modules with BGAs
- CD ROM/DVD ROM
- Network Communication Equipment

Part Number System

TP 800 - H55 - 9 - 000



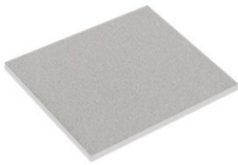
Standard Sheet size 200x400mm or custom die cut parts.
Thickness available in 0.25mm increments.

TP1000

Ultra High Performance Gap Filler Pad

Features and Benefits

- Thermal Conductivity: 10.0 W/m.K
- High Thermal Conductivity
- High Compression Ratio
- High Electrical Insulation
- Good Temperature Resistance
- Good Toughness and Easy to use



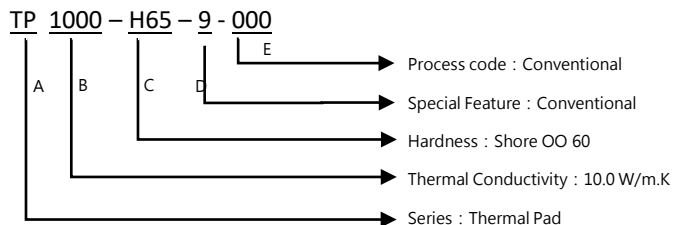
TP1000 is silicone thermal pad with high thermal conductivity, naturally tacky on both sides. Good electrical insulation, low thermal resistance at low compression pressure. It meets UL94 V-0 flame retardant grade.

TP 1000 Typical Properties		
Attributes	Values	Test Methods
Composition	Silicone+ Ceramic	-
Color	Grey	Visual
Thickness(mm)	0.5~5.0	ASTM D374
Density (g/cc)	3.6	ASTM D792
Hardness (Shore OO)	60	ASTM D2240
Usage Temperature (°C)	-40~150	-
Electrical		
Breakdown Voltage (KV/mm)	>6.0	ASTM D149
Dielectric Constance (@1MHz)	7.4	ASTM D150
Volume Resistance (Ω.cm)	10 ¹¹	ASTM D257
Flammability	V-0	UL 94
Thermal		
Thermal Conductivity (W/m.K)	10.0	ISO 22007-2

Typical Applications

- VRMs
- ASICs and DSPs
- Modules Require High Thermal Conductivity
- High Speed Massive Hard Drive
- Modules with BGAs
- CD ROM/DVD ROM
- Network Communication Equipment

Part Number System



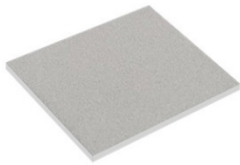
Standard Sheet: size 200x400mm or custom die cut parts.
Thickness available in 0.25mm increments.

TP1200

Ultra High Performance Gap Filler Pad

Features and Benefits

- Thermal Conductivity: 12.0 W/m.K
- High Thermal Conductivity
- High Compression Ratio
- High Electrical Insulation
- Good Temperature Resistance
- Good Toughness and Easy to use



TP1200 is silicone thermal pad with high thermal conductivity, naturally tacky on both sides. Good electrical insulation, low thermal resistance at low compression pressure. It meets UL94 V-0 flame retardant grade.

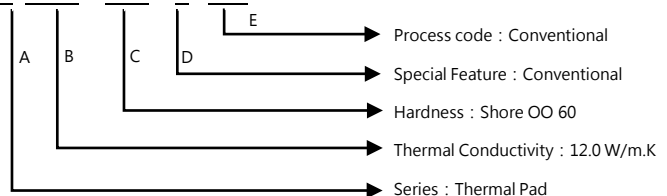
TP 1200 Typical Properties		
Attributes	Values	Test Methods
Composition	Silicone+ Ceramic	-
Color	Grey	Visual
Thickness(mm)	0.5~5.0	ASTM D374
Density (g/cc)	3.3	ASTM D792
Hardness (Shore OO)	65	ASTM D2240
Usage Temperature (°C)	-40~150	-
Electrical		
Breakdown Voltage (KV/mm)	>5.0	ASTM D149
Dielectric Constance (@1MHz)	7.0	ASTM D150
Volume Resistance (Ω.cm)	10 ¹²	ASTM D257
Flammability	V-0	UL 94
Thermal		
Thermal Conductivity (W/m.K)	12.0	ISO 22007-2

Typical Applications

- VRMs
- ASICs and DSPs
- Modules Require High Thermal Conductivity
- High Speed Massive Hard Drive
- Modules with BGAs
- CD ROM/DVD ROM
- Network Communication Equipment

Part Number System

TP 1200 – H65 – 9 – 000



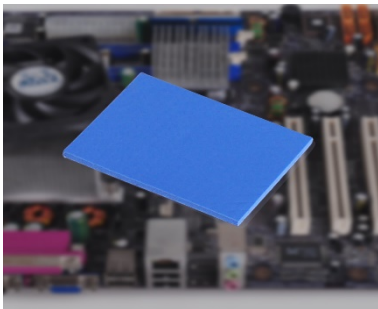
Standard Sheet: size 200x400mm or custom die cut parts.
Thickness available in 0.25mm increments.

TP***-SF Series

Silicon Free Thermal Pad

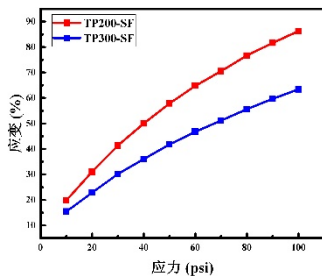
Features and Benefits

- Thermal Conductivity: 2.0, 3.0 W/m.K
- No Oil Bleeding and Volatility
- Good Mechanical Performance
- Naturally Tacky on Both Side
- High Electrical Insulation
- Easy to Use
- High Compression Ratio

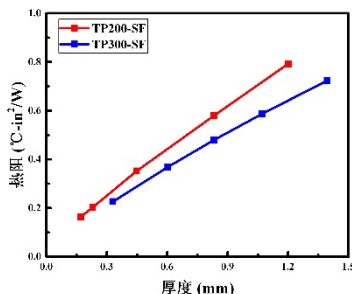


TP***-SF, silicon-free thermal pad, is design for applications that are sensitive on silicon, with high electrical insulation ,excellent thermal conductivity and easy to use and rework. It can work stably at - 40°C~125°C and meet UL94 V-0 flame retardant grade.

Compression vs. Pressure



Thermal Resistance vs. Thickness

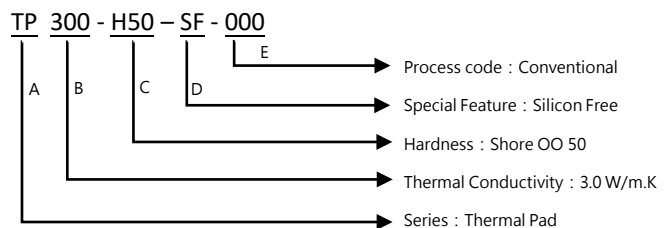


Typical Properties			
Attributes	Values		Test Methods
Product Name	TP200-SF	TP300-SF	-
Composition	Acrylic + Ceramics	Acrylic + Ceramics	-
Color	Green	Blue	Visual
Thickness (mm)	0.5~3.0	1.0~10.0	ASTM D374
Density(g/cc)	2.87	3.0	ASTM D792
Hardness (Shore OO)	45	50	ASTM D2240
Usage Temperature (°C)	-40~120	-40~125	-
Electrical			
Breakdown Voltage (KV/mm)	> 6.0	> 6.0	ASTM D149
Flammability	V-1	V-1	UL 94
Thermal			
Thermal Conductivity (W/m.K)	2.0	3.0	ISO 22007-2

Typical Applications

- Fiber Optic Modules
- Medical Equipment
- Hard Drives
- Precision Optical Equipment
- Sensors and Control Unit of Automotive
- Silicon sensitive components, equipment

Part Number System



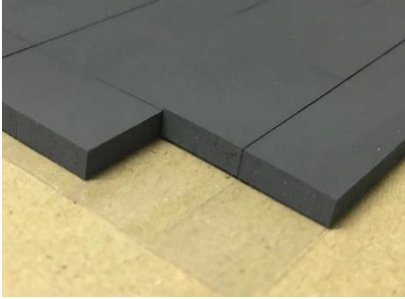
Standard Sheet: size 200x400mm or custom die cut parts.
Thickness available in 0.25mm increments.

TP***-AM1

Thermal Electro-Magnetic Absorber Pad

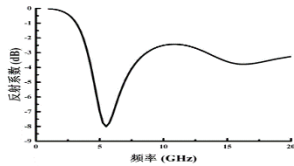
Features and Benefits

- Thermal Conductivity: 1.5 ~ 3.0 W/m.K
- Excellent Electro Magnetic Interference Absorbing Performance
- Good Mechanical Performance at wide Temperature Range
- High Chemical Stability

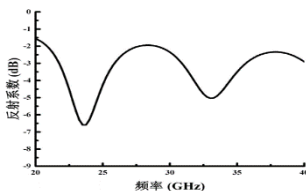


TP***-AM1 series are with both thermal conductivity and EMI absorbing functions. It is made of Silicon and thermally conductive EMI-absorbing ceramic filler. It has good thermal conductivity, electromagnetic interference absorption and shielding functions; while exporting heat, it can absorb leaked electromagnetic radiation and achieve the purpose of eliminating electromagnetic interference. Provide a good solution for electronic communication products in thermal conductivity and electromagnetic shielding.

Frequency vs. Reflection



Frequency vs. Reflection

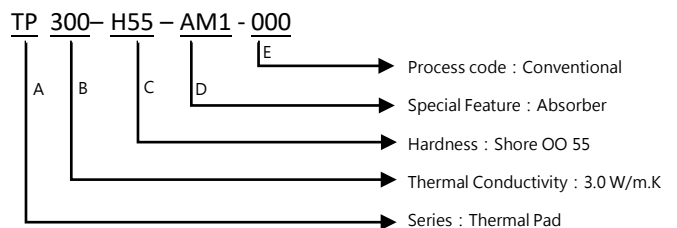


TP***-AM1 Typical Properties			
Attributes	Values		Test Methods
Product Name	TP150-AM1	TP300-AM1	
Composition	Silicon + Ceramics		-
Color	Dark Grey		Visual
Thickness (mm)	0.5~10.0	1.0~10.0	ASTM D374
Density (g/cc)	4.2	3.8	ASTM D792
Hardness (Shore OO)	55	55	ASTM D2240
Usage Temperature (°C)	-40~150	-40 ~ 150	-
Flammability	V-0	V-0	UL94
Electrical			
Volume Resistance (Ω·cm)	10 ¹⁴	10 ¹⁴	ASTM D257
Dielectric Constance (@10MHz)	≤20.0	≤12.0	ASTM D150
EMI			
Reflection Rate(dB) (2GHz~6GHz)	< -5	< -5	GJB:2038A-2011
Thermal			
Thermal Conductivity (W/m·K)	1.5	3.0	ISO22007-2

Typical Application

- Communication Equipment
- Digital Devices and PC
- Medical Equipment
- Automotive Electronics
- Aerospace
- High Frequency Modules

Part Number System



Standard Sheet: size 200x400mm or custom die cut parts.
Thickness available in 0.25mm increments.

Shelf Life

12Months@ 25°C · 50%RH · in Original Package

TF Series

Two-part Dispensable Gap Filler

2-Part Thermally Conductive Liquid Gap Filler

TF series are two-part, 1:1 ratio, ceramic filled silicone dispensable gap filler. Curing at room temperature lends itself to high volume automation. Typical applications are where high thermal performance is required, where high tolerance are present, and designs requiring reduced mechanical stresses.

Good electrical insulation, low thermal resistance at low compression pressure. After cured, the product performance is like thermal pad. It meets UL-94 V-0 flame retardant grade.

Features and Benefits

- Thermal Conductivity: 2.0, 3.0, 3.5,4.0,6.0W/m.K
- Low Viscosity, Easy to Dispense
- Curing Time Adjustable
- Good for Low Compression Pressure Application
- Excellent Mechanical and Chemical Performance in wide Temperature Range



TF Series Typical Properties				
Attributes	Values			Test Methods
Product Name	TF 200-M	TF 200	TF 300	-
Composition	Silicone +Ceramics			-
Color/ PartA	White	White	White	Visual
Color / Part B	Yellow	Light Blue		Visual
Viscosity/ PartA (cps)	45,000	45,000	130,000	ASTM D2196
Viscosity/ Part B (cps)	45,000	45,000	130,000	ASTM D2196
Mix Ratio	1 : 1	1 : 1	1 : 1	-
Density (g/cc)	2.1	2.0	3.0	ASTM D792
Cured Hardness (Shore 00)	60	50	50	ASTM D2240
Temperature Range (°C)	-40~120	-40~150	-40~150	-
Electrical (Cured)				
Breakdown Voltage (Kv/mm)	≥ 7.0	≥ 7.0	≥ 7.0	ASTM D149
Volume Resistance (Ω.cm)	10 ¹³	10 ¹³	10 ¹³	ASTM D257
Dielectric Constance (@10MHz)	5.0	6.5	7.0	ASTM D150
Flammability	V-0	V-0	V-0	UL 94
Thermal (Cured)				
Thermal Conductivity (W/m-K)	2.0	2.0	3.0	ISO 22007-2

TF Series

Two-part Dispensable Gap Filler

TF Series Typical Properties				
Attributes	Values			Test Methods
Product Name	TF350	TF400	TF600	-
Composition	Silicone + Ceramics			-
Color/ Part A	White	White	White	Visual
Color / Part B	Blue	Blue	Red	Visual
Viscosity/ Part A (cps)	280,000	150,000	850,000	ASTM D2196
Viscosity/ Part B (cps)	280,000	150,000	850,000	ASTM D2196
Mix Ratio	1 : 1	1 : 1	1 : 1	-
Density (g/cc)	3.0	3.0	3.5	ASTM D792
Cured Hardness (Shore 00)	50	50	55	ASTM D2240
Temperature Range (°C)	- 40~150	- 40~150	- 40~150	-
Electrical (Cured)				
Breakdown Voltage (Kv/mm)	≥ 7.0	≥ 5.0	≥ 6.0	ASTM D149
Volume Resistance (Ω.cm)	10 ¹³	10 ¹²	10 ¹³	ASTM D257
Dielectric Constance (@10MHz)	6.5	5.0	7.0	ASTM D150
Flammability	V-0	V-0	V-0	UL 94
Thermal (Cured)				
Thermal Conductivity (W/m-K)	3.5	4.0	6.0	ISO 22007-2

Typical Applications

- Automotive Electronics
- Fiber Optic Modules
- SSD
- Network Equipment and Modules
- Between Cooling Device to Chassis or Frame
- Between Battery Pack and Cooling Plate

Curing Schedule

- (1) Working Time@ 25°C: 1hr.
- (2) Surface Curing@ 25°C: 1 hr.
- (3) Fully Cure@ 25°C: 12 -16 hrs.
- (4) Fully Cure @ 100°C: 1hr.

Purchasing Information

Package : 50ml(AB each 25ml)
400ml(AB each 200ml)
20 KG (AB each 10 KG)

Shelf Life

6 Months@ 25°C · 50%RH · in Original Package

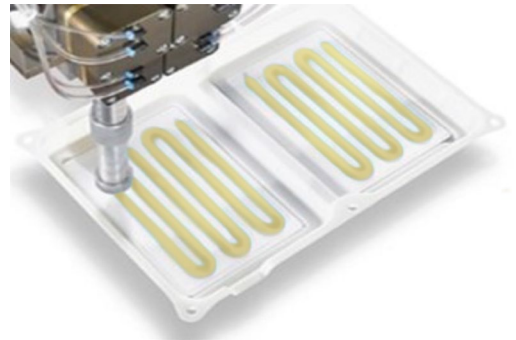
2-part Low Volatile Thermally Conductive Liquid Gap Filler

TF series are two-part, 1:1 ratio, ceramic filled low volatile silicone dispensable gap filler. Curing at room temperature lends itself to high volume automation. Typical applications are where high thermal performance is required, where high tolerance are present, and designs requiring reduced mechanical stresses.

Good electrical insulation, low thermal resistance at low compression pressure. After cured, the product performance is like thermal pad. It meets UL-94V-0 flame retardant grade.

Features and Benefits

- Thermal Conductivity : 2.0, 3.5W/m·K
- Low Volatile
- Low Viscosity, Easy to Dispense
- Curing Time Adjustable
- Good for Low Compression Pressure Application
- Excellent Mechanical and Chemical Performance in wide Temperature Range



TF***-L Series Typical Properties			
Attributes	Values		Test Methods
Product Name	TF 200-L	TF 350-L	-
Composition	Silicone + Ceramics		-
Color/ Part A	White	White	Visual
Color / Part B	Yellow	Pink	Visual
Viscosity/ Part A (cps)	270,000	280,000	ASTM D2196
Viscosity/ Part B (cps)	270,000	280,000	ASTM D2196
Volatility	None	None	150°C/24H/Visual
Density (g/cc)	2.65	3.2	ASTM D792
Cured Hardness (Shore 00)	50	60	ASTM D2240
Temperature Range (°C)	- 40~150	- 40~150	-
Electrical (Cured)			
Breakdown Voltage (KV/mm)	> 7.0	> 6.0	ASTM D149
Volume Resistance (Ω.cm)	10 ¹⁴	10 ¹³	ASTM D257
Dielectric Constance (@10MHz)	6.5	7.0	ASTM D150
Flammability	V-0	V-0	UL 94
Thermal (Cured)			
Thermal Conductivity (W/m-K)	2.0	3.5	ISO 22007-2

TM Series

One-part Dispensable Gap Filler

High Performance Dispensable Thermal Interface Material

TM Series, 1-Part Thermally Conductive Gel, have good conformation and have various options of thermal conductivity according to the customers' requirements. The product is good for automatic dispensing process, with efficient thermal conductivity and excellent gap filling performance.



Features and Benefits

- Thermal Conductivity: 1.0~8.0 W/m.K
- High Electrical Insulation
- High Compression at low pressure
- High Temperature Resistance
- Low Compression Pressure Application
- Automatic Dispensable

Typical Applications

- Network Communication Devices--WIFI、Router、VOIP etc.
- IT—Notebook PC、Storage、Hard Drive、Scanner、Printer etc.
- Consumer Electronics--Gaming、Flat Panel Display etc.
- Industrial--LED、Power、Converter、Automation Equipment

TM Series Typical Properties

Attributes	Values			Test Methods
	TM 200	TM 300	TM 400	
	TM 200	TM 300	TM 400	-
Composition	Silicone +Ceramics			-
Color	Light Grey	Green	Pink	Visual
Density (g/cc)	2.9	2.9	3.4	ASTM D792
Flow Rate (g/min)	6.0	5.5	> 1	ISO 9048
Temperature Range (°C)	- 40~150	- 40~150	- 40~150	-
Electrical				
Breakdown Voltage (Kv/mm)	≥ 4.0	≥ 5.0	≥ 6.0	ASTM D149
Volume Resistance (Ω.cm)	10 ¹⁴	10 ¹⁴	10 ¹⁰	ASTM D257
Dielectric Constance @10MHz	7.1	7.3	7.0	ASTM D150
Flammability	V-0	V-0	V-0	UL 94
Thermal				
Thermal Conductivity (W/m-K)	2.0	3.0	4.0	ISO22007-2
Thermal Resistance (°C -in ² /W) 0.3mm @50 psi 80°C	0.09	0.06	0.05	ASTM D5470

TM Series

One-part Dispensable Gap Filler

TM Series Typical Properties					
Attributes	Values				Test Methods
	TM 500	TM 600	TM 700	TM 800	-
Composition	Silicone +Ceramics				-
Color	Red	Orange	Blue	Light Red	Visual
Density (g/cc)	3.5	3.4	3.2	3.2	ASTM D792
Flow Rate (g/min)	2.5	2.5	5~20	5~20	ISO 9048
Temperature Range (°C)	- 40~150	- 40~150	- 40~150	- 40~150	-
Electrical					
Breakdown Voltage (Kv/mm)	≥ 5.0	≥ 4.5	≥ 4.0	≥ 5.0	ASTM D149
Volume Resistance (Ω.cm)	10 ¹⁰	10 ¹²	10 ¹⁴	10 ¹⁴	ASTM D257
Dielectric Constance @10MHz	6.6	7.1	7.3	7.0	ASTM D150
Flammability	V-0	V-0	V-0	V-0	UL 94
Thermal					
Thermal Conductivity (W/m-K)	5.0	6.0	7.0	8.0	ISO22007-2
Thermal Resistance (°C -in ² /W) 0.3mm @50 psi 80°C	0.04	0.05	0.045	0.04	ASTM D5470

Purchase Information

Package : 50ml/300 ml Cartridge
20 KG Pail

Instructions for Use and Precautions

First clean the surface then apply the product on the surface. After the operation is over, the unused products should be sealed and stored in time. You can dispense the material manually with handle dispenser or dispensing system for high volume automatic dispensing. Avoid contact with eyes when dispensing.

Storage and Transportation

Store in a cool, dry and ventilated place. This product is non-toxic and non-dangerous and can be handled and transported as general chemicals.

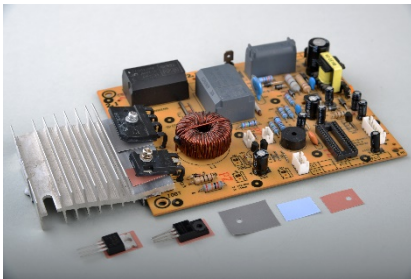
Shelf Life

This product has a shelf life of 12 months before opening.

TC Series

Electrically Insulating Thermal Sheet

TC900S · TC1200 · TC2000 is the high-performance Thermally Conductive Electrically Isolating material reinforced with fiberglass, which has excellent cut through resistance and excellent thermal resistance. It can be used in electronic and electrical applications that require both thermal conductivity and electrical insulation.



Features and Benefits

- High performance film
- Breakdown Voltage up to 6KV
- Excellent electrical insulation properties
- Flammability
- UL94V0
- Low thermal resistance

Typical Applications

- Power Modules
- Heat Generation Power Module
- Automotive Electronic Heat Modules
- Motor Control
- Power Semiconductor

TC Series Typical Properties				
Attributes	Values			Test Methods
Product Name	TC 900S	TC 1500	TC 2000	-
Composition	Silicone + Fiber Glass			-
Color	Pink	Black	White	Visual
Thickness (mm)	0.23	0.25	0.25/0.38/0.5	ASTM D374
Density (g/cc)	2.5	2.8	1.5	ASTM D792
Hardness (Shore A)	85	85	70	ASTM D2240
Tensile Strength (MPa)	9.0	9.0	15	ASTM D412
Elongation (%)	30	30	20	ASTM D412
Temperature Range (°C)	-60~180	-60~180	-60~200	-
Electrical				
Breakdown Voltage (Kv)	≥ 5.5	≥ 5.0	≥ 4.0	ASTM D149
Volume Resistance (Ω.cm)	10 ¹⁴	10 ¹³	10 ¹⁴	ASTM D257
Flammability	V-0	V-0	V-0	UL 94
Thermal				
Thermal Conductivity (W/m-K)	1.6	2.0	3.5	ISO 22007-2
Thermal Resistance vs. Pressure				ASTM D5470
psi	10	25	50	100
TC 900S- (°C ·in ² /W)	0.95	0.75	0.61	0.47
TC 1500- (°C ·in ² /W)	0.67	0.58	0.50	0.44
TC 2000- (°C ·in ² /W) @0.38mm	0.35	0.30	0.27	0.25

Purchase Information:

Product	Thickness (mm)	Shipment Specifications	
TC 900S	0.23	300 mm × 50 m, 300 mm × 100 m	TO-220, TO-247, TO-218
TC 1500	0.25	300 mm × 50 m, 300 mm × 100 m	TO-220, TO-247, TO-218
TC 2000	0.25/0.38/0.50	300 mm × 300 mm	TO-220, TO-247, TO-218

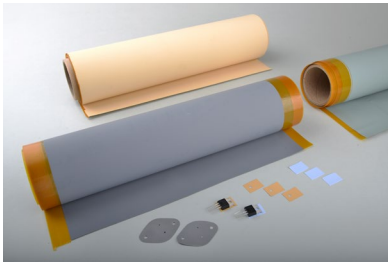
- The above are standard sizes.
- Die-cut to various sizes or shapes according to customer specifications.

TCK 10

Electrically Insulating Thermal Sheet

Features and Benefits

- High performance film
- Low thermal resistance
- Excellent electrical insulation properties
- Flammability UL 94 V-0



TCK10 high-performance Thermally Conductive Electrically Insulating material reinforced with glass fiber, which has excellent cut through resistance and excellent thermal resistance. It can be used in electronic and electrical applications that require both thermal conductivity and electrical insulation.

Typical Applications

- Power Modules
- Motor Control
- Power Semiconductor
- Heat Generation Power Module
- Automotive Electronic Heat Module

TCK Series Typical Properties

Attributes	Values	Test Methods		
Product Name	TCK 10	-		
Composition	Silicone + PI film	-		
Color	Beige	Visual		
Thickness (mm)	0.135-0.16	ASTM D374		
Density (g/cc)	2.5	ASTM D792		
Hardness (Shore A)	80	ASTM D2240		
Tensile Strength (MPa)	-40~150	-		
Electrical				
Breakdown Voltage (KV)	≥ 6.0	ASTM D149		
Volume Resistance (Ω.cm)	1.7x10 ¹⁴	ASTM D257		
Flammability	V-0	UL 94		
Thermal				
Thermal Conductivity (W/m-K)	1.3	ISO 22007-2		
Thermal Resistance vs. Pressure		ASTM D5470		
psi	10	25	50	100
TCK 10 (°C -in ² /W)	0.86	0.52	0.28	0.38

Purchasing Information:

Product	Thickness (mm)	Shipment Specifications	
TCK 10	0.135-0.16	300 mm × 50 m, 300 mm × 100 m	TO-220, TO-247, TO-218

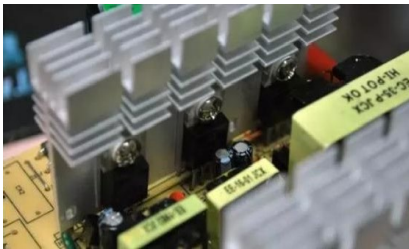
- *The above are standard sizes.*
- *Die-cut to various sizes or shapes according to customer specifications.*

TCK15B

Bonding Electrically Insulating Thermal Sheet

Features and Benefits

- Ultra Low Thermal Resistance
- High Shear Strength
- Excellent Electric Insulation
- Wide Temperature Range
- No need extra reinforcing Heat Sink



TCK15B is a heat-curing thermally conductive insulating tape. The low modulus silicone is designed to effectively absorb the mechanical stress CTE mismatch, shock and vibration generated by assembly, while providing superior thermal performance (vs. double-sided tape) and long-term integrity.

The TCK15B is typically used to structurally bond together power components and heat sinks on PCBs.

TCK 15B Typical Properties

Attributes	Values	Test Methods
Reinforcement Carrier	Fiber Glass	-
Color	Yellow	Visual
Thickness (mm)	0.26	ASTM D374
Temperature Range (°C)	-40~200	-
Bonding		
Shear Strength (MPa) @RT	> 1.4	ASTM D1002
Torque (N·m) @TO-220	> 1.5	Torque Meter
Electric		
Breakdown Voltage (KV) 1	6	ASTM D149
Breakdown Voltage (KV) 2	4.5	ASTM D149
Volume Resistance (Ω.cm)	10 ¹²	ASTM D257
Dielectric Constance (@1MHz)	5.0	ASTM D150
Flammability	V-0	UL 94
Thermal		
Thermal Conductivity (W/m-K)	1.4	ASTM D5470
Curing Time		
@160~180°C (mins.) ³	6	-
1) The breakdown voltage without pressure after vulcanization; 2) Press the TO-200 package transistor on the aluminum plate, the pressure is 150Psi, the time is 30S, the breakdown voltage after curing at 160°C under no pressure, 6Min; 3) Heating Press 30S with 150Psi pressure before.		

Typical Applications

- Used to bond individually packaged semiconductors to heat sinks

Purchase Information

- Sheet : 300mm*200mm
- Die-cut to various sizes or shapes according to customer specifications

Shelf Life

- 6 Months

GF Series

Two-part Potting Compound

GF series thermally conductive potting encapsulant provides thermal conductivity and electrical insulative characteristics delivered in a two-part dispensable and easily automated product. Additionally, the GF series provides protection from shock, dust, moisture, and vibration.



Features and Benefits

- Thermal Conductivity: 0.8~4.0 W/m.K
- High Electrical Insulation
- UL 94 V0
- Excellent Fluidity and Wettability
- High Volume Automatic Operation

Typical Applications

- Industrial: LEDs, Power Supplies
- Automotive: Transformers and PFC for OBC, DC/DC Converter
- Consumer Electronics: DC Converters,
- High Voltage Applications

Purchase Information

Package : 1kg Can/20 KG Pail

GF Series Typical Properties				
Attributes	Values			Test Methods
Product	GF 100	GF 150	GF 200	-
Compositions	Silicone + Ceramics			-
Color/Part A	White	White	White	Visual
Color/Part B	Silver	Grey	Pink	Visual
Viscosity/Part A	4,500	3,500	6,000	ASTM D2196
Viscosity/Part B	4,500	3,500	6,000	ASTM D2196
Mix Ratio	1 : 1			-
Density (g/cc)	1.8	2.6	2.5	ASTM D792
Operating Time (Min)	30	120	120	ISO 9048
Hardness after Cured	55	20	65	ASTM D2240
Temperature Range (°C)	- 40~200	- 60~200	- 40~200	-
Electrical				
Breakdown Voltage (Kv/mm)	≥ 10	≥10	≥7	ASTM D149
Volume Resistance (Ω.cm)	10 ¹⁵	10 ¹³	10 ¹¹	ASTM D257
Dielectric Constance @1MHz	5.5	6.0	6.0	ASTM D150
Flammability	V-0	V-0	V-0	UL 94
Thermal				
Thermal Conductivity (W/m-K)	0.8	1.5	2.0	ISO22007-2

Instructions for Use and Precautions

Supplied in two-component liquid packs with 1:1 mixing ration of A/B; optional automatic mixing and dispensing systems, or manual mixing; due to the fast-curing properties of sealants require automatic mixing and dispensing equipment. In applications where the product is very sensitive to internal air bubbles, a vacuum degassing process of 28 to 30 inches of mercurial column is required.

Transportation and Storage

Store in a cool, dry and ventilated place. This product is non-toxic and non-dangerous and can be handled and transported as general chemicals.

Shelf Life

6 Months

GF Series

Two-part Potting Compound

GF series thermally conductive potting encapsulant provides thermal conductivity and electrical insulative characteristics delivered in a two-part dispensable and easily automated product. Additionally, the GF series provides protection from shock, dust, moisture, and vibration.



Features and Benefits

- Thermal Conductivity: 0.8~4.0 W/m.K
- High Electrical Insulation
- UL 94 V0
- Excellent Fluidity and Wettability
- High Volume Automatic Operation

Typical Applications

- Industrial: LEDs, Power Supplies
- Automotive: Transformers and PFC for OBC, DC/DC Converter
- Consumer Electronics: DC Converters,
- High Voltage Applications

Purchase Information

Package : 1kg Can/20 KG Pail

GF Series Typical Properties			
Attributes	Values		Test Methods
	Product	GF 300	
Compositions	Silicone + Ceramics		-
Color/Part A	White	White	Visual
Color/Part B	Blue	Yellow	Visual
Viscosity/Part A	11,000	15,000	ASTM D2196
Viscosity/Part B	11,000	15,000	ASTM D2196
Mix Ratio	1 : 1		-
Density (g/cc)	3.0	3.1	ASTM D792
Operating Time (Min)	60	120	ISO 9048
Hardness after Cured	60	60	ASTM D2240
Temperature Range (°C)	- 40~200	- 60~200	-
Electrical			
Breakdown Voltage (Kv/mm)	≥ 7	≥ 7	ASTM D149
Volume Resistance (Ω.cm)	10 ¹³	10 ¹³	ASTM D257
Dielectric Constance @1MHz	6.7	6.7	ASTM D150
Flammability	V-0	V-0	UL 94
Thermal			
Thermal Conductivity (W/m-K)	3.0	3.6	ISO22007-2

Instructions for Use and Precautions

Supplied in two-component liquid packs with 1:1 mixing ration of A/B; optional automatic mixing and dispensing systems, or manual mixing; due to the fast-curing properties of sealants require automatic mixing and dispensing equipment. In applications where the product is very sensitive to internal air bubbles, a vacuum degassing process of 28 to 30 inches of mercurial column is required.

Transportation and Storage

Store in a cool, dry and ventilated place. This product is non-toxic and non-dangerous and can be handled and transported as general chemicals.

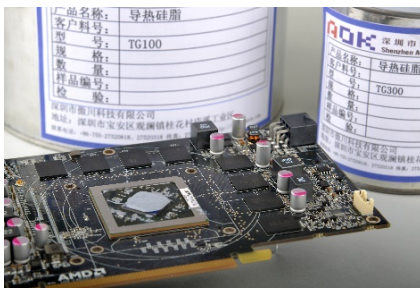
Shelf Life

6 Months

TG Series

High Performance Thermal Grease

TG series thermal conductive grease can effectively reduce the contact thermal resistance between the radiator and the heat source. Ideal for applications requiring minimum compressed thickness, constant pressure and ease of screen printing for optimum performance. AOK's high performance silicone grease products are designed to ensure maximum reliability in most applications by eliminating pump out.



Features and Benefits

- Thermal Conductivity: 1.0~5.0 W/m.K
- Low Oil Bleeding (almost 0)
- Long-lasting, good reliability
- Good wettability, effectively reducing the thermal resistance
- Strong weather resistance (temperature, moisture, aging resistance)

Instructions for Use and Precautions

First clean the surface to be applied, then stir the silicone grease evenly, and then apply the silicone grease to the surface by dispensing, brushing or screen printing. If screen printing is used, it is recommended to use 60-80 mesh nylon mesh, and use a rubber scraper with a hardness of about 70. When coating, apply silicone grease at about 45 degrees to the coating surface. After the operation, the unused product should be sealed and stored in time.

Storage and Transportation

Store in a cool, dry and ventilated place. This product is non-toxic and non-dangerous and can be handled and transported as general chemicals.

TG Series Typical Properties						
Attributes	Values					Test Methods
Product	TG 100	TG 200	TG 300	TG 400	TG 500	-
Composition	Unvulcanized silicone oil and thermally conductive filler mixture					-
Color	White	White	Grey	Grey	Grey	Visual
Viscosity (mPa·s)	40,000	2,000,000	2,000,000	200,000	3,000~4,000	ASTM D2196
Density (g/cc)	2.7	2.8	3.1	2.7	2.50	ASTM D792
Penetration (25°C · 0.1mm)	250	280	250	290	220	HG/T269
Temperature Range(°C)	- 40~150	- 40~150	- 40~150	- 40~125	- 50~150	-
Electrical						
Breakdown Voltage (KV/mm)	≥4.0	≥4.0	-	-	-	ASTM D149
Thermal						
Thermal Conductivity (W/m-K)	1.0	2.0	3.0	4.0	5.0	ISO22007-2
Thermal Resistance (°C · in ² /W) 0.1mm @50 psi 80°C	0.15	0.12	0.03	0.015	< 0.015	ASTM D5470

Typical Applications

- IT-servers, computers, storage modules
- Network communication equipment-
- wireless modules, routers
- Consumer electronics, Gaming System 、 Portable Devices
- Industrial - power supply, LED lighting

Purchase Information

Package : 30 ml Cartridge/1 Kg Can/
2 Kg Can/10 KG Can

Shelf Life

12 Months

Q : Why Use Thermally Conductive Interface Materials (TIM) ?

A : The use of thermally conductive material eliminates the air gap between the two contact surfaces by filling and integrating rough and uneven mating surfaces. Since the thermal conductivity of the material is much greater than the air, it reduces interface thermal resistance and the temperature at the device will drop.

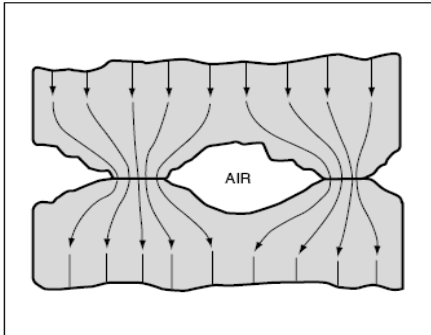


Figure 1a. Schematic representation of two surfaces in contact and heat flow across the interface.

Pic 1. Heat flow path without TIM

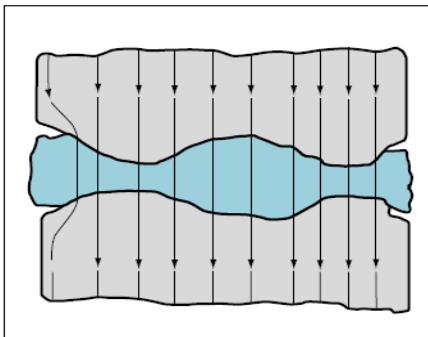


Figure 1b. Interface material compressed between two contacting surfaces.

Pic. 2 Heat flow path with TIM

Q : What are the current common thermal interface materials (TIM)?

A : Common thermal interface materials include thermally conductive silicone pad, thermally conductive gel, thermally conductive insulating sheet, thermally conductive mud, thermally conductive potting, thermally conductive silicone grease, graphite sheet, copper foil, aluminum foil, liquid metal, etc.

Q : What is the thermal conductivity test standard used by AOK?

A : Currently, we use the ISO 22007-02 standard .

Q : What does it mean that the material is slightly tacky?

A : Our thermally conductive silicone pads have the natural tacky characteristics of silicone rubber, which can be easily assembled and applied. This feature is easier to peel and prevent tearing than backing glue.

Q : How long is the service life of your thermal interface material?

A : Most of our thermal interface materials are silicone rubber based. The service life is generally recognized as 20 years, and it is mainly determined by the service life of the silicone rubber.

Q : Will the hardness of AOK' s TIM change after being heated?

A : Our thermally conductive silicone pad have the natural characteristics of silicone rubber. The hardness, within -40~200 degree working environment, will not have obvious changes and can be easily used for assembly.

Q : Can your thermal pad be reused?

A : It depends on the application and the condition of the pad. Some of our customers use the same pad after rework. Our suggestion is your engineers need to judge whether it can be reused according to the actual situation.

Q : Are your silicone pad electrically insulated?

A : Yes, all our thermal pads are electrically insulated, and the withstand voltage value generally reaches a few KV or more, which will not cause short circuits.

Q : Can your thermal pad be backed glues?

A : Yes, it' s available for most of the conventional products.

Q : Does your thermal conductive materials contain heavy metals or harmful substances?

A : Our entire series of materials are subject to be inspected by SGS. So far, all the hazardous substances specified by customers are far below the standard.

Q : Has your thermal conductive materials passed UL certification?

A : Most of our materials have passed UL94V-0.

Q : Will your thermal conductive material volatilize or precipitate when heated?

A : All thermally conductive silicone products contain silicone oil. We have solved the problem of volatilization and silicone oil precipitation by two special high-temperature chemical treatments and vacuum treatment.

Q : Why are wettability and compliance important characteristics of thermal pads?

A : A good gap filler has good wettability and compliance to reduce thermal resistance caused by gaps. When Thermal pad have great wettability and compliance, it can fill gaps better and attach to the surfaces better, thereby effectively reducing thermal resistance.

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深圳市傲川科技有限公司
SHENZHEN AOCHUAN TECHNOLOGY CO.,LTD



HQ : Aochuan Building 401, 302 Guihua Road, Guixiang Village, Guanlan Town, Longhua District, Shenzhen City, Guangdong Province, 518110, China

Manufacture site : NO.10 Gaopu Road, high-tech development park, Heyuan City, Guangdong Province, China

Phone : 400-080-1996/+86-755-29765652

e-Mail : sales@aok-technologies.com

Website : www.aok-technologies.com