



# **Basic Information**

- Place of Origin:
- Brand Name: zhonglei

China

100 m<sup>2</sup>

- Minimum Order Quantity:
- Packaging Details: carton
- Supply Ability: 10000



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上海中垒电气材料有限公司 Shanehai Zhonglei Electric Material Co. Ltd

# **Product Specification**

<ul> <li>Flame Retardant:</li> </ul>	Yes
Material:	Silicone
Hardness:	50 Shore A
Application Method:	Dispensing Or Brushing
Color:	Blue
Tensile Strength:	15 Psi
Adhesion Strength:	Strong
Operating Temperature     Range:	-40°C To 125°C
<ul> <li>Highlight:</li> </ul>	Silicone Free Thermally Conductive Pad,

Thermally Conductive Pad 5.0 W/MK

Our Product Introduction

## **Product Description:**

Our Thermally Conductive Material is an advanced solution designed to efficiently manage heat within a wide range of applications. This premium-grade material is composed of high-quality silicone, known for its excellent thermal properties and durability. The material is carefully engineered to serve as both a heat conducting material and a thermal conductive adhesive, offering versatile use in various industrial and commercial settings.

With a hardness of 50 Shore A, this thermally conductive silicone maintains an optimal balance between flexibility and rigidity. This means it can conform to uneven surfaces, ensuring maximum contact and thus improving the heat transfer efficiency. Despite its flexibility, it also retains enough structural integrity to withstand pressure and maintain its form under thermal stress, making it an ideal choice for applications requiring a robust yet adaptable material.

When it comes to mechanical strength, our thermally conductive material exhibits a tensile strength of 15 Psi. This measurement assures you that the silicone compound has the necessary resilience against stretching and pulling forces. This is particularly important in applications where the material may be subject to mechanical strain, ensuring that it retains its thermal conductivity and adhesive properties even when faced with physical stress.

The operating temperature range of this product is particularly notable, with a broad spectrum spanning from -40°C to 200°C. This extensive range allows the material to perform reliably in environments that experience extreme temperature fluctuations. Whether it is used in frigid or hot conditions, the silicone's thermal properties remain consistent, ensuring that it continues to conduct heat effectively without degradation or loss of adhesion.

With a thickness of 0.5~5mm, our thermally conductive silicone strikes the perfect balance between thinness for enhanced thermal transfer and sufficient material volume for durability and performance. This thickness ensures that the material is not so thick as to impede thermal conduction, nor too thin to risk tearing or puncture in demanding applications. This precision-engineered thickness is a testament to our commitment to providing products that meet the exacting needs of our customers.

As a thermal conductive adhesive, this material offers a dual function. It not only actively conducts heat away from sensitive components, but also securely bonds components together. This eliminates the need for mechanical fasteners in certain applications, reducing material costs and simplifying the assembly process. The adhesive quality is specifically formulated to create strong, lasting bonds without compromising the material's thermal conduction efficiency.

In summary, our Thermally Conductive Material is a superior choice for any application requiring efficient heat management. Its combination of flexibility and strength, along with its impressive temperature range and optimal thickness, make it a versatile and reliable heat conducting material. Whether used as a thermal conductive adhesive or as a standalone thermal interface material, it offers consistent performance in even the most challenging environments. Trust our Thermally Conductive Material to keep your components cool, stable, and operating at their best.

### Features:

Product Name: Thermally Conductive Material Adhesion Strength: Strong Dielectric Strength: 10KV/mm Thermal Conductivity: 6W/mK Density: 3 G / Cbm Thickness Tolerance: ±0.001" (±0.025mm) Also known as Heat Conductive Compound Efficient Thermal Conduction Material High-performance Heat Conductive Substance

### **Technical Parameters:**

Technical Parameter	Specification
Operating Temperature Range	-40°C To 125°C
Tensile Strength	15 Psi
Thermal Conductivity	5 W/mK
Thickness	0.5~5mm
Dielectric Strength	10 KV/mm
Thickness Tolerance	±0.001" (±0.025mm)
Flame Retardant	Yes

## **Applications:**

The Zhonglei brand, originating from China, has developed an advanced Thermal Conductive Compound designed to effectively manage and dissipate heat in a variety of applications. This thermally conductive material is engineered to provide a high dielectric strength of 10 KV/mm, ensuring electrical insulation in addition to thermal conductivity. This product, with its inherent flame retardant properties, guarantees safety and reliability in scenarios where fire resistance is critical.

With a hardness specification of 50 Shore A, the Zhonglei thermally conductive compound strikes an optimal balance between flexibility and durability, making it suitable for a range of industrial and commercial uses. The strong adhesion strength of this material ensures a secure bond between surfaces, which is particularly important in the assembly of complex electronic components. The consistent grey color of the compound provides a professional and uniform look to the finished application, maintaining consistency across products. The Heat Conducting Material from Zhonglei is ideal for use in electronic devices such as smartphones, tablets, and laptops, where efficient heat dispersion is essential to maintain the functionality and longevity of the components. It can also be applied in LED lighting systems, where excess heat can affect performance and lifespan. In power electronics, such as converters and inverters, this compound aids in thermal management, preventing overheating and potential system failures.

Furthermore, the thermally conductive compound can be employed in the automotive industry, particularly in electric vehicles, to manage battery heat and ensure the system operates within safe temperature ranges. The aerospace sector also benefits from this product, using it to protect sensitive instrumentation from the extreme temperature variations encountered during flight. Additionally, in the realm of home appliances, this compound is used to improve heat dissipation in devices like refrigerators, ovens, and air conditioners, enhancing their efficiency and safety.

In summary, the Zhonglei thermally conductive compound, with its significant dielectric strength, flame retardancy, optimal hardness, strong adhesion, and uniform color, is a versatile and essential material for any application that requires efficient thermal management. Its use spans a multitude of scenarios, from intricate electronics to robust industrial machinery, marking it as an indispensable component in the modern manufacturing landscape.

### **Customization:**

Welcome to zhonglei, your premier source for high-quality **Thermal Conductive Compound** products. Each of our thermally conductive materials is carefully manufactured in China, ensuring top-tier performance and reliability.

Our product customization service allows you to specify the exact thickness tolerance you require, with precision up to ±0.001" (±0.025mm), to fit your unique application needs. The material features a hardness of 50 Shore A, making it both flexible and durable. Available in a standard blue color, our **Heat Conductive Compound** is not only aesthetically pleasing but also boasts a tensile strength of 15 Psi, ensuring it can withstand various mechanical stresses.

Moreover, our thermally conductive material offers excellent chemical resistance, which means it will maintain integrity even when exposed to harsh substances. This makes it an ideal choice for a wide range of industries and applications where **Thermal Transmission Material** is critical.

Choose zhonglei for a thermal solution that meets your specific requirements with precision and quality.

### Support and Services:

Our Thermally Conductive Material products are designed to provide efficient heat dissipation for a variety of applications. To ensure you get the most out of our products, we offer comprehensive technical support and services. Our team of experts can guide you through product selection, design integration, and provide advice on optimal usage for your specific needs.

We offer resources to help you understand the properties and capabilities of our thermally conductive materials. This includes detailed product datasheets, application notes, and thermal management insights. Our support services also include troubleshooting assistance to address any issues that may arise during the use of our products.

For those requiring additional guidance, our technical services team can provide customized support. This may include thermal analysis, performance testing, and recommendations for enhancing thermal management in your application. We are committed to ensuring that our products perform to the highest standards and that our customers receive the support they need to succeed.

### Packing and Shipping:

Our Thermally Conductive Material products are carefully packaged to ensure safe delivery to your location. Each item is encased in antistatic packaging to preserve the material's integrity and protect against electrostatic discharge. For added protection, the materials are cushioned with foam inserts to prevent damage during transit.

The outer packaging consists of a durable, corrugated cardboard box that is sealed with heavy-duty adhesive tape. This box is clearly labeled with 'Fragile' and 'Handle with Care' stickers to alert couriers of the sensitive nature of the contents.

Prior to shipping, each package is weighed and measured to ensure compliance with carrier regulations and to determine the most efficient delivery method. We use trusted shipping providers to guarantee that your product arrives in a timely manner and in perfect condition. A tracking number will be provided so that you can monitor the shipment's progress and plan for its arrival.

Please inspect your package upon delivery. If you encounter any issues or if the product has been compromised during shipment, contact us immediately so we can assist you with a replacement or a refund.

## FAQ:

Q1: What types of products does the Zhonglei brand offer in terms of thermally conductive materials?

A1: Zhonglei offers a variety of thermally conductive materials, including thermal pastes, pads, tapes, and epoxies. These products are designed to improve heat dissipation in electronic components and are suitable for a wide range of applications.

Q2: Can Zhonglei's thermally conductive materials be used in automotive applications?

A2: Yes, Zhonglei's thermally conductive materials are suitable for automotive applications where efficient heat management is critical for performance and reliability. They can be used in electronic control units, LED lighting, batteries, and other heat-sensitive components. **Q3: Are the thermally conductive materials from Zhonglei easy to apply?** 

A3: Zhonglei's thermally conductive materials are designed with user convenience in mind and can be easily applied to various surfaces. Some products may come with features such as self-adhesive backing for easy installation, while others may require the use of additional tools or methods for application.

Q4: What is the thermal conductivity range of Zhonglei's thermally conductive materials?

A4: The thermal conductivity of Zhonglei's materials can vary depending on the specific product and its formulation. Generally, their products cover a wide range of thermal conductivity values to meet different cooling requirements and application needs. For exact figures, it is best to refer to the technical datasheets of individual products.

Q5: Are Zhonglei's thermally conductive materials environmentally friendly?

A5: Zhonglei is committed to providing products that are environmentally conscious. Their thermally conductive materials are typically designed to comply with environmental regulations and standards. However, it is advisable to review the product specifications or contact the company for detailed information regarding environmental impact and safety.

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