



6.0 W/m.K High Compressibility Silicon Free Thermally Conductive Silicone Sheet

Our Product Introduction

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Basic Information

- Place of Origin: China
- Brand Name: zhonglei
- Minimum Order Quantity: 100 m²
- Packaging Details: carton
- Supply Ability: 10000



Product Specification

- Material: Silicone
- Curing Method: Room Temperature Or Heat Cure
- Application Method: Dispensing Or Brushing
- Thermal Conductivity: 6W/mK
- Thickness Tolerance: $\pm 0.001''$ ($\pm 0.025\text{mm}$)
- Flame Retardant: Yes
- Color: Blue
- Dielectric Strength: 10 KV/mm
- Highlight:
 - Silicon Free Thermally Conductive Silicone Sheet**
 - , High Compressibility Thermally Conductive Silicone Sheet**
 - , 6.0 W/m.K Conductive Silicone Sheet**

Product Description

Product Description:

The Thermally Conductive Material is an innovative solution designed for a wide array of applications that require efficient heat dissipation. This advanced compound is engineered to provide a high degree of thermal conductivity and dielectric strength, making it an excellent choice for electronic devices, automotive components, and various industrial processes where thermal management is crucial. With its impressive capabilities, this thermally conductive compound ensures that heat is effectively transferred away from sensitive components, thereby extending their lifespan and reliability.

Constructed from a premium quality silicone base, this thermal transmission material is not only highly effective in managing heat but also provides strong adhesion and durability. Silicone as a material is known for its versatility and thermal stability, making it an ideal choice for applications involving extreme temperatures. This thermally conductive silicone compound exhibits a remarkable dielectric strength of 4.5 KV/mm, which allows it to act as an electrical insulator while conducting heat away from critical components. This feature is particularly important in electronic applications where electrical isolation is as critical as thermal management.

The thermal conductivity of this compound is rated at 1.5 W/mK, ensuring that it can efficiently transfer heat across surfaces. This level of thermal conductivity is vital for maintaining optimal operating temperatures, preventing overheating, and safeguarding components against thermal degradation. The high thermal conductivity also means that this heat conductive compound can be used in applications with demanding heat dissipation requirements, such as LED lighting systems, power supplies, and heat sinks.

One of the most significant advantages of this Thermal Conductive Material is its strong adhesion strength. This characteristic ensures a secure bond between surfaces, which is essential for effective thermal transfer. The robust adhesive properties also contribute to the material's mechanical stability and resistance to environmental factors, such as humidity and temperature fluctuations. Users can rely on this material to maintain its integrity and performance over long periods, even under challenging conditions.

In terms of mechanical properties, this thermally conductive compound boasts a tensile strength of 48 Psi. This indicates that the material has a high resistance to stretching or pulling forces, which makes it less likely to tear or degrade under mechanical stress. The strong tensile strength is especially beneficial in applications where the material is subjected to mechanical movements or vibrations, ensuring that the thermal interface remains intact and functional throughout its service life.

Overall, this Thermally Conductive Material is a highly effective and reliable choice for managing thermal energy. Its combination of dielectric strength, thermal conductivity, adhesion strength, and tensile strength makes it a versatile and indispensable thermal transmission material for a myriad of applications. Whether used in consumer electronics, automotive systems, or industrial machinery, this heat conductive compound delivers consistent performance and contributes to the longevity and efficiency of the components it serves. With its superior qualities, this product stands out as an essential component in any thermal management strategy.

Features:

Product Name: Thermally Conductive Material

Thickness: 0.5~10mm

Material: Silicone

Hardness: 50 Shore A

Adhesion Strength: Strong

Density: 3.2 g/cm³

Thermal Conductive Compound for efficient heat transfer

Heat Conductive Compound ensures optimal thermal management

Heat Conducting Material designed for high-performance applications

Technical Parameters:

Parameter	Specification
Chemical Resistance	Excellent
Thermal Conductivity	6 W/mK
Flame Retardant	Yes
Density	3.2 g/cbm
Thickness Tolerance	±0.001" (±0.025mm)
Color	Blue
Hardness	50 Shore A
Adhesion Strength	Strong
Material	Silicone

Applications:

The **zhonglei** brand is renowned for its high-quality thermal management solutions, and its Thermal Conductive Compound is no exception. Originating from China, this product stands out in the marketplace with a significant tensile strength of 48 Psi and a hardness rating of 50 Shore A. The grey color of the zhonglei compound is a testament to its professional-grade quality and industrial aesthetic. One of the critical applications for the zhonglei Thermal Conductivity Material lies within the realm of electronics, where efficient heat dissipation is of the utmost importance. As electronic components operate, they generate heat that can adversely affect performance and

longevity. The zhonglei material, with its superb thermal conduction properties, can be applied between heat sources such as CPUs and GPUs and heat sinks to improve heat transfer, ensuring that devices operate within safe temperature ranges. This is particularly vital in high-performance computing and gaming applications where excessive heat can lead to throttling or hardware failure. Moreover, the zhonglei Thermal Conduction Material is designed to withstand a wide operating temperature range of -40°C to 200°C, making it an excellent choice for automotive applications. Under the hood, components are exposed to extreme conditions, and reliable thermal management is crucial. The zhonglei compound can be used on automotive control units, LED headlights, and power electronics, offering protection against thermal runaways and enhancing performance longevity.

In the field of LED lighting, where maintaining efficiency and luminosity is key, the zhonglei thermal compound can be used to bond heat-generating LED chips to heat sinks. The product's dielectric strength of 4.5 KV/mm ensures that it not only manages heat but also provides electrical insulation, preventing short circuits and ensuring the safety and durability of lighting systems.

Telecommunications equipment also benefits from the application of zhonglei's thermally conductive materials. As data centers and networking hardware are required to operate continuously, often in confined spaces, the need for effective heat management solutions is crucial. Applying the zhonglei compound helps maintain operational integrity and prevents overheating, which is essential for 24/7 uptime in critical communication infrastructures.

In conclusion, the zhonglei Thermal Conductive Compound is a versatile and essential product for various applications that require efficient thermal management. Its robust physical properties, combined with exceptional thermal performance, make it an indispensable material for industries ranging from electronics to automotive, LED lighting, and telecommunications.

Customization:

Discover zhonglei's Thermally Conductive Material, meticulously crafted to meet your high-quality thermal management needs. Originating from China, our product is not just any Thermal Conductive Putty, but a reliable solution designed with a hardness of 50 Shore A, ensuring the perfect balance between flexibility and structural integrity.

Our silicone-based Thermal Conductive Adhesive boasts an impressive operating temperature range, enduring extreme conditions from -40°C to 200°C. This resilience makes it an ideal Thermal Conduction Material for a wide array of applications across various industries. When it comes to chemical resistance, zhonglei's product offers excellent protection, ensuring durability and consistent performance in the most challenging environments. Moreover, our dedication to precision is evident in the tight thickness tolerance of $\pm 0.001''$ ($\pm 0.025\text{mm}$), guaranteeing uniform application and effectiveness in use.

Support and Services:

Our Thermally Conductive Material products are designed with the highest standards to ensure efficient heat management in various applications. To help you make the most of our products, we offer comprehensive technical support and services that include:

Product Selection Guidance: Our experts are available to help you choose the right thermally conductive material for your specific application needs, ensuring optimal performance and compatibility.

Application Assistance: We provide advice on how to integrate our materials into your design, including tips on handling, cutting, and applying the product for maximum thermal conductivity and adhesion.

Technical Data and Documentation: Access detailed technical data sheets, safety data sheets, and application guidelines to better understand the properties and usage of our thermally conductive materials.

Troubleshooting: If you encounter any issues with our products, our technical support team is ready to assist with problem-solving strategies, including identifying and rectifying any application or product-related concerns.

Custom Solutions: For specialized applications, we can provide custom product modifications or developments to meet unique thermal management challenges.

Quality Assurance: We stand behind the quality of our thermally conductive materials with rigorous testing and quality control measures to ensure they meet the highest industry standards.

Our goal is to provide you with the support and services you need to achieve the best thermal management solutions for your projects. Please reach out to our technical support team for any assistance you may require.

Packing and Shipping:

Product Packaging for Thermally Conductive Material:

The thermally conductive material is securely packaged in industrial-grade, anti-static packaging to prevent any electrical charge build-up. The material is encased in a protective, cushioned lining to ensure it remains uncompromised from mechanical shocks during transit. Each package is clearly marked with handling instructions and the contents' thermal specifications to ensure proper handling and storage.

Shipping Information for Thermally Conductive Material:

All shipments of thermally conductive material are dispatched through our trusted logistics partners to ensure timely and safe delivery. Packages are labeled with hazardous material information if applicable, and accompanied by a Material Safety Data Sheet (MSDS) to comply with safety regulations. We utilize temperature-controlled transportation for temperature-sensitive materials to maintain their efficacy. Tracking information is provided for each shipment, allowing customers to monitor their package's journey until it reaches its final destination.

FAQ:

Q1: What types of applications are suitable for zhonglei's thermally conductive materials?

A1: Zhonglei's thermally conductive materials are designed for a wide range of applications that require efficient heat dissipation. These include electronics cooling, LED lighting, automotive electronics, power supplies, and other heat-generating components in various industrial and consumer products.

Q2: Can zhonglei's thermally conductive materials be customized to specific shapes and sizes?

A2: Yes, zhonglei offers customization options for their thermally conductive materials. Customers can request specific shapes, sizes, and thicknesses to meet the requirements of their particular applications.

Q3: How do zhonglei's thermally conductive materials compare to traditional cooling methods?

A3: Zhonglei's thermally conductive materials offer several advantages over traditional cooling methods. They allow for more efficient heat transfer, can be applied in thinner layers, and can be used in applications where space is limited or where traditional cooling methods like heat sinks or fans are not viable.

Q4: Are zhonglei's thermally conductive materials environmentally friendly?

A4: Zhonglei is committed to producing environmentally friendly products. Their thermally conductive materials are designed to be safe for both the environment and users, complying with various environmental regulations. However, for specific information on recyclability and environmental impact, it's best to consult the product datasheet or contact the company directly.

Q5: How does the place of origin, China, affect the availability of zhonglei's thermally conductive materials?

A5: Being manufactured in China allows zhonglei to leverage efficient production processes and supply chain advantages, which can lead to cost-effective pricing and reliable availability for global customers. However, customers outside of China should account for shipping times and potential import regulations when ordering.



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