# Perfect Insulations

AN ISO 9001:2015 COMPANY

## Thermal Silicone Cloth | PCV160S

The PCV160S thermal silicone cloth is a fabric-like product made from silicone and fiberglass using a specialized manufacturing process. Due to its excellent thermal conductivity, insulation properties, and ease of assembly, it is widely used in industries such as electronics and electrical appliances. During use, different thicknesses of thermal silicone sheets are selected and cut according to the size and gap height of the heat-generating interface, and installed in the gap between the heat source and its heat dissipation component to provide thermal conductivity and insulation.

### Features and Advantages

- Excellent thermal conductivity and high electrical insulation
- High mechanical strength, wear-resistant, and tear-resistant
- Non-sticky on both sides, making it easy to handle and remove
- Exceptional weather and aging resistance, suitable for long-term use

### Typical Applications

- Thermal interface between chips, processors, storage devices, and heat sinks or enclosures
- Equipment requiring long-term stable cooling, such as base stations and routers
- Thermal interface in automotive electronic control units (ECUs) and battery management systems (BMS)
- Thermal management between power modules and heat sinks

| Test Items | Unit | PCV160S | Test Standard |
|---|---|---|---|
| Appearance | - | Pink | Visual |
| Thickness | mm | 0.23/0.30±0.03 | ASTM D374/374M |
| Hardness | Shore A | 85±5 | ISO 48-4 |
| Density | g/cm³ | 2.48±0.1 | ASTM D792 |
| Breaking Force | N/25mm | ≥200 | ASTM D5035 |
| Breakdown Voltage | KV | ≥6 | ASTM D149 |
| Volume Resistivity | Ω·cm | ≥$1\times10^{14}$ | ASTM D257 |
| Dielectric Constant | 1MHz | 4.4~5.0 | ASTM D150 |
| Thermal Conductivity | W/m·K | 1.6±0.2 | ASTM D5470 |
| Thermal Impedance | ℃·in²/W | 0.420 | ASTM D5470（40psi） |
| Thermal Impedance | ℃·cm²/W | 2.711 | ASTM D5470（40psi） |
| Flammability | Grade | V-0 | UL94 |
| Operating Temperature | ℃ | -50~200 | - |

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## Application Instructions

- **Surface Preparation**: Ensure that the surface is clean, free of grease and dust, to enhance thermal conductivity.
- **Cutting and Fitting**: Cut the thermal silicone cloth to the appropriate size as needed, ensuring it covers all heat source areas.
- **Installation**: Place the cut thermal fiberglass cloth between the electronic component and the heat sink, ensuring close contact.
- **Pressing and Fixing**: Apply appropriate pressure to ensure tight bonding of the silicone cloth with the component and heat sink. Clamps or screws may be used to secure it in place.

## Storage Instructions

Store in a cool, dry place, away from direct sunlight. Shelf life is 10 years from the date of manufacture.

## Packaging

Standard size: 300mm × 50M per roll, can be cut to specific shapes and sizes as needed.

## Note:

The above data are based on extensive experiments and are reliable. However, due to the variety of actual applications, which we cannot control, we recommend customers conduct their own application tests before formal use to confirm suitability. Our company assumes no responsibility for any direct, indirect, or incidental losses resulting from the use of this product under specific conditions. If users encounter issues during use, they can contact our after-sales or technical service department, and we will provide assistance to the best of our ability.