

# PAKCOOL® Thermally Conductive Pad TP-215-HT

### **Key Features and Benefits**

- Thermal Conductivity: 1.5W/m·K
- Superior high and low temperature resistance, excellent weather resistance
- Superior chemical and mechanical stability
- Can effectively protect electrical components

## **Description**

PAKCOOL® TP-215-HT thermally conductive pads are designed with high thermal conductivity and high strength to meet the diverse needs of thermal management. This series of products offers a wide range of thermal conductivities and is suitable for various applications. PAKCOOL® TP-215-HT is widely used in communication equipment for its extremely low oil permeability. Under moderate application pressure, PAKCOOL® TP-215-HT series production can fill the air gaps between components and their heat-sinks and enhance heat transfer. PAKCOOL® TP-215-HT is electrical insulation and has high thermal conductivity at pressures ranging from 20 to 100 psi (0.14 to 0.69 MPa). Products can be customized to meet customer's special requirements.

PAKCOOL® TP-215-HT is a hardness enhancement version of PAKCOOL® TP-215, with excellent mechanical strength and elasticity. PAKCOOL® TP-215-HT can be provided in standard size with different thicknesses, or die cutting according to customer requirements.

## **Applications:**

- LED
- Power modules
- Integrated chips
- Automotive Electronics
- Communication devices
- Computers and Accessories

#### **Technical Parameters**

ColorGrayVisualThermal Conductivity (W/m·K)1.5ASTM D5470Thermal Impedance @20psi,0.5mm (K-in²/W)0.96ASTM D5470Thickness* (mm)0.3—5.0ASTM D374Density (g/cm³)2.60±0.05ASTM D792Hardness (Shore A) $60\pm10$ ASTM D2240Tensile Strength (Psi)≥100ASTM D412Volume Resistivity (Ω·cm)≥1.0×10¹³ASTM D257Dielectric Strength (kV/mm)≥12ASTM D149Dielectric Constant (100KHz)4.5ASTM D150UL Flammability RatingV-0UL 94Continuous Use Tamperature (*C)-40 ~ +200	Typical Properties	ТР-215-НТ	Test Methods
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Color	Gray	Visual
@20psi,0.5mm (K-in²/W) $0.96$ ASTM D5470Thickness* (mm) $0.3$ — $5.0$ ASTM D374Density (g/cm³) $2.60\pm0.05$ ASTM D792Hardness (Shore A) $60\pm10$ ASTM D2240Tensile Strength (Psi) $\geq 100$ ASTM D412Volume Resistivity 	· ·	1.5	
Density (g/cm³) $2.60\pm0.05$ ASTM D792Hardness (Shore A) $60\pm10$ ASTM D2240Tensile Strength (Psi) $\geqslant 100$ ASTM D412Volume Resistivity ( $\Omega$ ·cm) $\geqslant 1.0\times10^{13}$ ASTM D257Dielectric Strength (kV/mm) $\geqslant 12$ ASTM D149Dielectric Constant (100KHz)4.5ASTM D150UL Flammability RatingV-0UL 94Continuous Use $-40 \sim +200$	@20psi,0.5mm	0.96	
Hardness (Shore A) $60\pm10$ ASTM D2240Tensile Strength (Psi) $≥100$ ASTM D412Volume Resistivity (Ω·cm) $≥1.0\times10^{13}$ ASTM D257Dielectric Strength (kV/mm) $≥12$ ASTM D149Dielectric Constant (100KHz) $4.5$ ASTM D150UL Flammability RatingV-0UL 94Continuous Use $-40 \sim +200$ $$	Thickness* (mm)	0.3—5.0	ASTM D374
Hardness (Shore A) $60\pm10$ D2240         Tensile Strength (Psi) $\geqslant 100$ ASTM D412         Volume Resistivity (Ω·cm) $\geqslant 1.0 \times 10^{13}$ ASTM D257         Dielectric Strength (kV/mm) $\geqslant 12$ ASTM D149         Dielectric Constant (100KHz)       4.5       ASTM D150         UL Flammability Rating       V-0       UL 94         Continuous Use       -40 ≈ +200	Density (g/cm <sup>3</sup> )	2.60±0.05	ASTM D792
Volume Resistivity (Ω·cm) $\geqslant 1.0 \times 10^{13}$ ASTM D257         Dielectric Strength (kV/mm) $\geqslant 12$ ASTM D149         Dielectric Constant (100KHz)       4.5       ASTM D150         UL Flammability Rating       V-0       UL 94         Continuous Use $-40 \approx +200$ $$	Hardness (Shore A)	60±10	
$(\Omega \cdot cm) \geqslant 1.0 \times 10^{15}  ASTM D257$ $Dielectric Strength  \geqslant 12  ASTM D149$ $(kV/mm) \qquad \qquad 4.5  ASTM D150$ $UL Flammability  \qquad V-0  UL 94$ $Continuous Use \qquad \qquad -40 \sim +200 \qquad$	Tensile Strength (Psi)	≥100	ASTM D412
(kV/mm) ≥ 12 ASTM D149  Dielectric Constant (100KHz) 4.5 ASTM D150  UL Flammability Rating V-0 UL 94  Continuous Use -40 ~ +200	·	$\geq 1.0 \times 10^{13}$	ASTM D257
(100KHz) 4.5 ASTM D150  UL Flammability Rating  Continuous Use $-40 \sim +200$	<u> </u>	≥12	ASTM D149
Rating V-0 UL 94  Continuous Use -40 ~ +200		4.5	ASTM D150
-40 ~ +200 <b></b>	The state of the s	V-0	UL 94
Temperature (C)	Continuous Use Temperature (℃)	-40 ~ +200	

\*Standard Thickness (mm): 0.3, 0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5

Note: Data is for guidance only and should not be used as product specifications.

## **Configuration:**

- Sheet form or die-cut form
- without pressure sensitive adhesive
- Standard dimension for sheet is 200mm × 400mm
- Custom dimensions are available

### **Storage:**

- Store in a cool, dry place out of direct sunlight
- Suggest the shelf-time not more than 24 months

The data of this specification are obtained under laboratory conditions. However, because of the difference of use environment, process and so on, it can not guarantee the correctness and applicability of the product in some usage and use. When using, be sure to test to confirm the product suitable for your purpose. If you have any problems in using this product, please contact our technical department. We will do our best to help you.