

## Thermal Interface - Pads and Films

# Dow Corning® TP-3500 Soft Thermal Pad

### FEATURES

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- High Compressibility
- Electrically Insulating
- Homogenous Construction
- Fiberglass Reinforced

### BENEFITS

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- Noise/vibration dampening
- Shock absorbing
- Both sides compressible

### COMPOSITION

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- Polydimethylsiloxane pad

### APPLICATION METHODS

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- Cold application
- Requires no heating or curing
- Material can be installed and removed easily and cleanly

### APPLICATIONS

- Thermal bridge for low thermal resistance with reduced interfacial resistance
- Display Driver IC
- Computer Memory Chips
- Game Consoles
- Telecommunications
- CD-ROM/DVD
- Between CPU and Heat Spreader

### TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Property	Unit	Value
Color	-	Gray
Thermal Conductivity	btu/hr ft degF W/mK	2.08 3.6
Durometer Shore 00	-	42
Specific Gravity (Cured)	-	3.3

### DESCRIPTION

TP-3500-Soft thermal pad is a silicone gel pad available in a variety of thicknesses. TP-3500-Soft has high thermal conductivity and high compressibility. Good heat transfer depends on a good interface between a heat-producing device and a heat-transfer media. Silicones have a low surface tension that enables them to wet most surfaces, which can lower the thermal contact resistance between the substrate and the material. In addition to sustaining their physical and electrical properties over a broad range of operating conditions, silicones are resistant to ozone and ultraviolet degradation and have good chemical stability.

### HOW TO USE

Thin thermal interface and gap filler thermal interface materials are cold-applied and require no heating or curing. The materials can be removed easily and cleanly, with no special tools, for access and rework. Unlike greases, Dow Corning® brand thermal interface materials are not messy to apply and do not flow away from the interface with thermal cycling. These thermally conductive silicones function as heat-transfer media, barriers against environmental contaminants and as stress-relieving shock and vibration absorbers over a wide temperature and humidity range. For gap filling, their high compressibility accommodates

tolerance stack-up and requires a lower clamping force, reducing system costs.

## USABLE LIFE AND STORAGE

The product should be stored in the original packaging under normal warehouse conditions to maintain the integrity of the packaging materials.

**HANDLING PRECAUTIONS PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET IS AVAILABLE ON THE DOW CORNING WEBSITE AT WWW.DOWCORNING.COM, OR FROM YOUR DOW CORNING REPRESENTATIVE, OR BY CALLING YOUR GLOBAL DOW CORNING CONNECTION.**

## HEALTH AND ENVIRONMENTAL INFORMATION

To support Customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area. For further information, please see our website, [www.dowcorning.com](http://www.dowcorning.com) or consult your local Dow Corning representative.

## LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

## LIMITED WARRANTY INFORMATION PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent. Dow Corning's sole warranty is that our products will meet the sales specifications in effect at the time of shipment. Your exclusive remedy for

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Property	Units	TP-3500-SOFT					
Thickness	mm	0.25	0.50	1.0	1.5	2.0	2.5
Color	-	Light Gray	Light Gray	Light Gray	Light Gray	Light Gray	Light Gray
Thermal Resistance (°C·in <sup>2</sup> /W)	10 PSI	0.325	0.395	0.652	0.864	1.197	1.327
	30 PSI	0.267	0.350	0.615	0.831	1.107	1.221
	50 PSI	0.237	0.324	0.596	0.808	1.000	1.074
	100 PSI	0.197	0.286	0.555	0.750	0.779	0.865
Thermal Conductivity	W/mK	3.7	3.6	3.7	3.8	3.5	3.5
UL® Flammability Rating	-	V-1	V-1	V-1	V-1	V-0	V-0
Hardness	Shore 00	43	42	44	45	39	39
Compression Deflection (%) at pressure	10 PSI	n/a	0.2	1.7	2.2	5.9	6.3
	30 PSI	n/a	0.8	5.0	6.6	16.7	17.7
	50 PSI	n/a	1.6	8.3	10.8	26.3	27.7
	100 PSI	n/a	4.1	16.3	20.5	44.5	46.4
Specific Gravity	-	3.3	3.3	3.3	3.3	3.3	3.3
Tear Strength	lb/in	352	192	108	100	57	50
Volume Resistivity	ohm-cm	3.3E+14	3.5E+14	1.0E+14	1.0E+14	4.7E+13	5.7E+13
Dielectric Strength	volts/mil	87	84	87	76	92	87
	kV/mm	3	3	3	3	4	3
Dielectric constant	100 Hz	17	6	13	19	11	12
	100 kHz	15	6	11	16	10	10
	1 MHz	14	6	11	15	10	10

