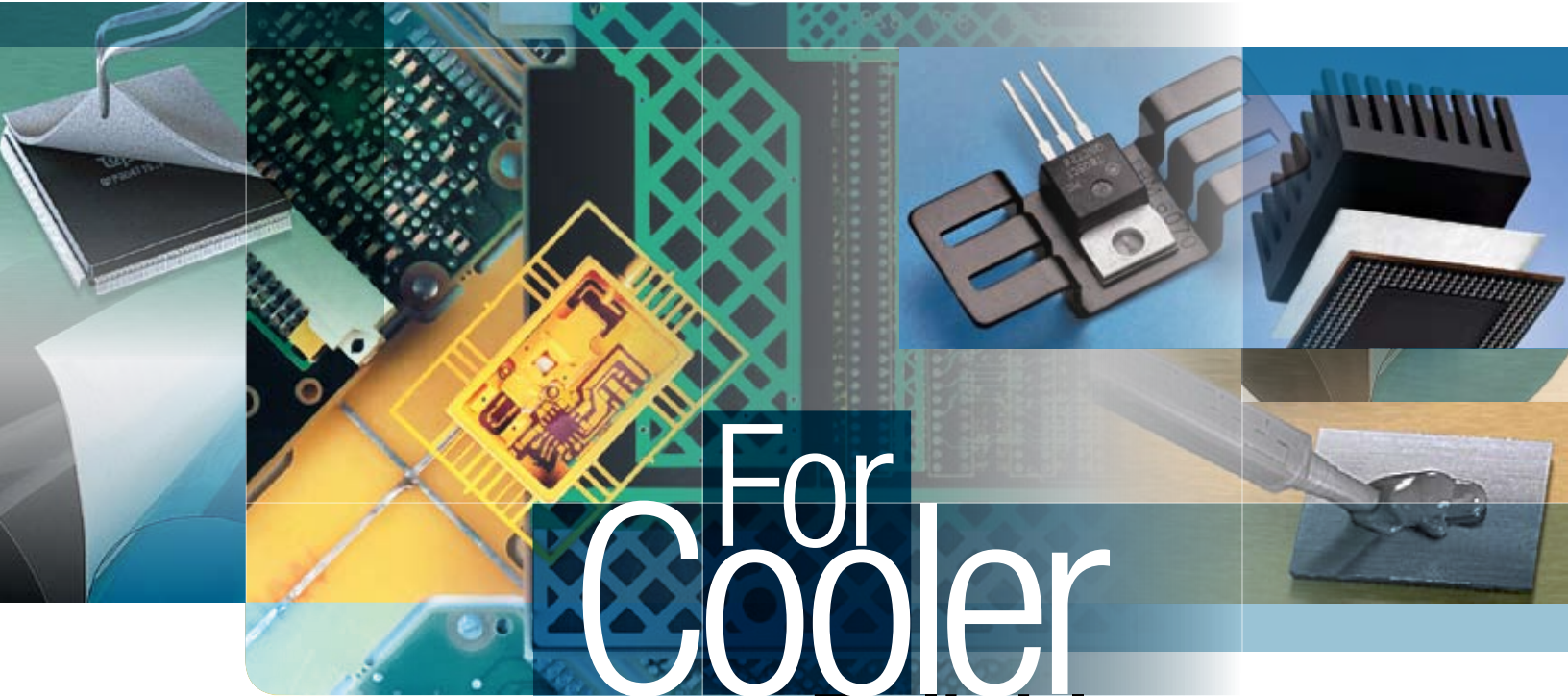


# 3M™ Thermally Conductive Acrylic Interface Pads 5589H and 5590H

For applications requiring gap filling and non-silicone construction



## For Cooler More Reliable Devices

**Used to transfer heat from hot surfaces or devices to cooler surface region of assembled devices.**

- Excellent conformability, gap filling property that provides excellent heat flow
- Excellent environmental durability
- Range of thermal performance to 100°C

Designed with filled acrylic polymer to be used for non-silicone applications.

Available in 240 mm × 20 meter rolls for improved converting processing.

Lower cost solution than Silicone Thermal Interface Pads.



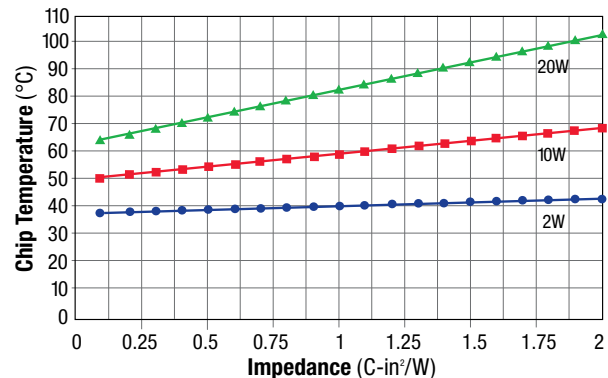
## Selection Guide

Product	Description				Adhesion/Shore 00 Softness	Thermal Performance		Dielectric Properties			Potential Operating Temperature Range*** (°C)
	Base Material Type	Product Thickness mil (mm)	Filler Type	Liner Type		Adhesion Characterization /// Shore 00 Testing based on TM 6mm Thickness	Conductivity (W/m-K 3M ASTM D5470 TM)	Impedance**** (°C-in <sup>2</sup> /W (°C-cm <sup>2</sup> /W)	Dielectric Strength KV/mm (Film version tested)	Volume Resistivity (ohm/cm)	
5589H* Soft Pad	Filled Acrylic Polymer	40(1.0) 60(1.5)	Ceramic	PET	No added adhesive layer. Pad is tacky and conformable /// Asker C=16	2.0	1.33 (8.6) 1.67 (10.8)	21	3.4 X 10 <sup>12</sup>	UL VO	Short Term (Hours-Days): 110°C Long Term (Weeks-Months): 80°C
Note: *1) 3M Pad 5589H has a very low tack surface and a medium tack surface.											
5590H* Soft Pad	Filled Acrylic Polymer	20(0.5) 40(1.0) 60(1.5)	Ceramic	PET	No added adhesive layer. Pad is tacky and conformable /// Asker C=30	3.0	0.46 (3.0) 0.70 (4.5) 0.95 (6.1)	33	2.7 X 10 <sup>12</sup>	UL VO	Short Term (Hours-Days): 110°C Long Term (Weeks-Months): 80°C
Note: *1) 3M Pad 5590H has a very low tack surface and a medium tack surface.											
***End use application testing will determine final temperature range based on final design and other environmental conditions. Suggested Temperature range is based on a UL-746 Test Method or a 3M Test Method.											

## Application Note

If user needs to have pad adhesively held in place, 3M™ Adhesive Transfer Tape 9461P is a 1 mil high temperature acrylic transfer adhesive that bonds well to the 3M™ Thermally Conductive Acrylic Interface Pad and to many metal surfaces used for dissipating the heat.

## Effect of Thermal Interface Impedance and Device Power on Chip Temperature



**Important Notice:** Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use.

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 Issued: 9/09 6994 (HB)  
 60-5002-0428-8

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