

3M™ Hyper Soft Thermally Conductive Interface Pads 5519 and 5519S

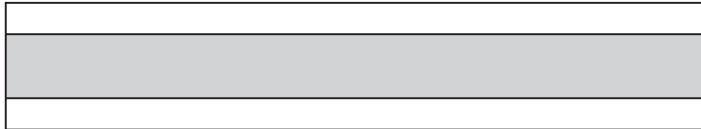
Product Description

3M™ Hyper Soft Thermally Conductive Interface Pads 5519 and 5519S are designed to provide a preferential heat transfer path between heat generating components and heat sinks, heat spreaders or other cooling devices. These products consist of a highly conformable slightly tacky silicone elastomer sheet filled with thermally conductive ceramic particles which provide special features listed as follows.

- Very high thermal conductivity and good electrical insulation properties.
- Good softness and conformability even to non-flat surfaces.
- “S” version incorporates a thin PEN (polyethylene-naphthalate) film carrier for improved handling.
- Slight tack allows pre-assembly. Good wettability for better thermal conductivity.

Construction

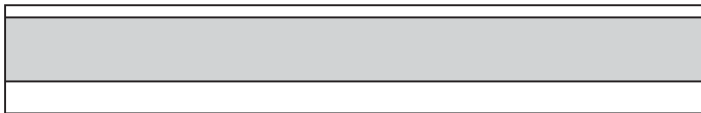
3M™ Hyper Soft Thermally Conductive Interface Pad 5519



Removable Film liner
 Thermally conductive silicone elastomer
 Removable Film liner

Standard thickness (excludes liner): 0.5 mm, 1.0 mm, 1.5 mm, 2.0 mm

3M™ Hyper Soft Thermally Conductive Interface Pad 5519S



Permanent PEN Film (0.009 mm) carrier
 Thermally conductive silicone elastomer
 Removable Film liner

Standard thickness (excludes liner): 0.5 mm, 1.0 mm, 1.5 mm, 2.0 mm



THE VITAL COMPONENT



3M™ Hyper Soft Thermally Conductive Interface Pads 5519 and 5519S

Typical Physical Properties

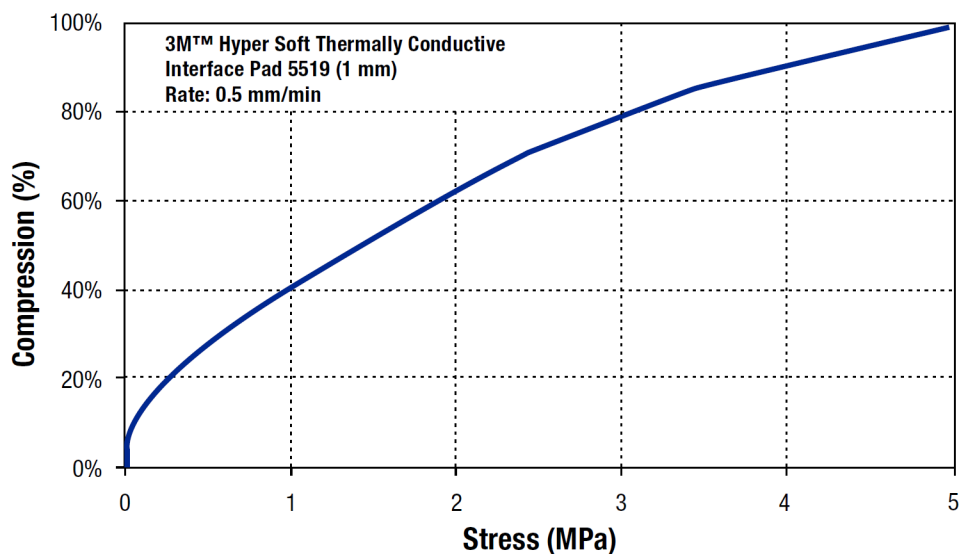
Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

3M™ Hyper Soft Thermally Conductive Interface Pads 5519 and 5519S		
Property	Method	Value
Thermal Conductivity (W/mK) ^{Note 2}	ASTM D5470	4.9
Flammability	UL 94	V0
Density (g/cm ³ , @ 25°C)	–	3.1
Hardness	Shore 00 ^{Note 1}	5519 @ 70 5519S @ 75
Volume Resistivity (Ω-cm)	ASTM D257	1.7 x 10 ¹⁴
Dielectric Strength (kV/mm)	ASTM D149	1.1
Dielectric Constant	ASTM D150	19.5 (1-100 kHz)

Notes:

- 1) Shore 00 Test Method based on a 6mm thick sample. Results will vary for different thickness samples.
- 2) Thermal conductivity can vary with test method and/or equipment used for testing at different test sites.

Compression vs. Stress



Environmental Aging Data

Heat resistance of 1.0 mm 3M™ Hyper Soft Thermally Conductive Interface Pad 5519

Duration (hrs)	Initial	500	1000	3000
Thermal Conductivity (W/mK)	4.9	4.9	4.9	4.9
Hardness (Shore 00)	69	70	70	70
Appearance	–	No effect	No effect	No effect

Aged at 130°C in high temperature chamber.

Note: Thermal Conductivity for aging tested using the QTM-500 Hot Wire Test Method. Values can differ from an ASTM-D5470 TM due to TM differences.



3M™ Hyper Soft Thermally Conductive Interface Pads 5519 and 5519S

Shelf Life

Product shelf life is 24 months from date of manufacture when stored at room temperature conditions (23-25°C & 50% RH) and in the products original packaging.

Certification/Recognition

MSDS: 3M has not prepared a MSDS for these products which are subject to the MSDS requirements of the Occupational Safety and Health Administration's Hazard Communication Standard, 29 C.F.R. 1910.1200(b)(6)(v). When used under reasonable conditions or in accordance with the 3M directions for use, these products should not present a health and safety hazard. However, use or processing of these products in a manner not in accordance with the directions for use may affect their performance and present potential health and safety hazards.

TSCA: These products are defined as an article under the Toxic Substances Control Act and therefore, are exempt from inventory listing requirements.

RoHs Complaint/REACH Compliant: These products comply with the European Union's "Restriction of Hazardous Substances" (RoHs) initiative and with European REACH regulations 2002/95/EC and 2005/618/EC.

For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-866-599-4227. Address correspondence to: 3M, Electronics Markets Materials Division, 3M Center, Building 225-3S-06, St. Paul, MN 55144-1000. Our fax number is 651-778-4244 or 1-877-369-2923. In Canada, phone: 1-800-364-3577. In Puerto Rico, phone: 1-787-750-3000. In Mexico, phone: 52-70-04-00.

Important Notice

All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. 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. Any statements related to the product which are not contained in 3M's current publications, or any contrary statements contained on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.

Warranty; Limited Remedy; Limited Liability.

This product will be free from defects in material and manufacture at the time of purchase. **3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. **Except where prohibited by law, 3M will not be liable for any indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.**



Electronics Markets Materials Division

3M Center, Building 225-3S-06
St. Paul, MN 55144-1000
1-866-599-4227 phone
651-778-4244 fax
www.3M.com/electronics

3M is a trademark of 3M Company.
Please recycle. Printed in U.S.A.
© 3M 2010. All rights reserved.
60-5002-0335-5

