

3M™ Thermally Conductive Acrylic Interface Pad 5571N and 5571DL

Product Description

3M™ Thermally Conductive Acrylic Interface Pad 5571N and 5571DL are designated to provide a preferential heat transfer path between heat generating components like Integrated Circuit Chip (IC) or electric vehicles (EV) and heat spreaders as aluminum heat sink. 3M™ Thermally Conductive Acrylic Interface Pad 5571N and 5571DL consist of a highly conformable slightly tacky acrylic elastomeric sheet filled with conductive ceramic particles which provides special features listed as follows;

Key Features

- Good softness
- Highly conformability even to non-flat IC surfaces and automotive batteries
- Highly thermally conductive while being electrically insulating
- Slight tack allows easy pre-assembly. Good wettability for better thermal conductivity
- No siloxane gas/ oil bleeding, which can cause electric connection failure.
- Good flame retardancy, UL94 V2 rated, File # E239181

Product Construction/Material Description

PET liner
Thermally conductive conformable layer
PET liner

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

3M™ Thermally Conductive Acrylic Interface Pad 5571N and 5571DL	
Property	Value
Color	White
Base resin	Acrylic
Pad Thickness	0.5mm
Primary Filler Type	Ceramic
Product Liner	PET Film 5571N: Single Liner 5571DL: Double Liner
Roll Length	Standard: 33 MT Custom size can be supplied by user requests.

Applications

- IC Packaging Heat Conduction
- Heat Sink
- COF Chip Heat Conduction
- LED Board TIM
- HD TV Address IC Chip and Scan Module Board
- General Gap Filling in Electronic Device

Mechanical fastening such as clamp, bracket, and screw can be used in parallel with this thermal conductive pad.

Application Techniques

- To obtain optimum thermal conductivity, the wetting surfaces must be maximized. For better contact, clean, dry and well unified surface condition is recommended. Typical surface cleaning solvents are isopropyl alcohol and water (rubbing alcohol) or heptane. Note: Be sure to follow manufacturer's safety precautions and directions for use when using solvents.
- Ideal application temperature range is from 15°C to 40°C. Initial application to surfaces at temperatures below 10°C is not recommended because the pad becomes too firm to be wetted readily. However, once properly applied, low temperature holding is generally satisfactory

Typical Physical Properties and Performance Characteristics

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

3M™ Thermally Conductive Acrylic Interface Pad 5571N and 5571DL		
Property	Method	Typical Value
Thickness (mm)	-	0.5
Thermal conductivity (W/m-K) ^b	ASTM C1113	2.0
Thermal conductivity (W/m-K)	ASTM D5470	1.5
Hardness (Shore 00)	ASTM D2240	70
Density (grams/cm ³)	ASTM D6111	1.85
Flammability	UL94	V-2
Dielectric Strength (kV/mm)	ASTM D149	13
Volume Resistivity (Ω-cm)	ASTM D257	3.3 x 10 ¹²

^a Methods listed as ASTM are tested in accordance with the ASTM method noted

^b Thermal Conductivity Test Method:

- 2.0W/m-K in XY direction per Hot wire plane Test method

Heat Resistance

3M™ Thermally Conductive Acrylic Interface Pad 5571N and 5571DL				
Duration (hrs)	Initial	1000	2000	5000
Thermal Conductivity (W/m-K)	2.0	2.0	2.0	2.0
Hardness (Shore 00)	69	70	70	70
Appearance	-	No effect	No effect	No effect

*Note 1: Aged by dwelling at 110°C high temperature chamber.

*Note 2: The end use customer application, design & verification testing will determine the final in use effective temperature range based on each application's environmental conditions.



Storage and Shelf Life

The shelf life of 3M™ Thermally Conductive Acrylic Interface Pad 5571N and 5571DL is 12 months from the date of manufacture when stored in the original packaging materials and stored at 21°C (70°F) and 50% relative humidity.

Certificate of Analysis (COA)

The 3M Certificate of Analysis (COA) for this product is established when the product is commercially available from 3M. The commercially available product will have a COA specification established. The COA contains the 3M specifications and test methods for the products performance limits that the product will be supplied against. The 3M product is supplied to 3M COA test specifications and the COA test methods. Contact your local 3M representative for this product's COA.

This technical data sheet may contain preliminary data and may not match the COA specification limits and/or test methods that may be used for COA purposes.

Final product specifications and testing methods will be outlined in the products Certificate of Analysis (COA) that is shipped with the commercialized product.

Safety Data Sheet: Consult Safety Data Sheet before use.

Regulatory: For regulatory information about this product, contact your 3M representative.

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