

# 3M™ Thermally Conductive Interface Tape TM-670SA

## Product Description

3M™ Thermally Conductive Interface Tape TM-670SA is a 0.25 mm pressure sensitive adhesive tape filled with thermally conductive ceramic particles.

## Features and Benefits

- High/low adhesion construction (face side or non-liner side is lower adhesion) for good reworkability
- Halogen free\*
- Good thermal conductivity (>0.5 W/m-K)
- Fine electrical insulation
- Low thermal impedance
- Vibration damping
- Good and reliable adhesion performance against Al and SUS

## Product Uses

This product can be used for heat management of electronic devices for general heat dissipation devices and other bonding/joining parts in electronic products.

## Construction

3M™ Thermally Conductive Interface Tape TM-670SA	
Adhesive Type	Soft Acrylic Adhesive
Tape Thickness (mm)	0.25
Tape Color	White (slightly grey dotted)
Filler Type	Ceramic Particle
Product Liner	130 µm Paper Liner with red 3M Logo
Roll Length	Standard: 33MT Custom size can be supplied by request.

\*Halogen Free is defined as having maximum 900 ppm bromine, maximum 900 ppm chlorine, and/or maximum 1500 ppm total bromine and chlorine, per IEC 61249-2-21.



## Applications

- Battery Thermal Management
- Heatsink-Thermal Interface Attachment
- Heatsink-Thermal Interface Material
- LED Lighting Thermal Management
- Thermal Interface-Damping-Cushioning

Mechanical fastening such as clamp, bracket, screw can be used in parallel with Thermally Conductive Interface Tape TM-670SA.

## 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 Interface Tape TM-670SA	
<b>ASTM D-330</b> <b>90° Peel Adhesion</b> <b>Crosshead speed: 508mm/min.</b> <b>Liner side</b> <b>72 hr dwell at 70°C</b> <b>Non-liner side</b> <b>SUS 304 test substrate</b>	<b>Unit: grams/12.7mm width</b>  >3500 >1000
<b>ASTM D-1002</b> <b>Dynamic Shear</b> <b>Initial Strength</b> <b>Crosshead speed: 305mm/min.</b> <b>(SUS to SUS)</b>	<b>Unit: Kg/6.25cm<sup>2</sup></b> >38
<b>Foam Density (grams/cm<sup>3</sup>)</b>	1.4 (±0.09)
<b>Thermal Conductivity</b> <b>(W/m-K on plane direction)</b>	0.60

## Application Notes

- Bond strength is dependent upon the amount of adhesive to surface contact developed. Firm application pressure helps to develop better adhesive contact and improve bonding strength.
- To obtain optimum adhesion, the bonding surfaces must be clean, dry and well unified. Typical surface cleaning solvents are isopropyl alcohol and water (rubbing alcohol) or heptane. **Note:** Be sure to follow the manufacturer’s safety precautions and directions for use when using solvents.
- Ideal tape application temperature range is 21°C to 38°C (70°F to 100°F). Initial tape application to surfaces at temperatures below 10°C (50°F) is not recommended because the adhesive becomes too firm to adhere readily. However, once properly applied, low temperature holding is generally satisfactory.

## Storage and Shelf Life

The shelf life of 3M™ Thermally Conductive Interface Tapes TM-670SA is 12 months from the date of manufacture when stored in original cartons at 21°C (70°F) and 50% relative humidity.

## Regulatory

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

## Important Note

Please consult Federal, State, and Local Regulations. State Volatile Organic Compound (VOC) regulations may prohibit the use of certain alcohol solutions or solvents. You should check with your state environmental authorities to determine whether use of a solution or solvent is restricted or prohibited.

## Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

## Product Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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