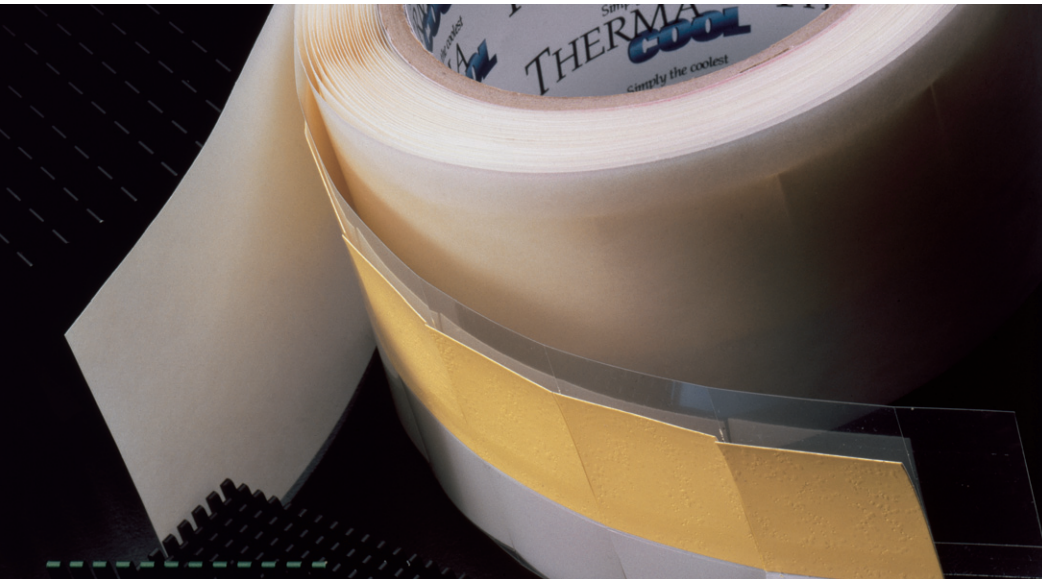


# ThermaCool™ Thermal Management Materials



The ThermaCool™ family of phase change materials provide solutions to challenging thermal management problems. These products can be used in place of messy thermal greases, they provide excellent thermal coupling between components and heat sinks and can alleviate all the problems associated with thermal greases such as migration, pump-out, and uneven bondline. The thermal impedance of ThermaCool phase change products is similar to thermal grease. The phase change materials are designed to provide either bondline adhesion or easy release for better rework ability.

## Products and Description

- **C1055 & C1060:** Thermally conductive products designed to exhibit exceptional viscoelastic (creep and flow) properties. Effects of viscosity and elasticity determine conformability. Minimal force is required for this material to flow and achieve total wet-out. As temperature decreases the material does not stiffen. The modulus remains uniform between 0°C and 130°C. These unique viscoelastic properties of the C1055, combined with the inherent low thermal resistance, insure minimal contact resistance and a highly effective path for heat dissipation.
- **C1095 x01:** A thermally conductive polymeric interface material designed specifically for application requiring a thermal interface material (TIM) that will not create any bond line adhesion between a heat sink or other heat dissipating device and the metal case surface of a microprocessor (MPU) or other heat generating device.
- **ThermaCool C1100:** family of high performance phase changing compounds which self adhere to the heat sink at room temperature. This adhesive quality also creates a

(continued)

Simply the coolest  
**THERMA  
COOL™**

## Phase Change Tapes

### Typical Applications

- Creates high performance thermal coupling between flip chip or heat spreader to heat sink
- Materials can be provided in a non-bonding formulation to prevent any adhesion between microprocessor and heat sink, while still having excellent thermal performance
- Replacing messy thermal grease in rapid microelectronic assembly

### Key Product Properties

- User friendly replacement for thermal grease
- Lowest thermal impedance in ThermaCool product family
- Optimized for best thermal coupling between microprocessor and the heat sink
- Provides ease of component assembly and allows ease in rapid re-work
- Can be supplied in a timely manner in a number of formats to meet a wide range of performance applications.

conformable interface between the sink and MPU and dramatically improving heat transfer. Their thermal performance provides similar performance to thermal greases at high power densities.

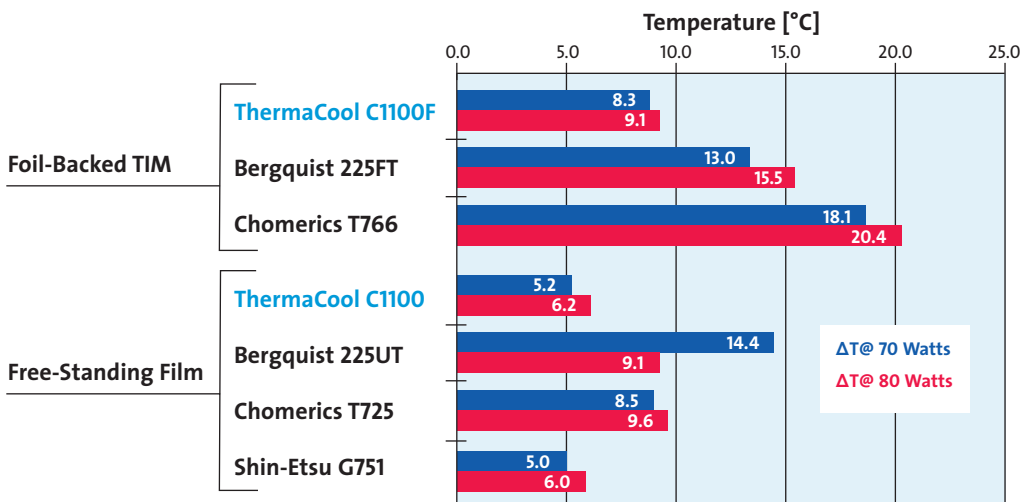
- **1100** — Phase change product with phase change temperature beginning at 35°C.
- **1100 F** — Phase change product on aluminum foil to prevent permanent stiction between heat sink and microprocessor.

## Other Thermal Management Products

- **Gap Fillers**—Conductively filled silicone polymer sheets used to provide thermal management solutions where interface gaps are greater than 10 mils.
- **Thermally Conductive Fabrics**—Fabric reinforced silicone polymer sheets used to provide thermal management solutions where interface gaps are less than 15 mils.
- **Thermally Conductive Tapes**—Tape systems with thermally conductive adhesives and substrates that can either be electrically isolating/thermally conductive or only thermally conductive.

## Thermal Phase Change

Description	ThermaCool	Chomerics	Bergquist	Fujipoly
High Power MPU	C1055, C1100	Thermflow T725	Hi-Flow 225U, 225UT, 625	T-PCM 900, T-PCM-HP105
High Power MPU with Al Foil one side	C1100F	Thermflow T766	Hi-Flow 225FT, 225FAC	N/A
Reinforced	C1060	Thermflow T443	Hi-Flow 115-AC, 200G	N/A
Non Stick one side	C1095-X01	N/A	N/A	N/A



ThermaCool™ is a trademark.



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