

# 127-20 THERMAL INTERFACE MATERIAL DATA SHEET

## EXTREME PERFORMANCE PHASE CHANGE THERMAL COMPOUND

The **127-20 Series** is an advanced thermal interface material, formulated as a hybrid phase change material without diluents or solvents for optimal performance. This dispensable, screen-printable compound achieves ultra-low bond line thickness and unmatched thermal conductivity.

Engineered to resist pump-out, outgassing and phase separation, the **127-20 Series** eliminates concerns over silicone deposition on sensitive optics and electronics. It meets the demanding thermal and reliability needs of high-speed chipsets and graphic processors while remaining halogen-free and fully RoHS and REACH compliant.

With its stay-put viscosity, **The 127-20 Series** is ideal for precision application in the most complex assemblies. Experience thermal excellence with no tradeoffs in stability or safety - upgrade to our **127-20 Series** for your next-generation designs.

### FEATURES

- High thermal conductivity on par with metallic TIMs (20 W/m-K)
- Non-evaporative materials with minimal pump out
- Nonconducting & nonreactive for use on any alloy/metal
- Ultra-low BLT
- 2.5 Year shelf life

### APPLICATIONS

- Interface for semiconductors requiring low pressure or spring clamp mounting
- Thermal sensors, TEC modules, thermal wells
- IGBT's, LED
- Power Transistors, diodes, power resistors

### SIZE

Part Number: **127-20** (10cc Syringe)  
Other sizes available upon request



TYPICAL PROPERTY	RESULTS
Type	Silicone free, hybrid phase change paste
Special feature	Extreme thermal conductivity. Zero pump out. No-solvent
Color	Light grey
Viscosity, cps	280000
Specific gravity	2.5
Operating temperature range °C	-50°C to 200°C
Shelf life @25C	2.5 Years
Bondline Thickness	4-10 microns (Preferred) 100 microns maximum
<b>THERMAL</b>	
Thermal conductivity (W/m-K)	12 and 20
Recommended maximum temperature	130°C
Phase change and cure temperature	50°C (122°F)
<b>ELECTRICAL</b>	
Breakdown voltage (VAC/mil)	200
Outgassing, % TML	0.15% TML
Volume resistivity	10 <sup>14</sup> ohm-cm

**Disclaimer:** All statements, technical information, and recommendations related to Wakefield Thermal products are based on information believed to be reliable, but 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 must assume all risks and liability associated with such use. Wakefield Thermal will not be liable for any indirect, special, incidental or consequential loss or damage arising from this product, regardless of legal theory asserted.

**Installation Instructions:** 1. Thoroughly clean and dry the mating surfaces with Isopropyl alcohol. 2. Apply a thin layer of thermal compound to achieve 4-10 micron thickness. 3. Join surfaces while gently rotating to spread the compound evenly. 4. Apply continuous pressure of at least 30 kPa to fully mate surfaces without separating the two surfaces. 5. Thermal cycle above 50°C to fully cure and activate the phase change properties.

**Safety Information:** Should be used with caution. Avoid contact with eyes and skin by wearing gloves and safety goggles. Do not ingest. Read all safety data sheets and instructions thoroughly prior to use.