



HYBRID THERMAL/EMI ABSORBER

CoolZorb T 500 is a thin version hybrid absorber, thermal management material that is used for both heat transfer and EMI mitigation.

CoolZorb T 500 product is used like a traditional thermal interface material between heat source such as an IC and heat sink or other heat transfer device or metal chassis and also functions to suppress unwanted energy coupling, resonances or surface currents causing board level EMI issues.

FEATURES AND BENEFITS

- Designed specifically for thin applications less than 1mm
- Silicone gel binder imparts inherent tack typical of thermal gap fillers
- Filler particles impart good thermal conductivity and excellent EMI suppression in the microwave frequency range
- CoolZorb T 500 passes UL 94 V0 requirements
- Does not require adhesive when used like a traditional thermal interface material

VALUE

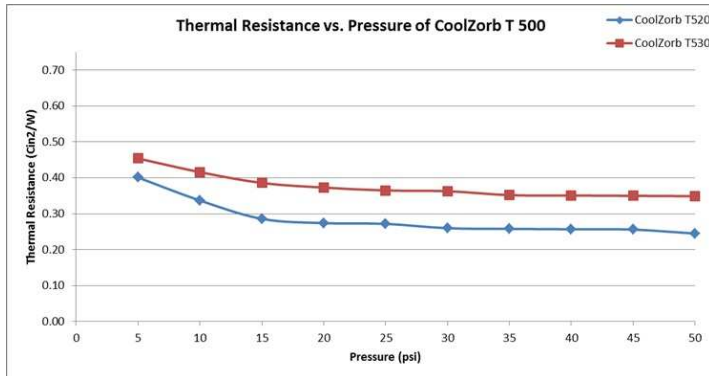
- Lower BOM and Design cost - Reduces EMI issues due to capacitive coupling of heat sinks
- Lower BOM and Design cost - Dual function improves design, assembly, cost of ownership
- Customer Perceived Value - Improved reliability performance of electronics
 - Better signal integrity due to reduction of EMI
 - Consistent performance of electronics due to temperature stability and low outgassing properties of product
- Time to Market - Improved EMC performance / lower cost to meet compliance
- Corporate Social Responsibility - Environmentally friendly solution that meets regulatory requirements including RoHS and REACH directives

| TYPICAL PROPERTIES | DATA | TEST METHOD |
|--|---------------------------------|-------------------|
| Color | Dark gray | Visual |
| Thermal conductivity | 4.0W/m-K | ASTM D5470 |
| Density | 3.4 g/cc | ASTM D792 |
| Hardness (3 sec) | 75 Shore 00 | ASTM D2240 |
| Tensile strength | 36.2 psi | ASTM D638 |
| Temperature Range | -40°C to 175°C | NA |
| UL Flammability | UL 94 V-0 | UL |
| Volume resistivity | 4.4 x 10 ¹³ Ω*cm | ASTM D257 |
| Outgassing (TML) | 0.34% | ASTM E595-07 |
| Outgassing (CVCM) | 0.03% | ASTM E595-07 |
| Coefficient of Thermal Expansion (CTE) | pending μm/mC | IPC-TM-650 2.4.41 |
| EMI Attenuation @ 10 GHz | 23.9 dB/cm | |
| EMI Attenuation @ 18 GHz | 25.5 dB/cm | |
| Standard Thickness range | 0.020" - 0.030" (0.5-0.75mm) | |
| Thickness Tolerance | +/- 10% of nominal | |

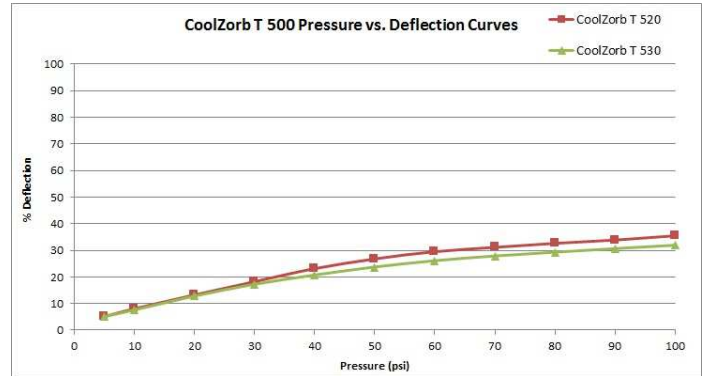


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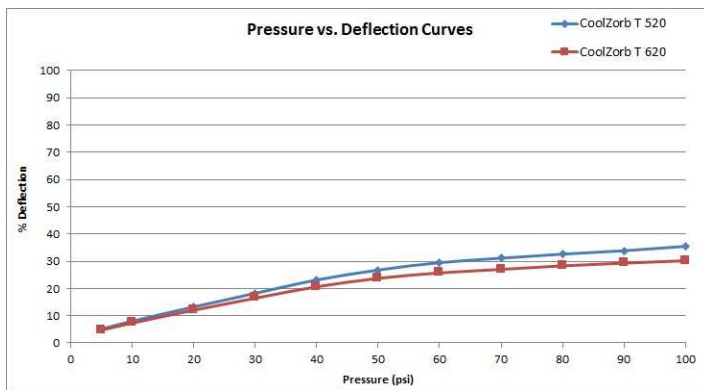
CoolZorb T 500 Thermal resistance at 50C (ASTM D5470)



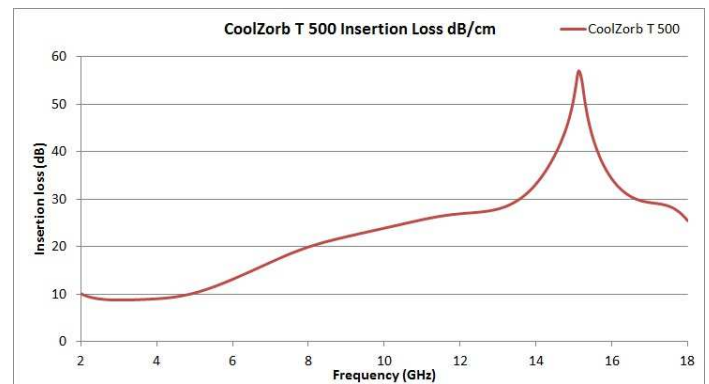
CoolZorb T 500 Percent Deflection (ASTM D575)



CoolZorb Deflection Comparison (ASTM D575)



CoolZorb Attenuation (dB/cm)



AVAILABILITY

- Standard sheet size is 18" X 18"
- Thickness availability range is 0.020" - 0.030" (0.5mm- 0.75mm)
- Common standards for thickness are 0.020" and 0.030" thickness (0.5mm and 0.75mm)
- No charge samples are available in 4" X 4" size for each of the above common thicknesses

PART NUMBER SYSTEM

- CoolZorb T 500 series absorber sheets (18"X18") use the following designation when ordering: A17554-XXX where XXX is thickness of absorber in thousands of an inch
- CoolZorb T 500 series no charge absorber samples (4"X4") use the following designation when ordering: CZ500-XXXS where XXX is thickness of absorber in thousands of an inch
- Example: A17554-020 = CoolZorb T 500, 0.020"X18"X18" sheet size; Example: CZ500-030S = CoolZorb T 500, 0.030"X4"X4" no charge sample size

RFP-DS-COOLZORB T 500 010518

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