

Hybrid Thermal Transfer/EMI Absorber

CoolZorb 400 Series



HYBRID THERMAL/EMI ABSORBER

CoolZorb 400 is a hybrid absorber/thermal management material that is used for EMI mitigation. 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. CoolZorb 400 also functions to suppress unwanted energy coupling, resonances or surface currents causing board level EMI issues.

FEATURES AND BENEFITS

- Good thermal conductivity with great EMI suppression within 1-18GHz
- Inherent surface tack typical of standard thermal gap fillers
- Compliant with minimal component stress during assembly
- Meets UL 94 V-0 flame requirements

VALUE

- Performance advantage comes from dual functional properties of elevated thermal conductivity and EMI reduction
- 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
- Improved EMC performance and resultant lower cost to meet compliance requirements
- Environmentally friendly solution that meets regulatory requirements including RoHS and REACH

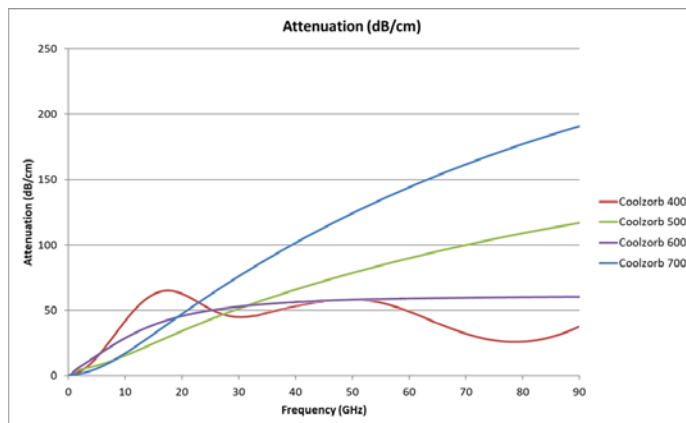
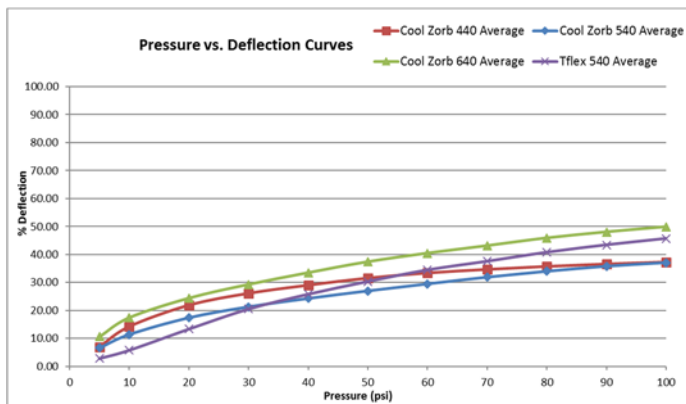
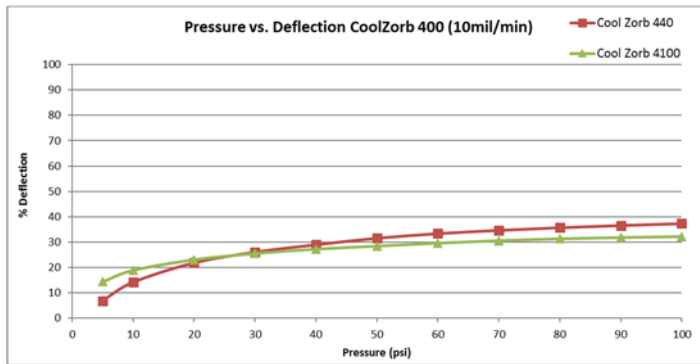
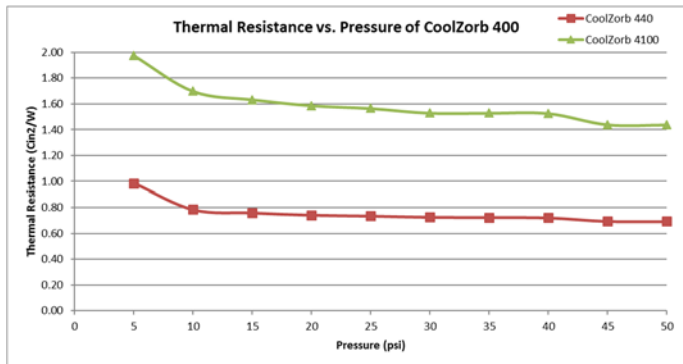
TYPICAL PROPERTIES	TYPICAL DATA	TEST METHOD
Color	Dark gray	Visual
Thermal conductivity	2.0W/m-K	ASTM D5470
Density	4.6 g/cc	ASTM D792
Hardness	60 Shore 00	ASTM D2240
Tensile strength	20.4 psi	ASTM D638
Temperature Range	-40°C to 175°C	NA
UL Flammability	94 V0	UL
Volume resistivity	$1.6 \times 10^{14} \Omega$	ASTM D257
Outgassing (TML)	0.34%	ASTM E595-07
Outgassing (CVCM)	0.04%	ASTM E595-07
Coefficient of Thermal Expansion (CTE)	139.4 $\mu\text{m/m}^\circ\text{C}$	IPC-TM-650 2.4.41
Standard Thickness range	.040"-.200" (1.0-5.1mm)	
Thickness Tolerance	+/- 10%	

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AVAILABILITY

- Standard sheet size is 18" X 18"
- Thickness availability range is 0.040" - 0.200" (1.0mm- 5.1mm)
- Common standards for thickness are 0.040", 0.060" and 0.080" (1.0, 1.5 and 2.0mm)
- No charge samples are available in 4" X 4" size for each of the above common thicknesses

PART NUMBER SYSTEM

- PRODUCTION sheets (18"x18") use the following designation when ordering: A17553-XXX where XXX is thickness of absorber in thousands of an inch, example A17533-040 for 0.040"x18"x18"
- SAMPLE sizes of 0.040", 0.060" and 0.080" thicknesses are available without charge. 4" x 4" pieces are ordered with the part numbers CZ400-040S, CZ400-060S and CZ400-080S. Other sizes may be available with NRE charge.

RFP-DS-COOLZORB 400 050119

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Laird Performance Materials:

[A17553-080](#) [A17553-100](#)