Laird
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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

- Designed using silicone gel binder that imparts inherent tack typical of standard thermal gap fillers
- Filler particle composition imparts both good thermal conductivity and EMI suppression in the microwave frequency range with best attenuation performance at or above 5 GHz.
- Soft, compliant pad which exerts minimal stress on mating components during assembly while providing good thermal transfer properties due to low interfacial resistance.
- CoolZorb 400 passes UL94V0 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	DATA	TEST METHOD
Color	Dark gray	Visual
Thermal conductivity	2.0W/m-K	ASTM D5470
Density	4.5 g/cc	ASTM D792
Hardness	60 Shore 00 Typical	ASTM D2240
Tensile strength	60 psi	ASTM D638
Temperature Range	-40°C to 175°C	NA
UL Flammability	UL94 V-0	UL
Volume resistivity	1.4×10^{14} Ω	ASTM D257
Outgassing (TML)	0.26%	ASTM E595-07
Outgassing (CVCM)	0.04%	ASTM E595-07
Coefficient of Thermal Expansion (CTE)	165 µm/°C	IPC-TM-650 2.4.41
Standard Thickness range	.020”-.200” (0.5-5.1mm)	
Thickness Tolerance	+/- 10%	

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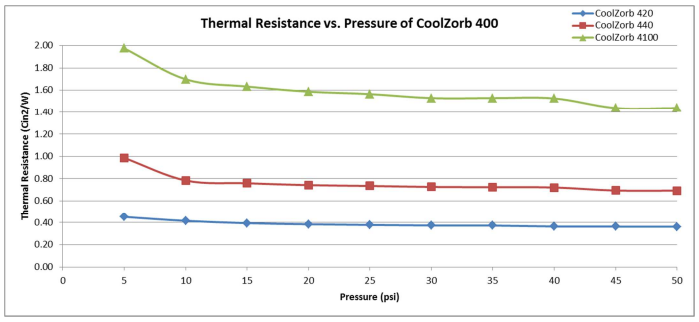
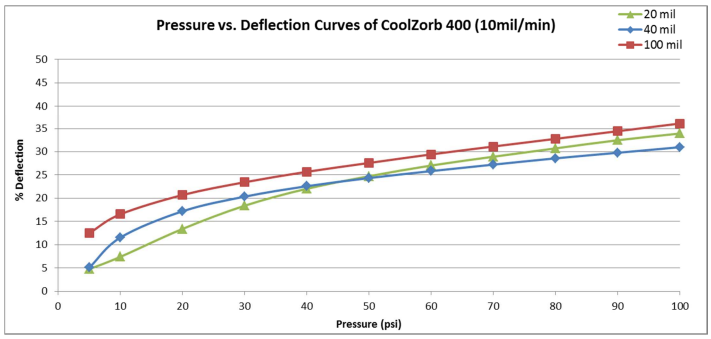
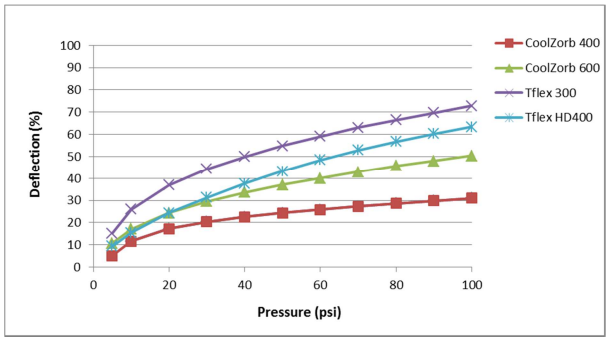
CoolZorb 400 Thermal resistance at 50C (ASTM D5470)



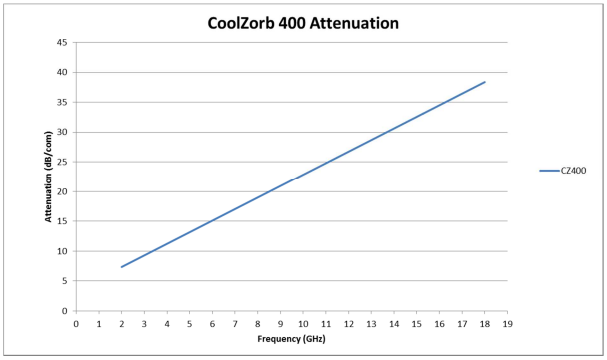
CoolZorb 400 Percent Deflection (ASTM D575)



CoolZorb Deflection Comparison (ASTM D575)



CoolZorb Attenuation (dB/cm)



AVAILABILITY

- Standard sheet size is 18” X 18”
- Thickness availability range is .020” - .200” (0.5mm- 5.1mm)
- Common standards for thickness are .020”, .040” and .100” thickness (0.5mm, 1.0mm and 2.5mm)
- No charge samples are available in 4” X 4” size for each of the above common thicknesses

PART NUMBER SYSTEM

- CoolZorb 400 series absorber sheets (18”X18”) use the following designation when ordering: CZ400-XXX where XXX is thickness of absorber in thousands of an inch
- CoolZorb 400 series no charge absorber samples (4”X4”) use the following designation when ordering: CZ400S-XXX where XXX is thickness of absorber in thousands of an inch
- Example: CZ400-020 = CoolZorb 400, .020”X18”X18” sheet size
- Example: CZ400S-040 = CoolZorb 400, .040”X4”X4” no charge sample size

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Laird Performance Materials:

A17553-020 A17553-060 A17553-125 A17553-040