

HYBRID THERMAL/EMI ABSORBER

CoolZorb HD500 is a High Deflection version of the CoolZorb 500 hybrid electromagnetic absorber and thermal interface material. The product is used like a traditional thermal interface material between a heat source such as an IC and a heat sink or other heat transfer device or metal chassis. CoolZorb HD500 also functions to suppress unwanted energy coupling, resonances or surface currents which cause board level EMI issues. The high deflection property reduces mechanical stresses of the application, specifically targeting next gen high performance IC to avoid cracks or pin breaks.

FEATURES AND BENEFITS

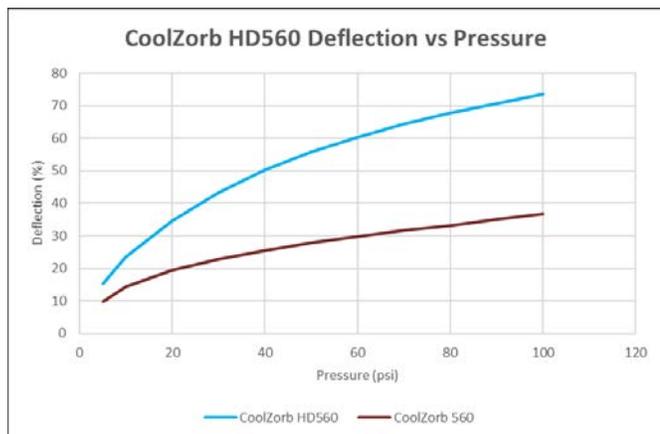
- High Deflection (twice the deflection as CoolZorb 500 for the same pressure)
- Inherent surface tack typical of standard thermal gap fillers
- Good thermal conductivity
- Good EMI suppression
- Meets flammability requirements (test pending)
- Meets environmental standards requirements (test pending)

VALUE

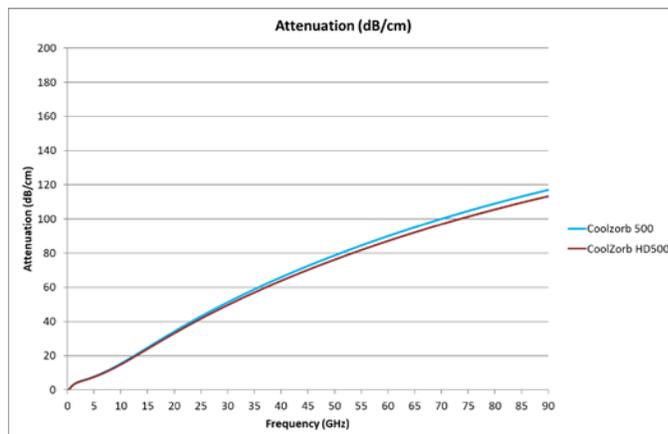
- Dual functional properties of thermal conductivity and EMI attenuation provide two in one solution for easier design and assembly and lower cost of ownership
- Ensures mechanical integrity for longer life product
- Improved reliability performance of electronics
- Environmentally friendly solution meets including RoHS and REACH

TYPICAL PROPERTIES	DATA	TEST METHOD
Color	Dark gray	Visual
Thermal conductivity	4 W/m-K	ASTM D5470
Density	3.39 g/cc	ASTM D792
Hardness (3 sec)	25.8 Shore 00	ASTM D2240
Temperature Range	-40°C to 175°C	NA
UL Flammability	UL 94 V-0 (pending)	UL
Volume resistivity	$8.8 \times 10^{13} \Omega \cdot \text{cm}$	ASTM D257
Outgassing (TML)	0.35%	ASTM E595-07
Outgassing (CVCM)	0.04%	ASTM E595-07
Coefficient of Thermal Expansion (CTE)	153 $\mu\text{m}/\text{mC}$	IPC-TM-650 2.4.41
EMI Attenuation @ 10 GHz	15.4 dB/cm	
EMI Attenuation @ 20 GHz	34.0 dB/cm	
Standard Thickness	0.040" to 0.200" (1.0mm to 5.1mm)	
Thickness Tolerance	+/- 10%	

CoolZorb HD500 Percent Deflection (ASTM D575)



CoolZorb HD500 Attenuation (dB/cm)



AVAILABILITY

- Standard sheet size is 9" X 9"
- Thickness availability range is 0.040" to 0.200" (1.0mm to 5.1mm)
- No charge samples are available in 4" X 4" size for each of the above common thicknesses

PART NUMBER SYSTEM

- PRODUCTION sheets (9"X9") use the following designation when ordering: A18036-060
- SAMPLE size of 0.060" thickness is available without charge. 4" x 4" pieces are ordered with the part numbers CZHD500-060S. Other sizes may be available with NRE charge.

MFS-DS-COOLZORB HD500 101019