



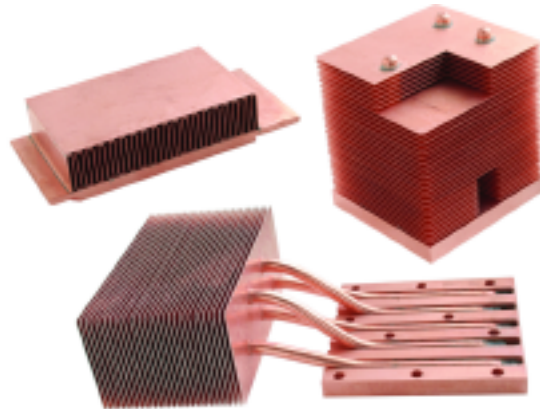
AAVID  
THERMALLOY

AavSHIELD<sup>3C</sup>  
Copper Tarnish Inhibitor

RoHS   
Compliant

## AavSHIELD<sup>3C</sup> COPPER FINISH

AavSHIELD<sup>3C</sup> is an RoHS compliant copper finish that provides resilient corrosion protection at a cost comparable to hexavalent chromium (Cr+6). Although copper is naturally corrosion resistant, it tarnishes quickly. AavSHIELD<sup>3C</sup> inhibits tarnish on critical heat sink surfaces to maintain peak thermal performance. AavSHIELD<sup>3C</sup> is an excellent alternative to expensive nickel plating in all but the harshest environments.



### CRITICAL APPLICATION NEED:

- *Tarnish Free Mounting Surface*
- *Long Term Corrosion Protection*
- *Electrical Continuity*
- *Aesthetics*
- *RoHS Compliant*

### APPLICATIONS:

Any copper component or assembly that requires tarnish and corrosion protection.

Examples:      CNC Machined Copper Heat sinks      Copper Heat Pipe Assemblies  
                    Copper Heat sink Assemblies              Copper Liquid Cold Plates

### ORDERING INFORMATION:

Specify AAVSHIELD3C finish on the drawing.

### AavSHIELD<sup>3C</sup> SOLUTION:

- *Tarnish and corrosion byproducts can protrude from mating surfaces creating a stand-off between the device cooled and the heat sink which increases interface resistance and degrades thermal performance. AavSHIELD<sup>3C</sup> protects the mounting surface from exposure during transit and storage providing parts ready for mounting.*
- *Aavid Thermalloy has conducted independent testing at elevated temperature and humidity using a chamber in accordance with ASTM D 1748 which revealed no measurable corrosion byproducts after an equivalent 3.3 years in 95% relative humidity and 38°C environment. (Results based on Arrhenius Acceleration using activation energy of 0.9eV for copper corrosion.)*
- *AavSHIELD<sup>3C</sup> disperses a thin coating allowing for effective grounding. Independent tests per Mil-C-5541 6.1.2.1 showed the electrical resistance to be less than 2200 microhms after the above artificial aging.*
- *AavSHIELD<sup>3C</sup> maintains the natural copper color that customers expect while uncoated copper rapidly tarnishes to a dull red brown.*
- *AavSHIELD<sup>3C</sup> meets the European Union (EU) Directive, "Restriction on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment."*

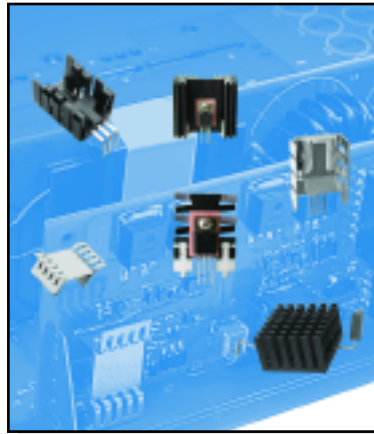
FOR MORE INFORMATION, VISIT OUR WEB SITE: [WWW.AAVIDTHERMALLOY.COM](http://WWW.AAVIDTHERMALLOY.COM)  
TEL: (603) 224-9988



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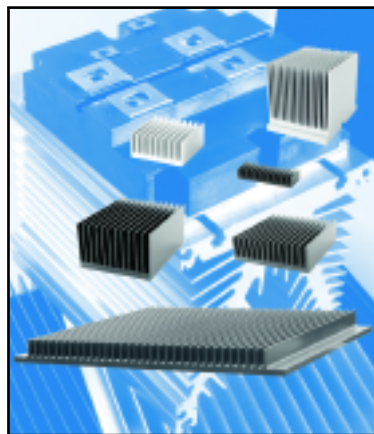
**RoHS** ✓  
**Compliant**



**Standard Board Level Heat Sinks**



**The Max Clip System™**



**Extrusion Selection Guide**



**Capability Brochure**

Aavid Thermalloy, LLC is committed to being a responsible global citizen through continual efforts to operate in ways that contribute to a cleaner, healthier environment for all. We strongly believe that good environmental practice is good business practice. Our customers, company, stakeholders, and community all benefit from this positive, proactive, and cost effective approach.

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