



**ZeroClearance® Shields** are an advanced alternative to traditional thermal and acoustical metal shields. ZeroClearance® shields are comprised of high-performance aluminum sheeting (various thicknesses available), a mechanically needle-punched fiber composite spacer and a unique, high-temperature pressure-sensitive adhesive on the back for attachment.

### Applications:

- Underbody above exhaust system
- HVAC thermal protection
- Fuel tank thermal protection
- Air bag module thermal protection

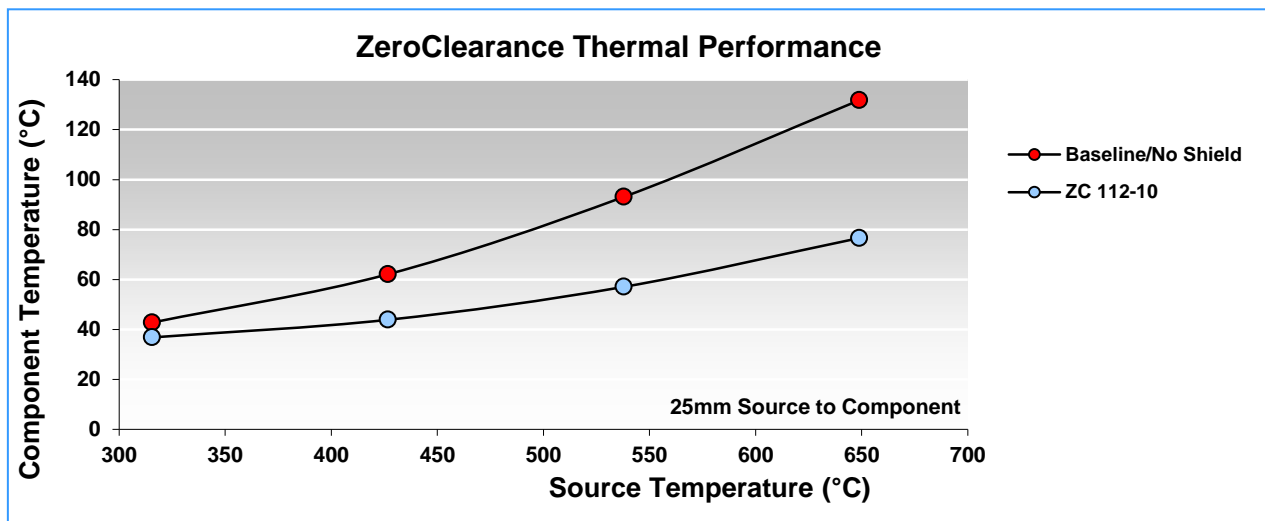
### Features and Advantages:

- Low tooling costs
- Short lead-times for production
- Approved at several major OEM's
- Ideally suited for applications where little space exists for traditional stampings
- Acoustical sound deadening benefits without the squeak and rattle issues of stampings
- Withstands 246°C (475°F) oven test for 30 hours with no failure
- Alternative adhesives available depending upon surfaces to be adhered

### Typical Properties:

<b>Material Type:</b>	Polyester & Fiberglass core material
<b>Core Thickness:</b>	3mm (0.125 inch) - (ZC112)
<b>Foil Thickness:</b> (.25mm passes gravelometer)	0.05mm (0.002") - (ZC112-02) 0.25mm (0.010") - (ZC112-10)
<b>Weight:</b>	915-1400 g/m <sup>2</sup> (3-4.5 oz/ft <sup>2</sup> )
<b>Moisture Absorption:</b>	0.3% (Pass)
<b>Thermal Conductivity</b> <b>(k-Value)</b>	24°C: 0.036 W/m <sup>o</sup> K 93°C: 0.043 W/m <sup>o</sup> K
<b>Adhesion To E-Coated Steel</b>	22.1 N/cm after 24hr Dwell (ZC112-10)
<b>Tensile Strength</b>	526 N/cm <sup>2</sup>
<b>Tear Resistance</b>	33 N/cm

\*All values Approximate



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