

## Thermal & Acoustical Shield

### Description:

This material is a shield that serves as an advanced alternative to traditional thermal and acoustical metal shields. It is comprised of high-performance aluminum sheeting, a mechanically needle-punched fiber composite spacer, and a unique, high-temperature pressure-sensitive adhesive on the back for attachment to low surface energy composites and CARC paint. 180248 can be used in a variety of applications such as underbody above exhaust system, HVAC thermal protection, fuel tank thermal protection and underhood component protection.

### Advantages:

- Acoustical sound deadening benefits
- Withstands 246°C (475°F) oven test for 30 hours with no failure
- IR signature masking

### Typical Physical Properties

Specifications	Test Method	Typical Results	Pass/Fail
Material Type		Polyester needled composite with laminated aluminum foil and PSA	
Core Thickness		6.4 mm ± 2 mm	
Foil Thickness		.25mm	
Moisture Absorption	WSS-M99P32-D6, Sect. 3.7.6	0.2%	PASS
Thermal Conductivity, (k-Value)	ASTM C518	25°C: 0.036 W/m/°K 45°C: 0.038 W/m/°K 65°C: 0.040 W/m/°K	PASS
Tensile Strength	ASTM D5034	MD: 439 N/cm <sup>2</sup> CD: 522 N/cm <sup>2</sup>	PASS
Tear Resistance	ISO 9073-4	MD: 785 N CD: 444 N	PASS
Peel Adhesion <i>HDPE</i> <i>PP</i> <i>SMC</i>	ASTM D3330, Method F 24 hr dwell @ 21°C & 50% RH	16.3 N/cm 14.8 N/cm 14.3 N/cm	PASS

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