



# ALPHA

engineered composites

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## AlphaShield 1002-HT

### DESCRIPTION

AlphaShield 1002-HT has been specifically designed as an acoustical heat shield material. The product is a four-ply lamination of aluminum foil and tri-directional fiberglass scrim with a needle punched polyester nonwoven to absorb sound and heat. A one-side high temperature pressure sensitive adhesive insures an easy to mount product.

### CERTIFICATIONS

Meets Ford Engineering Material Specification WSS-M99P32-D6 (Design Verification Testing).

### COMPOSITION

#### Component

#### Description

|                  |                                     |
|------------------|-------------------------------------|
| Foil             | 0.002" (51 micron) Aluminum         |
| Reinforcement    | Tri-directional Fiberglass Scrim    |
| Nonwoven Core    | Needle Punch Polyester              |
| Adhesive Backing | High Temperature Pressure Sensitive |

### PROPERTY DATA

| <u>CHARACTERISTIC</u> | <u>METHOD</u> | <u>TYPICAL VALUES</u>                         |                        |
|-----------------------|---------------|---|------------------------|
|                       |               | <u>ENGLISH</u>                                | <u>METRIC</u>          |
| WEIGHT                | ASTM-D-3776   | 17.5 oz/sy                                    | 593 g/m <sup>2</sup>   |
| THICKNESS             | ASTM-D-1777   | 0.105"  | 2.67 mm                |
| TENSILE STRENGTH      | ASTM-D-5035   | Warp- 60 lbs/inch                             | 10.72 kg/cm            |
|                       |               | Fill- 40 lbs/inch                             | 7.14 kg/cm             |
| TEAR STRENGTH         | ASTM-D-5587   | Warp- 25 lbs                                  | 11.34 kg               |
|                       |               | Fill- 25 lbs                                  | 11.34 kg               |
| BEACH PUNCTURE        | ASTM-D-781    | 1200 units (318 in-lbs)                       | 366 cm-kg              |
| PEEL ADHESION         | ASTM-D-3330   | 1.25 lbs/inch                                 | 223 g/cm               |
| THERMAL CONDUCTIVITY  | ASTM-C-177    | at 72.2°F: 0.29 BTU in/hr ft <sup>2</sup> °F  | at 24°C: 0.042 W/m-°K  |
|                       |               | at 199.4°F: 0.34 BTU in/hr ft <sup>2</sup> °F | at 93°C: 0.0518 W/m-°K |

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**Specializing in marine, aerospace, automotive and commercial fabrics for thermal and industrial applications**

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