



## AeroZero® Flame and Thermal Barrier AZ-FTB

### Product Description

The flame and thermal barrier (FTB) portfolio integrates flame barrier materials with AeroZero® thermal insulation. The FTB products are typically supplied with a high-performance engineering grade silicone pressure sensitive adhesive (PSA) on the non-flame facing side for bonding to a substrate. Typical use is protection of parts exposed to flames and high heat -temperatures ranging from 500 °C to 1200°C. Potential substrate parts include carbon fiber reinforced polymer (CFRP) composites, metallic parts including titanium, stainless steel and aluminum, and engineering thermoplastics such as polyether ether ketones (PEEK).



### Application

Prior to peeling the release liner from the adhesive, ensure the substrate is clean and free of loose particles. Standard application temperature is 25 °C (77 °F) and the recommended set time for optimal adhesion is three days prior to testing. The minimum application temperature is 10 °C (50 °F) and minimum set time is 24 hours before performing any tests. Increasing temperature and dwell time may increase adhesion strength.

### Features

- ◇ Ultra-thin (<2 mm)
- ◇ Lightweight, highly flexible
- ◇ PFAs free and halogen-free
- ◇ Very low thermal conductivity
- ◇ High dielectric strength
- ◇ Wraps easily over complex shapes
- ◇ Proven to withstand direct flame at 1,100 °C for up to 30-minutes

### Standard Dimensions

- ◇ Test Sample: 216 x 280 mm (8.5 x 11 in)
- ◇ Sample roll: 304mm x 3.05m (1 x 10 ft)
- ◇ Standard roll: 304mm x 30.5m (1 x 100 ft)

### Storage

Recommended Storage Conditions:

- ◇ Temperature: below 25 °C (77 °F)
- ◇ Relative Humidity: below 50%



### AeroZero® Flame and Thermal Barrier AZ-FTB

Physical and Mechanical Properties	Method	AZ-FTB 100	AZ-FTB 101	AZ-FTB 300
		Value	Value	Value
Product Code	-	7074-11S1-935	7075-12S1-935	7076-GSS1-935
Thickness, mil (mm)	ASTM D374/D374M	12.5 (0.32)	33.7 (0.86)	67.0 (1.70)
Density, g/cm <sup>3</sup>	ASTM D202	0.65	0.75	0.75
Basis Weight, g/m <sup>2</sup>	ASTM D202	215	650	1260
Thermal Properties				
Thermal Properties	Method	Value	Value	Value
Thermal Conductivity (25 °C), W/m·K	ASTM C518	0.047	0.055	0.055
Thermal Conductivity (180 °C), W/m·K	ASTM C518	0.070	0.080	0.077
Specific Heat Capacity (25 °C), J/g·°C	ASTM C1784	1.10	1.02	1.06
Decomposition Temp (10 wt% loss, TGA), °C (°F)	E2550	425 (797)	540 (1,004)	540 (1,004)
Additional Properties				
Additional Properties	Method	Value	Value	Value
Flammability Rating	FAR 25.853(a) App. F Part I(a)(1)(i), 60-sec vertical burn test	Pass	Pass	Pass
Dielectric Breakdown Voltage, kV	D149	7.6	10.0	18.3
Dielectric Breakdown Strength, kV/mm	D149	25	12	11

Data within this table are typical values for the standard AeroZero® FTB product family.  
Product Codes 7074-U0S1-000, 7075-12S1-000, 7074-11S1-000