



AeroZero® Thermal Protection Systems AZ-TPS Flame and Thermal Barrier

Product Description

Our AZ-TPS flame and thermal barriers (FTB) include at least one layer of our AeroZero® film with a flame resistant protection system layer bonded on one or both sides of the film. Our adhesive is a 25.4 micron (1 mil) high-performance engineering grade silicone pressure sensitive adhesive (PSA) with a release layer that is peeled off before application to a substrate. The AZ-TPS FTB product family consists of two material configurations, both of which include a PSA: 2071-R3S1-000 and 2071-R4S1-000.

Typical use is fire and thermal protection of parts exposed to flames and high temperatures. Potential substrates include carbon fiber composites, metallic parts including stainless steel and aluminum, and polymeric parts such as polyether ether ketones (PEEK) and polyimides.

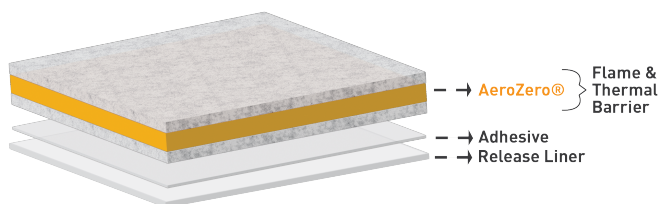
Applications

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.

Storage

Recommended Storage Conditions:

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



Features

- ◇ Ultra-thin thermal protection system (TPS)
- ◇ High flame/heat resistance
- ◇ 25+ mins, ~ 1000 °C flame & no burn through
- ◇ Reduces heat transfer during thermal events
- ◇ Flexible application onto complex parts
- ◇ Easy use with permanent bonding
- ◇ Lightweight and thin

Standard Dimensions

- ◇ Test Sample: 216 x 356 mm (8.5 x 11 in)



Lighten. Protect. Perform.



AeroZero® Thermal Protection Systems AZ-TPS Flame and Thermal Barrier Data

Physical Properties	Methods	Value	Value
Product Code	-	2071-R3S1-000	2071-R4S1-000
Thickness, mm (mil)	In-House Method	1.16 (45.6)	1.18 (46.4)
Dielectric Strength, kV/mm	ASTM D149-20	22	22
Density, g/cm ³	In-House Method	1.09	1.20
Areal Density, g/m ²	In-House Method	1260	1350

Thermal Properties	Methods	Value	Value
Thermal Conductivity (25 °C), W/m·K	ASTM C518-10	0.085	0.089
Specific Heat Capacity (25 °C), J/g·°C	ASTM C1784-20	1.10	1.05

Data represents average values of developmental samples provided for testing purposes.
Product Code # 2071-R3S1-000, 2071-R4S1-000



Blueshift products are manufactured under a certified AS 9100D/ ISO 9001:2015 Quality Management System facility. For more information on Blueshift Materials Film and Laminate products, please visit our website.

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