

RockeTape[™] Heat Resistant Thermal Tape

RT-AZ Polyimide

Product Description

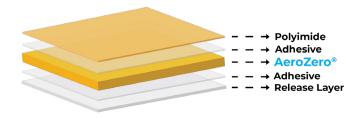
RT-AZ PI consists of a 165 micron (6.5 mil) AeroZero[®] polyimide aerogel film with a 25.4 micron (1 mil) external polyimide film joined with a 25.4 micron (1 mil) adhesive. The adhesive is a high-performance engineering grade silicone pressure sensitive adhesive (PSA) with a release layer that is peeled off before application to a substrate. Potential substrates include stainless steel, aluminum, glass, and polymer substrates such as polyimides, polyether ketones, polyurethanes, and polyesters. Typical use is thermal barrier/protection of parts in the Aerospace, Defense and Electronic industries.

Application

Prior to peeling the release liner from the adhesive, ensure the surface is clean and free of loose particles. Standard application temperature is 25 °C (77 °F) and the recommended set time for optimal adhesion is 3 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 thermal protection system (TPS)
- Lightweight
- ◊ RF transparent
- Flexibility enables use on complex parts
- Easy application with permanent bonding
- ♦ Flame retardant



Uses

- ♦ Launch vehicle protection
- Supersonic munition and aircraft
- High performance race cars and boats

Standard Dimensions

 Standard Roll: 25 mm wide x 7.6 m long (1 in x 25 ft)

Storage

Recommended Storage Conditions:

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





Lighten. Protect. Perform.

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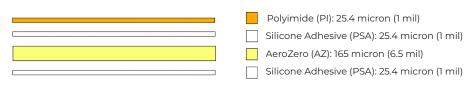
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Method Value Physical and Mechanical Properties 5010-1151-251 Product Code In-House Method Thickness, µm (mil) 240 (9.5) ASTM D882-12 Tensile Strength, MPa (ksi) 15 (2) ASTM D882-12 450 (65) Young's Modulus, MPa (ksi) Tensile Elongation at Break, % ASTM D882-12 8 Density, g/cm³ In-House Method 0.58 **Thermal Properties** Method Value ASTM C518-10 Thermal Conductivity (25 °C), W/m•K 0.046 ASTM C1784-20 Specific Heat Capacity (25 °C), J/g•°C 1.22 ASTM E408-13 IR Emissivity (Polyimide Surface) 0.85 Method Thermomechanical Properties Value ASTM E1640-13 Glass Transition Temp (AZ T_a, DMA), °C (°F) 305 (580) ASTM 2550-17 Decomposition Temp (10 wt% loss, TGA), °C (°F) 410 (770) Method **Additional Properties** Value Adhesive Strength: 180 °peel/3 day-RT dwell time AZ film on 50.8 micron (2 mil) AI Foil (lb/in) **ASTM D3330** >200 (1.1) **UL Flammability Rating** UL94 VTM0 VTM-0

Data within this table are typical values for the polyimide product family. *Product Code # 5010-11S1-251*





Blueshift products are manufactured under a certified AS 9100D/ ISO 9001:2015 Quality Management System facility. See our website for more information on Blueshift products.

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