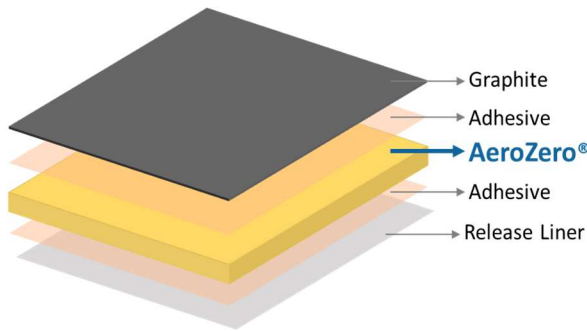




## ROCKETAPE™ RTGRS Graphite Heat Resistant Thermal Insulation Tape



### Features

- Ultra-thin and lightweight thermal insulation tape
- Easy peel and stick application to flat or complex 3D surfaces
- Excellent adhesion onto a wide range of substrates
- Excellent thermal insulator combined with a heat spreading graphite facing layer
- Highly insulative with low thermal conductivity
  - Protects sensitive components from extreme temperature swings
  - Isolates high temperature zones (hot spot reduction)
  - Enhances thermal endurance of parts/devices
  - Enables component size reduction
- High intermittent heat resistance > 1000 °F (538 °C)
- Flame retardant (UL94 VTM-0 compliant)

### Product Description

RTGRS Graphite consists of a 6.5-mil AeroZero® polyimide aerogel film with a double-sided 1-mil adhesive layer and a 2-mil graphite sheet bonded on one side. 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 carbon fiber, polyimides, polyether ketones, polyurethanes, and polyesters. Typical use is thermal barrier/protection of parts used in the Aerospace, Defense, Electronics & Communications Equipment, and High-Performance Racing industries.

### Storage

Recommended storage conditions:  
Temperature: below 25 °C (~77 °F)  
Relative Humidity: below 50%

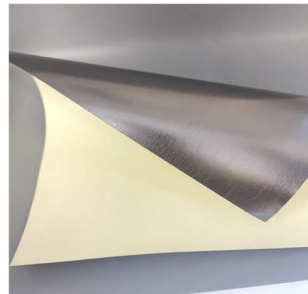
### Applications

Leading Edge thermal insulation protection for:

- Exterior leading aero surfaces for rockets, supersonic munitions, and aircraft
- High performance race cars and boats

### Standard Dimensions

- Standard Roll: 1 in wide x 25 ft long
- Other sizes available upon request



\* DISCLAIMER: Blueshift MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, COURSE OF PERFORMANCE, OR TRADE USAGE. All of the descriptive information, the typical performance data, and recommendations for the use of Blueshift products shall be used only as a guide and do not reflect the specification or specification range for any particular property of the product. Furnishing such information is merely an attempt to assist you after you have indicated your contemplated use and shall in no event constitute a warranty of any kind by Blueshift. All purchasers of Blueshift products shall be responsible for independently determining the suitability of the material for the purpose for which it is purchased, and for performing any additional testing that may be necessary to support purchaser's intended use. No distributor, salesman, or representative of Blueshift is authorized to give any warranty, guaranty, or make any representation in addition or contrary to the above.

## ROCKETAPE™ RTGRS Graphite Heat Resistant Thermal Insulation Tape

PHYSICAL AND MECHANICAL PROPERTIES	METHOD	VALUE	UNITS
Thickness	In-house method	267 ± 38 (10.5 ± 1.5)	µm (mil)
Tensile Strength	ASTM D882-12	4.5 ± 0.5 (0.65 ± 0.07)	MPa (ksi)
Young's Modulus	ASTM D882-12	415 ± 40 (60 ± 5.8)	MPa (ksi)
Tensile Elongation at Break	ASTM D882-12	4 ± 1	%
Density	In-house method	0.70 ± 0.05	g/cm <sup>3</sup>

THERMAL PROPERTIES	METHOD	VALUE	UNITS
Thermal Conductivity (23 °C)	ASTM C518-21	0.053 ± 0.005	W/mK

THERMOMECHANICAL PROPERTIES	METHOD	VALUE	UNITS
Glass Transition Temperature (AeroZero Tg, DMA)	ASTM E1640-13	305 (580)	°C (°F)
Decomposition Temperature (10 wt% loss, TGA)	ASTM E2550-17	470 (878)	°C (°F)

ADDITIONAL PROPERTIES	METHOD	VALUE	UNITS
Adhesive strength: 180°peel/3 day-RT dwell time RockeTape on 2-mil Al Foil substrate	ASTM D330	>300 (1.7)	N/m (lb/in)
UL Flammability Rating	UL94VTM	VTM-0	-

Data within this table are typical values for the listed product. The above data is not intended to indicate product specifications. Actual product specifications are available upon request.

### Application

Prepare the surface by removing any loose particles, wipe the surface with isopropyl alcohol and allow to dry. Remove the release liner from the tape and apply to the surface with adequate finger or mechanical pressure. Standard application temperature is 25 °C (72 °F) and the minimum application temperature is 10 °C (50 °F). The minimum set time is 24 hours before performing any tests, with maximum adhesion being reached at 72 hrs. Increasing the temperature and dwell time may increase adhesion strength.

Blueshift products are manufactured under a certified AS9100D/ISO9001:2015 Quality Management System facility. For more information on Blueshift Materials Film and Laminate products, please visit our website.