

# THERMAL PROTECTION FOR CRITICAL NATIONAL SECURITY ASSETS

## Acusil® Thermal Protection System Product Suite

Our nation's strategic weapons systems and spacecraft need to safely reach their mission destination. This requires protection from intense heat-producing friction as they move through planetary atmospheres.

### THERMAL PROTECTION PLUS RF TRANSMISSION CAPABILITIES

Peraton's Acusil® is a proprietary light-weight, silicone syntactic foam-based thermal protection system (TPS) used in missile defense ballistic re-entry and NASA space missions.

It provides excellent insulation properties to shield critical national security assets against extreme conditions and provides radio frequency (RF) transmission capabilities.

#### Easy Application

Acusil materials are directly applied to surfaces or bonded onto structures as prefabricated panels.

#### Proven Ablation Characteristics

Acusil retains its thermal insulative performance and RF transmission properties post-ablation. Acusil II sustains zero ablation in heat fluxes up to 100 W/cm<sup>2</sup>, while Acusil IV withstands up to 150 W/cm<sup>2</sup>.

#### BENEFITS

- Proven ablation characteristics
- Thermal insulative properties
- Radio frequency (RF) transmission capabilities
- Easy to apply
- Stable
- Toxicologically and environmentally benign

#### Decades of Durability

Acusil II applied to flight components that have been stored for more than a decade shows no degradation in its insulative properties. Over a span of more than 30 years, the thermal protection has successfully withstood the rigors of transportation, ground operations, and storage—including heat and humidity exposure.

#### TESTED AND TRUSTED

The Acusil TPS is a proven thermal protection solution for critical national security assets. It has been industry tested for more than 30 years.

The Acusil product suite is a trusted component on an array of high-profile spacecraft and ballistic missiles including:

- NASA: Mars 2020 Lander - Perseverance Rover
- NASA: Mars Science Laboratory - Curiosity Rover
- SpaceX: Dragon I Capsule
- Patriot Advanced Capability (PAC) 3 Interceptor Missile
- Evolved Sea Sparrow Missile (ESSM)

In the space market, Acusil has been used to protect against ascent heating on booster payload systems for NASA's Pegasus Booster and is a vital component of the 2020 Mars Lander mission.

#### CONTACT US

Acusil's proven ablation characteristics, thermal insulative and RF transmission properties—as well as ease of application—make it the ideal choice for our customers' thermal protection needs. Additionally, we are a Lockheed Preferred Supplier and are ISO 9001 Certified.



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