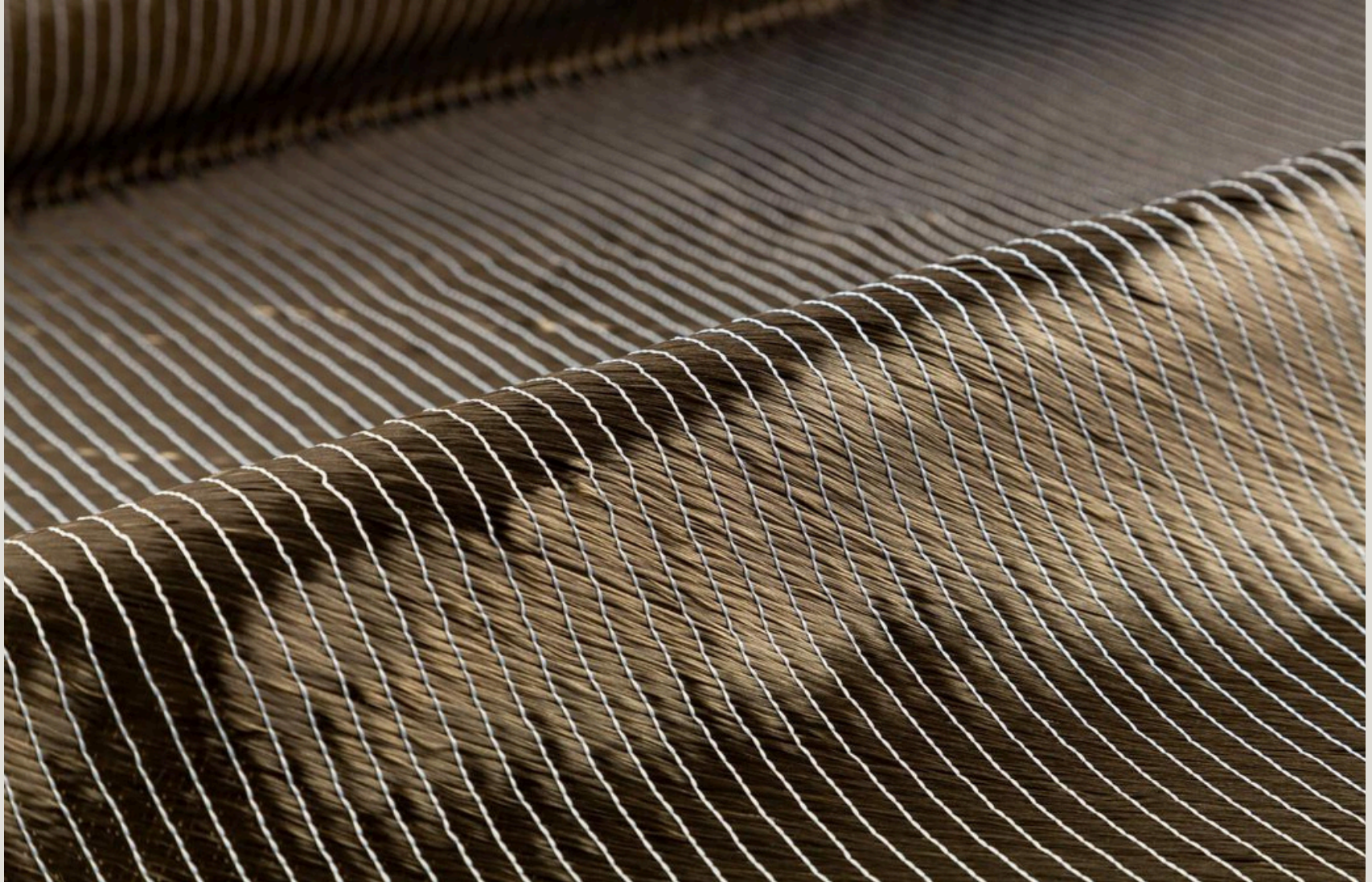


HULK SYSTEMS: BASALT GEOTEXTILE

PK SESSION: JULY 16, 2026



HULK FR SRT® BASALT GEOTEXTILE



Hulk System: FR SRT Basalt Geotextile

is a structurally reinforcing geotextile made from flame retardant surface treated basalt fiber in a $+45^{\circ}/-45^{\circ}$ stitched architecture. It is designed for high temperature, fire resistant, and structural reinforcement applications where conventional fiberglass may not provide sufficient thermal stability.

When combined with Hulk WP® or other compatible resin systems, Hulk FR SRT® (Basalt) forms a seamless composite “cast” over substrates such as foundation walls, fireresistant panels, and thermal/impact resistant assemblies.

KEY FEATURES AND BENEFITS

Feature	Description	Benefit
Basalt Fiber Composition	Made from non-combustible inorganic mineral fibers derived from volcanic rock, rather than conventional E-glass fiberglass	Higher thermal stability, fire resistance (retains integrity at up to 700°C peak), rot-proof, chemically stable, and non-corrosive
Composite "Cast" Integration	When embedded between layers of a liquid membrane (like Hulk WP®), it creates a seamless, monolithic "cast" over the substrate	Forms a hammer-proof, impact-resistant sheathing that resists external loads and puncture damage better than standalone membranes or coatings.
Unique Weave Architecture	Features a unique $\pm 45^\circ$ double-bias stitched architecture	Provides excellent in-plane shear performance, high abrasion/vibration resistance, and flexibility in shear-dominated laminates
Pest Deterrent	The dense basalt fabric inherently deters pests from chewing through the assembly	Adds an extra layer of protection against rodent or insect damage
Environmental Profile	The fiber itself has a low smoke and zero fuel contribution in a fire. The overall system uses water-based, low-VOC acrylic polymers with zero bituminous resins (tar).	Safer for the applicator and the environment, with easy, water-based cleanup.





COMPARISON: BASALT VS. FIBERGLASS SRT

Feature / Metric	Hulk FR SRT® Basalt	Hulk SRT® Fiberglass
Base Material	Basalt Fiber (Inorganic Mineral)	E-Glass Fiberglass (Quartz infused)
Color	Brown/Green Black	White
Inherent Fiber Density	2.65 - 2.80 g/cm	1.35 - 1.45 g/cm
Max Service Temp (Dry)	Melting range: ~1050–1250 °C	Glass/Quartz with stands up to 600°C (1112°F)
Peak Temp Limit (Dry)	Short-term peak up to 700°C (1292°F)	<i>Not specified</i>
Areal Weight	0.182 lb/ft	0.182 lb/ft
Thickness	0.046 in	0.046 in
Roll Coverage	450 sq ft.	450 sq ft.

| Unmatched Material Advantages



Sustainable Source

Derived from natural volcanic basalt rock, offering a low carbon footprint compared to carbon fiber production.



Corrosion Proof

Inherently resistant to alkalis and salts, ensuring structural integrity in harsh environments where steel fails.



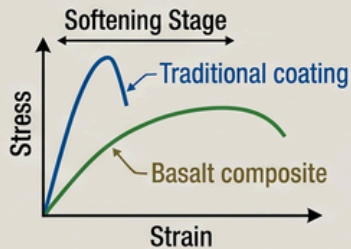
Non-Conductive

Electrically and magnetically inert, ideal for shielding sensitive equipment while providing mechanical support.

BASALT FIBER COMPOSITES FOR SEISMIC RESILIENCE: KEY TECHNICAL BENEFITS

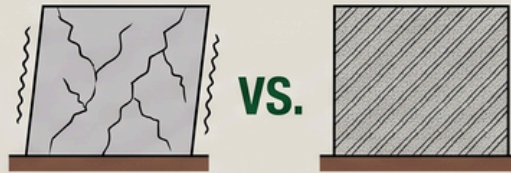


1. Increased Ductility and Energy Dissipation



- Allows structure to undergo larger deformations, absorbing kinetic energy.

2. High In-Plane Shear Performance



Hulk FR SRT® Basalt Gootextile engineered with $\pm 45^\circ$ stitched architecture aligns with principal tensile stresses (shear), providing superior resistance to diagonal cracking in walls and joints.

3. Confinement and Spalling Protection



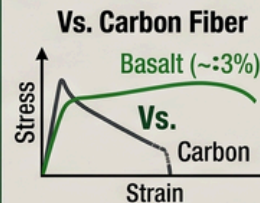
- Acts like high-strength jacket
- Postpones concrete crushing/spalling, keeping core intact.
- Prevents buckling of internal steel stirrups.

3. Confinement and Spalling Protection

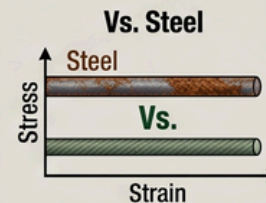


- “Confinement cast”
- Acts like high-strength jacket.
- Postpones concrete crushing/spalling, keeping core intact.
- Prevents buckling of internal steel stirrups.

4. Comparison to Other Materials



Higher elongation survives intense ‘snap’ of seismic cycles; similar load-bearing, lower cost.



Non-corrosive and non-conductive, won't rust and weaken over time.

5. Application in Seismic Retrofitting



- Primary choice for retrofitting existing masonry/concrete buildings.
- Increases ultimate load-bearing capacity by up to 60%.
- Increases displacement limits by ~15%.
- Older structures safer during code-defined earthquakes.

ENGINEERING SOLUTIONS FOR STRUCTURAL, THERMAL, AND ENVIRONMENTAL CONSTRUCTION CHALLENGES

Structural Cracking and Multi-Directional Shifting



- **The Challenge:** Traditional linear reinforcements often shear or rupture when concrete foundation walls or stucco substrates experience multi-directional stress and structural settling.
- **The Basalt Solution:** Engineered with a specialized stitched double-bias architecture, Hulk FR SRT® dynamically absorbs and distributes multi-directional shear forces. It acts as a high-strength anti-fracture layer under tile, stucco, and mortar assemblies to maintain surface integrity.

Extreme Heat and Thermal Degradation



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ENGINEERING SOLUTIONS FOR STRUCTURAL, THERMAL, AND ENVIRONMENTAL CONSTRUCTION CHALLENGES

Below-Grade Water Ingress and Foundation Vulnerabilities



- **The Challenge:** Concrete foundation walls inevitably develop micro-fissures over time, leading to hydrostatic water penetration, internal dampness, and moisture degradation.
- **The Basalt Solution:** When saturated with Hulk WP® or other compatible resin systems, the basalt fabric forms a seamless, high-durability composite "cast" directly over the substrate. This structural lamination bridges cracks and permanently seals out water.

Chemical Rot, Environmental Decay, and Pest Intrusions



- **The Challenge:** Organic structural fabrics rot over time, and steel meshes corrode when exposed to harsh soil chemistry, solvents, or concrete acids. Additionally, rodents and pests frequently chew through standard insulation layers.
- **The Basalt Solution:** Being a 100% inorganic mineral fiber, the fabric is completely rot-proof and stable against most acids and solvents. Furthermore, the dense, high-abrasion basalt weave acts as a highly effective physical deterrent that stops pests from chewing through building assemblies.



BASALT PUT TO THE TEST 🔥



THANK YOU FOR JOINING!