



GFE-1 Graphite Felt

What is GFE-1 Graphite Felt?

GFE-1 is a graphite felt that has been specifically designed and manufactured for the demanding needs of flow battery applications. The material is woven from specialized graphite fibers that are treated with our proprietary activation process to increase active sites and surface area to over 1000+ M²/g. Additionally, the felt weave results in smoother surface and more homogenous structure for more stable and consistent electrical performance. This ultra-high-quality graphite felt is designed for high wetting and absorption but is optimized for specific applications. Material is pre-fired to 3992°F (2200°C) to increase purity, reduce ash content, and ensure consistent performance.

Material Benefits

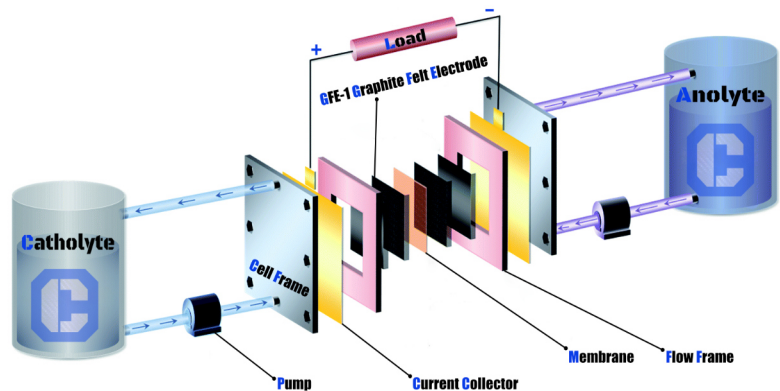
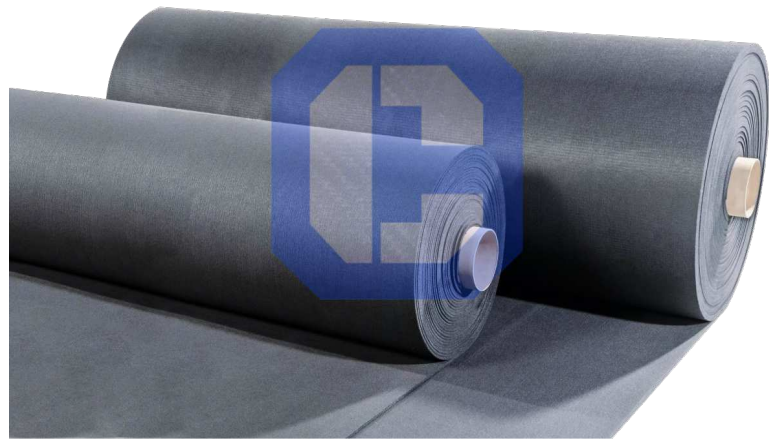
- Developed and designed for flow battery applications
- Flexible material that is easy to cut and install
- Proprietary activation process to increases active sites and surface area to over 1000+ M²/g
- Specialized weave for smoother surface and a more homogenous structure for more stable and consistent electrical performance
- Custom production material optimized for specific applications per customer specifications

Applications

- Vanadium redox flow batteries (VRFB)
- Fuel cell and flow battery electrodes
- Sodium and Zinc Bromine flow batteries
- Iron flow cells
- Heated filaments
- Sensor technology

Stocked Sizing and Properties

This material is a custom production item as sizes and requested properties are made to order. Our office does keep A4 samples and a few production rolls for testing and immediate shipment. Contact us directly to inquire further.



Properties	Unit	GFE-1	Notes
Density	g/cc	0.06 - 0.13	Made to order
Density Tolerance	%	10	Made to order
Electrical Resistance	Ω-cm	0.275	Max
Vanadium Liquid Adsorption (2 mol/L)	g/g	17	Min
Carbon Content	%	99.8	Min
Ash Content	PPM	500	Max
Metal Content	PPM	300	Max
Iron Content	PPM	30	Max
Thickness	mm	1 - 16	Made to order
Thickness Tolerance	%	± 10	Max
Width	m	1 - 1.4	Made to order
Length	m	≥ 40	Made to order
Cut to Size Tolerance	mm	± 1.5	Max
Pre-fire Temp	°F °C	3992 2200	Made to order