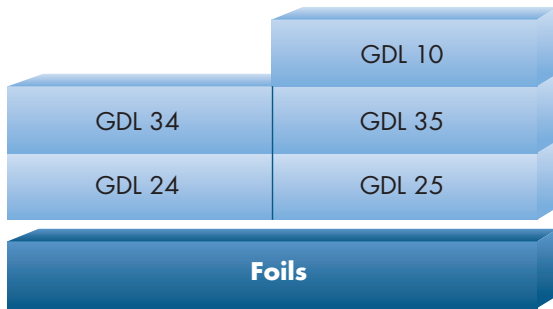


SIGRACET®

Expanded Graphite Foils



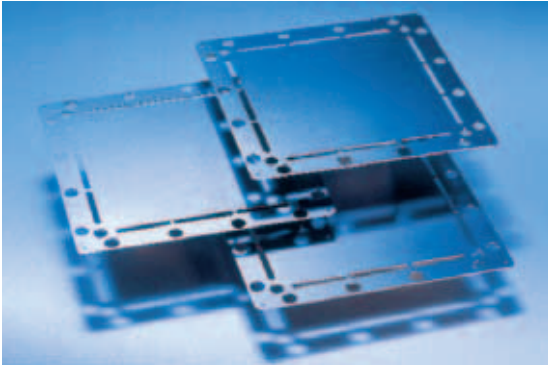
Our decades of experience in expanded graphite processing enables us to continuously develop new applications based on the unique properties of graphite. The material density, the thermal and electrical conductivity as well as the high purity of 99,85% are of decisive importance.

Physical Properties (Typical Values)

Property	Unit	Grade	
		L02918ZIF	L05518ZIF
Thickness	mil	11	22
	mm	0.29	0.55
Bulk Density	lbs/ft ³	111	111
	g/cm ³	1.78	1.78
Flexural Strength	psi	≥ 4.400	≥ 4.400
	N/mm ²	≥ 30	≥ 30
Flexural Modulus	psi	2.0 · 10 ⁶	1.5 · 10 ⁶
	N/mm ²	14.000	10.000
Compressive Strength	psi	≥ 12.000	≥ 12.000
	N/mm ²	≥ 80	≥ 80
Coefficient of Thermal Expansion II	1/°F · 10 ⁻⁶	≤ 1.8	≤ 1.8
	1/K · 10 ⁻⁶	≤ 1.0	≤ 1.0
Electrical Resistivity II	μΩm	6	6
Contact Resistance ⊥■	mΩcm ²	14	15
Air Permeability Coefficient ⊥●	in ² /s	≤ 1.085 · 10 ⁻⁶	≤ 1.085 · 10 ⁻⁶
	cm ² /s	≤ 7 · 10 ⁻⁶	≤ 7 · 10 ⁻⁶
Recommended Max. Operating Temperature	°F	≤ 300	≤ 300
	°C	≤ 150	≤ 150

See key to symbols overleaf

Broad Base. Best Solutions.



We manufacture graphite foils with dimensions of 500 mm x 1000 mm. For special applications the expanded graphite foils can be impregnated to achieve a higher gas tightness.

Physical Properties (Typical Values)

Property	Unit	Grade	
		L08318ZIF	L15518CIF
Thickness	mil	33	61
	mm	0.83	1.55
Bulk Density	lbs/ft ³	111	111
	g/cm ³	1.78	1.78
Flexural Strength	psi	≥ 4.400	≥ 4.400
	N/mm ²	≥ 30	≥ 30
Flexural Modulus	psi	1.09 · 10 ⁶	0.58 · 10 ⁶
	N/mm ²	7.500	4.000
Compressive Strength	psi	≥ 12.000	≥ 12.000
	N/mm ²	≥ 80	≥ 80
Coefficient of Thermal Expansion II	1/°F · 10 ⁻⁶	≤ 1.8	≤ 1.8
	1/K · 10 ⁻⁶	≤ 1.0	≤ 1.0
Electrical Resistivity II	μΩm	6	5
Contact Resistance ⊥■	mΩcm ²	17	21
Air Permeability Coefficient ⊥●	in ² /s	≤ 1.085 · 10 ⁻⁶	≤ 1.085 · 10 ⁻⁶
	cm ² /s	≤ 7 · 10 ⁻⁶	≤ 7 · 10 ⁻⁶
Recommended Max. Operating Temperature	°F	≤ 300	≤ 300
	°C	≤ 150	≤ 150

⊥ Through plane

II In plane

■ Resistance of the plate at 1.0 N/mm² (145 psi) compaction pressure between two sheets of GDL (typical compaction pressure in an FC stack)

● Measured at 77 °F (25 °C) using a vacuum experiment according to DIN 51935

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