

Divinycell HP has been developed to be fully compatible with low and medium temperature prepreg and RFI systems. Divinycell HP's elevated temperature performance also extends to its 'in service' life as it will retain a high percentage of its mechanical properties despite exposure to high ambient temperatures.

The mechanical properties of Divinycell HP have not been compromised in order to achieve its elevated temperature performance. It offers higher values than other commonly used 'elevated temperature cores' in all significant areas including its strength properties, elongation to break, ductility, adhesion/peel strength, fracture toughness and dimensional stability. Other key features of Divinycell HP include excellent chemical resistance (including styrene), low water absorption and good thermal/acoustic insulation.

Technical Data for Divinycell HP Grade

Property	Method	Unit	HP60	HP80	HP100	HP130	HP160	HP200	HP250
Compressive Strength ²⁾	ASTM D 1621	MPa	0.95	1.5	2.0	3.0	3.4	5.4	7.2
Compressive Modulus ²⁾	ASTM D 1621	MPa	74	105	135	170	200	310	400
Tensile Strength ²⁾	ASTM D 1623	MPa	1.8	2.8	3.5	4.8	5.4	7.1	9.2
Tensile Modulus ²⁾	ASTM D 1623	MPa	75	100	130	175	205	250	320
Shear Strength	ASTM C 273	MPa	0.85	1.25	1.6	2.2	2.6	3.5	4.5
Shear Modulus	ASTM C 273	MPa	20	28	35	50	73	73	97
Shear Strain	ASTM C 273	%	23	38	40	40	40	45	45
Nominal Density ¹⁾	ISO 845	kg/m ³	65	80	100	130	160	200	250
1) Typical density variation ± 10%.									
2) Perpendicular to the plane. All values measured at +23°C.									

Continuous operating temperature is -200°C to +80°C. The foam can be used in sandwich structures, for outdoor exposure, with external skin temperatures up to +100°C. For optimal design of applications in high operating temperatures in combination with continuous load, please contact DIAB Technical Services for detailed design instructions. Normally Divinycell HP can be processed up to +145°C with minor dimensional changes. Maximum processing temperature is dependent on time, pressure and process conditions. Therefore users are advised to contact DIAB Technical Services to confirm that Divinycell HP is compatible with their particular processing parameters. Coefficient of linear expansion: approx. $40 \times 10^{-6}/^{\circ}\text{C}$

