

HyboNANO® P

Introduction

HyboNANO® P is a closed-cell rigid foam based on polymethacrylimide (PMI). It is a foam core specially designed for the integrated molding of complex geometric structures, which is composed of PMI foam resin particles and special foam glue.

Custom density

HYBO can customize core material densities between 75 kg/m³ and 200 kg/m³ according to your needs.

Good process performance

HyboNANO® P is suitable for forming processes such as hot pressing tanks, RTM, HP-RTM, C-RTM, and LCM, and can withstand curing temperatures up to 180 °C and curing pressures of 0.7 MPa, depending on the material density.

Integrated foaming molding inside the mold

HyboNANO® P uses foam inside the mold to mass manufacture complex geometric fiber reinforced sandwich structural components with high cost-effectiveness.

Components that cannot be foam formed in the mold at once can also be combined with CNC machining to simplify complex processing procedures. At the same time, reducing the preparation time and material loss before CNC processing can reduce costs and improve processing efficiency.

The use of **HyboNANO® P** is fast and simple. The embedded parts can be integrated with the core material during foaming, and the final core material components can be directly used for layering and curing.

Property	Test Method *	Unit	HyboNANO® P 75	HyboNANO® P 110	HyboNANO® P 150	HyboNANO® P 200
Density	GB/T 6343	kg/m ³	75	110	150	200
	ASTM D1622	g/cm ³	0.075	0.11	0.15	0.2
	ISO 845	lb/ft ³	4.68	6.87	9.36	12.48
Compressive Strength	GB/T 8813	MPa	0.95	1.9	3.6	6.4
	ASTM D1621	psi	138	276	522	928
Compressive Modulus	ISO 844	MPa	35	70	110	190
		psi	5075	10150	15950	27550
Tensile Strength	GB/T 1040.2	MPa	0.85	1	2	3.5
		psi	123	145	290	508
Tensile Modulus	ASTM D638	MPa	90	150	270	370
		psi	13050	21750	39150	53650
Elongation at Break	ISO 527-2	%	0.8	0.8	0.8	0.8
Shear Strength	GB/T 1455	MPa	0.65	1	1.7	2.35
		psi	94	145	247	341
Shear Modulus	ASTM C273	MPa	40	50	70	125
		psi	5800	7250	10150	18125

The above values are typical values for nominal density, and the measured values will vary due to manufacturing deviations.
* Data is based on ASTM standard test methods, but GB or ISO values can be confirmed upon request.

For More Information

If you have questions or want to discuss the use of **HyboNANO® P** in your application, we recommend that you communicate with your local contacts.

Please visit www.hybotech.com, find and contact the local contact person directly by phone or email.

Disclaimer

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