Production Information

HyboFOAM® RF

Introduction

HyboFOAM® RF is a closed-cell rigid foam based on polymethacrylimide (PMI), which contains no halogen at all. The cell size is tiny and uniform。

HyboFOAM® RF refines the pore diameter of foam on the basis of **HyboFOAM® C** and maintains excellent mechanical properties, which is very suitable for resin liquid molding process.

Processing and production

HyboFOAM® RF can withstand a medium temperature curing process with a maximum temperature of 180 ℃ and a maximum pressure of 0.3 MPa, depending on the density. Suitable for curing methods such as autoclave, vacuum bag, RTM, VARTM, VARI, HP-RTM, etc.

Application

The application range of **HyboFOAM® RF** is also very extensive. Generally speaking, it is suitable for the vast majority of sandwich sandwich structure composite material components, including X-ray/CT machine boards/mobile phone diaphragms, sports equipment, vehicles/high-speed trains, or buoyancy equipment/fish floats, etc.

Thermoforming and Shaping

To meet different dimension parts and geometry, it is very easy to shape **HyboFOAM® RF** by bonding by various adhesive, and common CNC machine.

HYBO can also directly provide high-precision preformed or ready to use foam core materials with complex or simple geometric shapes.

Property	Test Method *	Unit	HyboFOAM® RF 52	HyboFOAM® RF 72	HyboFOAM® RF 110	HyboFOAM® RF 200
Density	GB/T 6343 ASTM D1622 ISO 845	kg/m^3 g/cm^3 lb/ft^3	52 0.052 3.24	75 0.075 4.68	110 0.11 6.86	200 0.2 12.48
Compressive Strength	GB/T 8810 ASTM D1621 ISO 844	MPa psi	0.8 116	1.7 247	3.6 522	9 1305
Compressive Modulus		MPa psi	40 5800	80 11600	120 17400	300 43500
Tensile Strength	GB/T 1040.2 ASTM D638 ISO 527-2	MPa psi	1.6 232	2.2 319	3.7 537	8 1160
Tensile Modulus		MPa psi	74 10730	101 14645	170 24650	260 37700
Elongation at Break		%	8.5	8.5	8.5	7.5
Shear Strength	GB/T 1455 ASTM C273 DIN 53294	MPa psi	0.8 116	1.2 174	2.23 323	- -
Shear Modulus		MPa psi	21 3045	32 4640	60 8700	- -

he 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.