

## 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 maintaining excellent mechanical properties and the elongation at break of the material is increased, 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 °C 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-40	HyboFOAM® RF 52	HyboFOAM® RF 75	HyboFOAM® RF 110	HyboFOAM® RF 200
Density	GB/T 6343	kg/m3	40	52	75	110	200
	ASTM D1622	g/cm3	0.04	0.052	0.075	0.11	0.2
	ISO 845	lb/ft3	2.50	3.25	4.68	6.87	12.48
Compressive Strength	GB/T 8813	MPa	0.5	0.8	1.7	3.6	9
Compressive Modulus	ASTM D1621	psi	73	116	247	522	1305
	ISO 844	MPa	20	40	80	120	300
		psi	2900	5800	11600	17400	43500
Tensile Strength	GB/T 1040.2 ASTM D638 ISO 527-2	MPa	1.2	1.6	2.2	3.7	8
Tensile Modulus		psi	174	232	319	537	1160
		MPa	52	74	101	170	260
		psi	7540	10730	14645	24650	37700
Elongation at Break		%	8.5	8.5	8.5	8.5	7.5
Shear Strength	GB/T 1455	MPa	0.6	0.8	1.2	2.23	4.6
Shear Modulus	ASTM C273	psi	87	116	174	323	664
	DIN 53294	MPa	16	21	32	60	100
		psi	2320	3045	4640	8700	14544
Heat Deflection Temperature	GB/T 31295 DIN 53424	°C	≥200				/

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 **HyboFOAM® RF** in your application, we recommend that you communicate with your local contacts.

Please visit [www.hybofoam.com](http://www.hybofoam.com), find and contact the local contact person directly by phone or email.

## Disclaimer

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## Contact Information

HYBO (Fujian) New Material Technology Ltd.,  
Add: Quanzhou Comprehensive Bonded Zone,  
Fujian, China.

Tel: 86-0595-82029999

Fax: 86-0595-85775222

Web: [www.hybofoam.com](http://www.hybofoam.com)

E-mail: [info@hybotech.com](mailto:info@hybotech.com)