Production Information

HyboFOAM® CRH

Introduction

HyboFOAM® CRH is a closed-cell rigid foam based on polymethacrylimide (PMI), which contains no halogen at all. The cell size is fine and uniform. It has excellent fire resistance characteristics.

Processing and production

HyboFOAM® CRH can withstand a medium temperature curing process with a maximum temperature of 150 ℃ and a maximum pressure of 0.5 MPa, depending on the density. Suitable for curing methods such as autoclave, vacuum bag, RTM, VARTM, VARI, HP-RTM, etc.

Due to its excellent surface resin absorption, engineers can find a perfect balance between peel strength and lightweight requirements.

Application

The application of **HyboFOAM® CRH** is pretty wide. Basically, it is suitable for most of sandwich structure composites parts in vehicle/high speed railway, such as interiors and wall panel, as well as the ones require fireproof or fire volatile matters.

Thermoforming and Shaping

To meet different dimension parts and geometry, it is very easy to shape **HyboFOAM® CRH** by thermo-shaping, 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® CRH 52	HyboFOAM® CRH 75	HyboFOAM® CRH 110
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
Compressive Strength	GB/T 8810 ASTM D1621 ISO 844	MPa psi	0.9 131	1.5 218	3 435
Compressive Modulus		MPa psi	40 5800	70 10150	110 15950
Tensile Strength	GB/T 1040.2 ASTM D638 ISO 527-2	MPa psi	1.8 261	2.6 377	4 580
Tensile Modulus		MPa psi	65 9425	110 15950	150 21750
Elongation at Break		%	3	3	2.5
Shear Strength	GB/T 1455 ASTM C273 DIN 53294	MPa psi	0.8 116	1.2 174	2.3 334
Shear Modulus		MPa psi	20 2900	35 5075	50 7250

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.