

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 Flame retardant characteristics.

Processing and production

HyboFOAM® CRH can withstand a medium temperature curing process with a maximum temperature of 150 °C 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 Flame retardant property.

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®<br>CRH 52 | HyboFOAM®<br>CRH 75 | HyboFOAM®<br>CRH 110 |
|-----------------------------|---------------------------------------|--------|---------------------|---------------------|----------------------|
| Density                     | GB/T 6343                             | kg/m³  | 52                  | 75                  | 110                  |
|                             | ASTM D1622                            | g/cm³  | 0.052               | 0.075               | 0.11                 |
|                             | ISO 845                               | lb/ft³ | 3.25                | 4.68                | 6.87                 |
| Compressive Strength        | GB/T 8813<br>ASTM D1621<br>ISO 844    | MPa    | 0.9                 | 1.5                 | 3                    |
| Compressive Modulus         |                                       | psi    | 131                 | 218                 | 435                  |
|                             |                                       | MPa    | 40                  | 70                  | 110                  |
| Tensile Strength            | GB/T 1040.2<br>ASTM D638<br>ISO 527-2 | psi    | 5800                | 10150               | 15950                |
|                             |                                       | MPa    | 1.8                 | 2.6                 | 4                    |
|                             |                                       | psi    | 261                 | 377                 | 580                  |
| Tensile Modulus             |                                       | MPa    | 65                  | 110                 | 150                  |
|                             |                                       | psi    | 9425                | 15950               | 21750                |
| Elongation at Break         |                                       | %      | 3                   | 3                   | 2.5                  |
| Shear Strength              | GB/T 1455<br>ASTM C273                | MPa    | 0.8                 | 1.2                 | 2.3                  |
|                             |                                       | psi    | 116                 | 174                 | 334                  |
| Shear Modulus               | DIN 53294                             | MPa    | 20                  | 35                  | 50                   |
|                             |                                       | psi    | 2900                | 5075                | 7250                 |
| Heat Deflection Temperature | GB/T 31295<br>DIN 53424               | °C     | ≥160                |                     |                      |

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® CRH** 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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