

Production Information

HyboFOAM® CRH

and lightweight requirements.

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

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               | MPa    | 0.9                 | 1.5                 | 3                    |
| Compressive Modulus         | ASTM D1621              | psi    | 131                 | 218                 | 435                  |
|                             | ISO 844                 | MPa    | 40                  | 70                  | 110                  |
|                             |                         | psi    | 5800                | 10150               | 15950                |
| Tensile Strength            | GB/T 1040.2             | MPa    | 1.8                 | 2.6                 | 4                    |
| Tensile Modulus             |                         | psi    | 261                 | 377                 | 580                  |
|                             |                         | MPa    | 65                  | 110                 | 150                  |
| Elongation at Break         | ISO 527-2               | psi    | 9425                | 15950               | 21750                |
|                             |                         | %      | 3                   | 3                   | 2.5                  |
| Shear Strength              | GB/T 1455               | MPa    | 0.8                 | 1.2                 | 2.3                  |
| Shear Modulus               | ASTM C273               | psi    | 116                 | 174                 | 334                  |
|                             | 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.

**HyboFOAM®** is a registered trademark of HYBO.

The above information, as well as all technical and other suggestions, are based on HYBO's existing knowledge and experience. However, HYBO assumes no liability for such information or advice, including the extent to which such information or advice may relate to third party intellectual property rights. HYBO reserves the right to change information or recommendations at any time without notice. HYBO disclaims all express or implied representations and warranties, and assumes no responsibility for the merchantability of the product or its suitability for a specific purpose (even if HYBO is aware of the purpose) or otherwise. HYBO is not responsible for any form of indirect, indirect or incidental damages (including loss of profits). The customer is fully responsible for arranging qualified experts to inspect and test all products. The mention of product names used by other companies is neither a recommendation nor recognition of the corresponding products, and does not mean that similar products cannot be used.

## 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)