

# TECHNICAL DATASHEET

## **MILLIFOAM RHC31HF**

MILLIFOAM® RHC31HF is a closed-cell rigid foam based on polymethacrylimide (PMI) chemistry and contains no CFC's. With its extremely low dielectric constant and favorable transmission properties in the high frequency region, it is ideal for the use in antenna systems. Applications range from miniature antennas in cell phones to large fixed ship-based and stationary antenna structures, radomes and mammography plates.

|                 |            |            |               |
|-----------------|------------|------------|---------------|
| Polymer         | PMI        | Sheet Size | 2500 x 625 mm |
| Thickness range | 0.5-3.0 mm | Supplier   | Evonik GmbH   |

Featuring an extremely fine cell structure, the foam ensures minimal resin uptake and good compatibility with metallic facing materials. MILLIFOAM® RHC31HF is suitable for hand lay-up, pre-preg processing and vacuum infusion at temperatures up to 130°C (266°F) and pressures up to 0.3 MPa (44 psi). The foam can be easily thermoformed or CNC machined to meet customized application requirements.

| Properties                 |                                   |
|----------------------------|-----------------------------------|
| Density                    | 32 kg/m <sup>3</sup>              |
| Compressive Strength       | 0.4 MPa                           |
| Tensile Strength           | 1.0 MPa                           |
| Tensile Modulus            | 36 MPa                            |
| Shear Strength             | 0.4 MPa                           |
| Shear Modulus              | 13 MPa                            |
| Elongation at Break        | 3.5 %                             |
| Dielectric Constant @10GHz | 1.046                             |
| Loss Tangent @10GHz        | 0.0017                            |
| Thermoforming Temperature  | 215°C (419°F)                     |
| Drying Conditions          | 4 hrs @ 130°C ± 5°C (266°F ± 9°F) |

#### Disclaimer

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