

# PYROFIL™ MR 50R12M

## Intermediate Modulus Carbon Fiber with High Strength Product Data Sheet

### Description

**PYROFIL™ MR 50R12M** is an intermediate modulus carbon fiber with extremely high tensile strength. It is a continuous carbon fiber and has 12K (12,000) filaments with approximately 6 microns diameter. **PYROFIL™ MR 50R12M** is a PAN based carbon fiber, which is made of non-textile precursor designed for high performance applications. **PYROFIL™ MR 50R12M** is totally suitable for many applications requiring higher tensile strength such as Aerospace.

### Typical Fiber Properties

| Fiber Properties        | Typical Values         |
|-------------------------|------------------------|
| Strand Tensile Strength | 5590 MPa (810 ksi)     |
| Strand Tensile Modulus  | 285 GPa (41 Msi)       |
| Filament Density        | 1.80 g/cm <sup>3</sup> |
| Mass Per Unit Length    | 570 mg/m               |
| Elongation              | 2.0%                   |
| Filament Count          | 12k (12,000)           |
| Filament Diameter       | 6.0 μm                 |

### Safety Precautions

It is recommended that customers should notice precautions for handling carbon fibers and operators should handle the material with clean wear, special gloves and eyeglasses to prevent from contacting the materials.

Material Safety Data Sheets (MSDS) are prepared for all MITSUBISHI RAYON products and are available if required.

### For More Information

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The numbers of the above preliminary specifications are representative properties obtainable. Mitsubishi Rayon Co., Ltd. cannot accept responsibility for the misapplication of this products nor for their use under controlled conditions. Numerical values resulting from the application of this material are dependent on processing details. It is recommended that the users develop his/her own application techniques and generate data consistent with his/her specific applications and process.