

# Radilon® BGV 40 Black

Polyamide 6

Radici Plastics

## Message:

Radilon® BGV 40 Black is a Polyamide 6 (Nylon 6) material filled with 40% glass fiber. It is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America.

Important attributes of Radilon® BGV 40 Black are:

Flame Rated

Heat Resistant

| General Information                                                   |            |                                  |                   |                |
|-----------------------------------------------------------------------|------------|----------------------------------|-------------------|----------------|
| Filler / Reinforcement                                                |            | Glass Fiber,40% Filler by Weight |                   |                |
| Features                                                              |            | Good Heat Aging Resistance       |                   |                |
| Appearance                                                            |            | Black                            |                   |                |
| Resin ID (ISO 1043)                                                   |            | PA6-GF40                         |                   |                |
| Physical                                                              | Dry        | Conditioned                      | Unit              | Test Method    |
| Density                                                               | 1.41       | --                               | g/cm <sup>3</sup> | ISO 1183       |
| Water Absorption <sup>1</sup><br>(Equilibrium, 23°C, 1.00 mm, 50% RH) | 1.8 to 2.2 | --                               | %                 | ISO 62         |
| Mechanical                                                            | Dry        | Conditioned                      | Unit              | Test Method    |
| Tensile Modulus                                                       | 12800      | 8500                             | MPa               | ISO 527-2/1A/1 |
| Tensile Stress (Yield)                                                | 200        | 130                              | MPa               | ISO 527-2/1A/5 |
| Tensile Strain (Break)                                                | 2.5        | 5.0                              | %                 | ISO 527-2/1A/5 |
| Flexural Modulus <sup>2</sup>                                         | 11500      | 7500                             | MPa               | ISO 178        |
| Flexural Stress <sup>3</sup>                                          | 295        | 210                              | MPa               | ISO 178        |
| Impact                                                                | Dry        | Conditioned                      | Unit              | Test Method    |
| Charpy Notched Impact Strength (23°C)                                 | 14         | 25                               | kJ/m <sup>2</sup> | ISO 179/1eA    |
| Charpy Unnotched Impact Strength                                      |            |                                  |                   | ISO 179/1eU    |
| -30°C                                                                 | 73         | --                               | kJ/m <sup>2</sup> |                |
| 23°C                                                                  | 80         | 100                              | kJ/m <sup>2</sup> |                |
| Thermal                                                               | Dry        | Conditioned                      | Unit              | Test Method    |
| Heat Deflection Temperature                                           |            |                                  |                   |                |
| 0.45 MPa, Unannealed                                                  | 220        | --                               | °C                | ISO 75-2/B     |
| 1.8 MPa, Unannealed                                                   | 215        | --                               | °C                | ISO 75-2/A     |
| Melting Temperature <sup>4</sup>                                      | 220        | --                               | °C                | ISO 3146       |
| Flammability                                                          | Dry        | Conditioned                      |                   | Test Method    |
| Flame Rating                                                          | HB         | --                               |                   | UL 94          |
| NOTE                                                                  |            |                                  |                   |                |
| 1.                                                                    | Saturation |                                  |                   |                |

|    |            |
|----|------------|
| 2. | 2.0 mm/min |
| 3. | 2.0 mm/min |
| 4. | 10°C/min   |

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