

# PENTAMID B S GV50 H black

Polyamide 6  
PENTAC Polymer GmbH

Message:  
Low viscosity, heat stabilised polyamide 6, 50% glass fiber reinforced

| General Information                     |       |                                                       |                    |             |
|-----------------------------------------|-------|-------------------------------------------------------|--------------------|-------------|
| Filler / Reinforcement                  |       | Glass fiber reinforced material, 50% filler by weight |                    |             |
| Additive                                |       | heat stabilizer                                       |                    |             |
| Features                                |       | Low viscosity                                         |                    |             |
|                                         |       | Thermal Stability                                     |                    |             |
| Agency Ratings                          |       | EC 1907/2006 (REACH)                                  |                    |             |
| Appearance                              |       | Black                                                 |                    |             |
| Forms                                   |       | Particle                                              |                    |             |
| Processing Method                       |       | Injection molding                                     |                    |             |
| Physical                                | Dry   | Conditioned                                           | Unit               | Test Method |
| Density                                 | 1.56  | --                                                    | g/cm <sup>3</sup>  | ISO 1183    |
| Molding Shrinkage                       |       |                                                       |                    | ISO 294-4   |
| Transverse flow                         | 0.40  | --                                                    | %                  | ISO 294-4   |
| Flow                                    | 0.25  | --                                                    | %                  | ISO 294-4   |
| Water Absorption                        |       |                                                       |                    | ISO 62      |
| Saturated, 23°C                         | 4.8   | --                                                    | %                  | ISO 62      |
| Equilibrium, 23°C, 50% RH               | 1.5   | --                                                    | %                  | ISO 62      |
| Viscosity Number                        | 120   | --                                                    | cm <sup>3</sup> /g | ISO 307     |
| Mechanical                              | Dry   | Conditioned                                           | Unit               | Test Method |
| Tensile Modulus                         | 15400 | 11000                                                 | MPa                | ISO 527-2/1 |
| Tensile Stress (Break)                  | 210   | 145                                                   | MPa                | ISO 527-2/5 |
| Tensile Strain (Break)                  | 2.5   | 3.6                                                   | %                  | ISO 527-2/5 |
| Impact                                  | Dry   | Conditioned                                           | Unit               | Test Method |
| Charpy Notched Impact Strength (23°C)   | 17    | 24                                                    | kJ/m <sup>2</sup>  | ISO 179/1eA |
| Charpy Unnotched Impact Strength (23°C) | 85    | 100                                                   | kJ/m <sup>2</sup>  | ISO 179/1eU |
| Thermal                                 | Dry   | Conditioned                                           | Unit               | Test Method |
| Heat Deflection Temperature             |       |                                                       |                    |             |
| 0.45 MPa, not annealed                  | 220   | --                                                    | °C                 | ISO 75-2/B  |
| 1.8 MPa, not annealed                   | 210   | --                                                    | °C                 | ISO 75-2/A  |
| Melting Temperature                     | 221   | --                                                    | °C                 | ISO 11357-3 |

| Flammability            | Dry                     | Conditioned | Test Method |
|-------------------------|-------------------------|-------------|-------------|
| Flame Rating            |                         |             | UL 94       |
| 1.6 mm                  | HB                      | --          | UL 94       |
| 3.2 mm                  | HB                      | --          | UL 94       |
| Additional Information  | Dry                     | Conditioned | Test Method |
| ISO Shortname           | PA6, MHRC, 12-160, GF50 | --          | ISO 1874    |
| Injection               | Dry                     | Unit        |             |
| Drying Temperature      | 80                      |             | °C          |
| Drying Time             | 3.0                     |             | hr          |
| Suggested Max Moisture  | 0.050 - 0.13            |             | %           |
| Suggested Max Regrind   | 20                      |             | %           |
| Rear Temperature        | 265 - 285               |             | °C          |
| Middle Temperature      | 270 - 295               |             | °C          |
| Front Temperature       | 275 - 285               |             | °C          |
| Processing (Melt) Temp  | 260 - 300               |             | °C          |
| Mold Temperature        | 60 - 100                |             | °C          |
| Injection Pressure      | 71.5                    |             | MPa         |
| Screw L/D Ratio         | 18.0:1.0 to 22.0:1.0    |             |             |
| Screw Compression Ratio | 2.2:1.0 to 2.8:1.0      |             |             |

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