

# PENTAMID AHT GV30 H1 schwarz

Polyamide 46

PENTAC Polymer GmbH

## Message:

Normal viscosity, high heat stabilised polyamide 4.6, easy flow, 30% glass fiber reinforced

| General Information                     |                                  |             |                    |             |
|-----------------------------------------|----------------------------------|-------------|--------------------|-------------|
| Filler / Reinforcement                  | Glass Fiber,30% Filler by Weight |             |                    |             |
| Additive                                | Heat Stabilizer                  |             |                    |             |
| Features                                | Good Flow                        |             |                    |             |
|                                         | Heat Stabilized                  |             |                    |             |
| Uses                                    | Automotive Under the Hood        |             |                    |             |
| Agency Ratings                          | EC 1907/2006 (REACH)             |             |                    |             |
| Appearance                              | Black                            |             |                    |             |
| Forms                                   | Pellets                          |             |                    |             |
| Physical                                | Dry                              | Conditioned | Unit               | Test Method |
| Density                                 | 1.41                             | --          | g/cm <sup>3</sup>  | ISO 1183    |
| Molding Shrinkage                       |                                  |             |                    | ISO 294-4   |
| Across Flow                             | 0.90                             | --          | %                  |             |
| Flow                                    | 0.60                             | --          | %                  |             |
| Water Absorption                        |                                  |             |                    | ISO 62      |
| Saturation, 23°C                        | 7.5                              | --          | %                  |             |
| Equilibrium, 23°C, 50% RH               | 2.0                              | --          | %                  |             |
| Viscosity Number                        | 140                              | --          | cm <sup>3</sup> /g | ISO 307     |
| Hardness                                | Dry                              | Conditioned | Unit               | Test Method |
| Ball Indentation Hardness (H 961/30)    | 250                              | --          | MPa                | ISO 2039-1  |
| Mechanical                              | Dry                              | Conditioned | Unit               | Test Method |
| Tensile Modulus                         | 10500                            | 6150        | MPa                | ISO 527-2/1 |
| Tensile Stress (Break)                  | 200                              | 110         | MPa                | ISO 527-2   |
| Tensile Strain (Break)                  | 3.7                              | 6.8         | %                  | ISO 527-2   |
| Flexural Modulus                        | 8800                             | --          | MPa                | ISO 178     |
| Flexural Stress                         | 250                              | --          | MPa                | ISO 178     |
| Impact                                  | Dry                              | Conditioned | Unit               | Test Method |
| Charpy Notched Impact Strength (23°C)   | 11                               | 20          | kJ/m <sup>2</sup>  | ISO 179/1eA |
| Charpy Unnotched Impact Strength (23°C) | 75                               | 85          | kJ/m <sup>2</sup>  | ISO 179/1eU |
| Thermal                                 | Dry                              | Conditioned | Unit               | Test Method |

|                               |                          |                          |       |             |
|-------------------------------|--------------------------|--------------------------|-------|-------------|
| Heat Deflection Temperature   |                          |                          |       |             |
| 0.45 MPa, Unannealed          | 290                      | --                       | °C    | ISO 75-2/B  |
| 1.8 MPa, Unannealed           | 290                      | --                       | °C    | ISO 75-2/A  |
| Melting Temperature           | 295                      | --                       | °C    | ISO 11357-3 |
| Electrical                    | Dry                      | Conditioned              | Unit  | Test Method |
| Electric Strength (1.00 mm)   | 28                       | --                       | kV/mm | IEC 60243-1 |
| Relative Permittivity (1 MHz) | 3.50                     | --                       |       | IEC 60250   |
| Comparative Tracking Index    | 275                      | --                       | V     | IEC 60112   |
| Flammability                  | Dry                      | Conditioned              | Unit  | Test Method |
| Flame Rating                  |                          |                          |       | UL 94       |
| 1.60 mm                       | HB                       | --                       |       |             |
| 3.20 mm                       | HB                       | --                       |       |             |
| Additional Information        | Dry                      | Conditioned              |       | Test Method |
| ISO Type                      | PA46, MHRC, 16-110, GF30 | PA46, MHRC, 16-110, GF30 |       | ISO 1874    |
| Injection                     | Dry                      | Unit                     |       |             |
| Drying Temperature            | 90.0                     |                          | °C    |             |
| Drying Time                   | 4.0                      |                          | hr    |             |
| Suggested Max Moisture        | 0.11                     |                          | %     |             |
| Suggested Max Regrind         | 20                       |                          | %     |             |
| Rear Temperature              | 295 to 320               |                          | °C    |             |
| Middle Temperature            | 310 to 325               |                          | °C    |             |
| Front Temperature             | 310 to 320               |                          | °C    |             |
| Processing (Melt) Temp        | 315                      |                          | °C    |             |
| Mold Temperature              | 100                      |                          | °C    |             |
| Injection Pressure            | 85.0                     |                          | MPa   |             |
| Holding Pressure              | 51.0                     |                          | MPa   |             |
| Screw L/D Ratio               | 20.0:1.0                 |                          |       |             |
| Screw Compression Ratio       | 2.2:1.0 to 2.8:1.0       |                          |       |             |

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