

# Durethan® BKV 35 H2.0 EF 900116

Polyamide 6

LANXESS Corporation

## Message:

Durethan® BKV 35 H2.0 EF 900116 is a Polyamide 6 (Nylon 6) material filled with 35% glass fiber. It is available in Latin America or North America.

Important attributes of Durethan® BKV 35 H2.0 EF 900116 are:

REACH Compliant

Heat Stabilizer

Typical application of Durethan® BKV 35 H2.0 EF 900116: Automotive

| General Information                                      |                        |                                  |                        |             |
|----------------------------------------------------------|------------------------|----------------------------------|------------------------|-------------|
| Filler / Reinforcement                                   |                        | Glass Fiber,35% Filler by Weight |                        |             |
| Additive                                                 |                        | Heat Stabilizer                  |                        |             |
| Features                                                 |                        | Heat Stabilized                  |                        |             |
| Agency Ratings                                           |                        | EC 1907/2006 (REACH)             |                        |             |
| Physical                                                 | Dry                    | Conditioned                      | Unit                   | Test Method |
| Density (23°C)                                           | 1.40                   | --                               | g/cm <sup>3</sup>      | ISO 1183    |
| Apparent Density                                         | 0.60                   | --                               | g/cm <sup>3</sup>      | ISO 60      |
| Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)               | 43.0                   | --                               | cm <sup>3</sup> /10min | ISO 1133    |
| Molding Shrinkage                                        |                        |                                  |                        | ISO 294-4   |
| Across Flow : 290°C, 2.00 mm <sup>1</sup>                | 0.60                   | --                               | %                      |             |
| Across Flow : 120°C, 2 hr, 2.00 mm <sup>2</sup>          | 0.15                   | --                               | %                      |             |
| Flow : 290°C, 2.00 mm <sup>3</sup>                       | 0.21                   | --                               | %                      |             |
| Flow : 120°C, 2 hr, 2.00 mm <sup>4</sup>                 | 0.070                  | --                               | %                      |             |
| Hardness                                                 | Dry                    | Conditioned                      | Unit                   | Test Method |
| Ball Indentation Hardness                                | 210                    | --                               | MPa                    | ISO 2039-1  |
| Mechanical                                               | Dry                    | Conditioned                      | Unit                   | Test Method |
| Tensile Modulus (23°C)                                   | 10500                  | 6700                             | MPa                    | ISO 527-2/1 |
| Tensile Stress (Break, 23°C)                             | 190                    | 115                              | MPa                    | ISO 527-2/5 |
| Tensile Strain (Break, 23°C)                             | 3.0                    | 6.0                              | %                      | ISO 527-2/5 |
| Flexural Modulus <sup>5</sup> (23°C)                     | 9500                   | 5900                             | MPa                    | ISO 178/A   |
| Flexural Stress <sup>6</sup>                             |                        |                                  |                        |             |
| 3.5% Strain                                              | 270                    | 150                              | MPa                    | ISO 178/A   |
| 23°C                                                     | 280                    | 180                              | MPa                    | ISO 178     |
| Flexural Strain at Flexural Strength <sup>7</sup> (23°C) | 4.0                    | 6.0                              | %                      |             |
| Burning Behavior <sup>8</sup>                            | passed                 | --                               |                        | ISO 3795    |
| ISO Shortname                                            | PA6, MHR, 10-100, GF35 | --                               |                        | ISO 1874    |
| Residual Moisture Content                                | 0.030 to 0.12          |                                  | %                      | Karl Fisher |

| Films                                                 | Dry         | Conditioned | Unit              | Test Method  |
|-------------------------------------------------------|-------------|-------------|-------------------|--------------|
| Film Puncture Energy                                  |             |             |                   | ISO 6603-2   |
| -- <sup>9</sup>                                       | 1.60        | --          | J                 |              |
| -- <sup>10</sup>                                      | 2.30        | --          | J                 |              |
| Film Puncture Force                                   |             |             |                   | ISO 6603-2   |
| -- <sup>11</sup>                                      | 760         | --          | N                 |              |
| -- <sup>12</sup>                                      | 833         | --          | N                 |              |
| Impact                                                | Dry         | Conditioned | Unit              | Test Method  |
| Charpy Notched Impact Strength                        |             |             |                   | ISO 179/1eA  |
| -30°C                                                 | 10          | 11          | kJ/m <sup>2</sup> |              |
| 23°C                                                  | 12          | 15          | kJ/m <sup>2</sup> |              |
| Charpy Unnotched Impact Strength                      |             |             |                   | ISO 179/1eU  |
| -30°C                                                 | 55          | 55          | kJ/m <sup>2</sup> |              |
| 23°C                                                  | 70          | 85          | kJ/m <sup>2</sup> |              |
| Notched Izod Impact Strength                          |             |             |                   | ISO 180/1A   |
| -30°C                                                 | 10          | 10          | kJ/m <sup>2</sup> |              |
| 23°C                                                  | 12          | 15          | kJ/m <sup>2</sup> |              |
| Unnotched Izod Impact Strength                        |             |             |                   | ISO 180/1U   |
| -30°C                                                 | 50          | 55          | kJ/m <sup>2</sup> |              |
| 23°C                                                  | 65          | 75          | 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                                   | 210         | --          | °C                | ISO 75-2/A   |
| 8.0 MPa, Unannealed                                   | 165         | --          | °C                | ISO 75-2/C   |
| Vicat Softening Temperature                           | 210         | --          | °C                | ISO 306/B120 |
| Melting Temperature <sup>13</sup>                     | 220         | --          | °C                | ISO 11357-3  |
| CLTE                                                  |             |             |                   | ISO 11359-2  |
| Flow : 23 to 55°C                                     | 3.0E-5      | --          | cm/cm/°C          |              |
| Transverse : 23 to 55°C                               | 9.0E-5      | --          | cm/cm/°C          |              |
| Electrical                                            | Dry         | Conditioned | Unit              | Test Method  |
| Comparative Tracking Index <sup>14</sup> (Solution A) | 425         | --          | V                 | IEC 60112    |
| Injection                                             | Dry         | Unit        | Test Method       |              |
| Drying Temperature - Dry Air Dryer                    | 80.0        |             | °C                |              |
| Drying Time - Dry Air Dryer                           | 2.0 to 6.0  |             | hr                |              |
| Processing (Melt) Temp                                | 250 to 290  |             | °C                |              |
| Mold Temperature                                      | 80.0 to 120 |             | °C                |              |

| NOTE |                             |
|------|-----------------------------|
| 1.   | 60x60x2; MT 80°C; 600 Bar   |
| 2.   | 60x60x2                     |
| 3.   | 60x60x2; MT 80°C; 600 Bar   |
| 4.   | 60x60x2                     |
| 5.   | 2.0 mm/min                  |
| 6.   | 2.0 mm/min                  |
| 7.   | Pull Rate: 2 mm/min; 50% RH |
| 8.   | US-FMVSS302                 |
| 9.   | -30°C                       |
| 10.  | 23°C                        |
| 11.  | -30°C                       |
| 12.  | 23°C                        |
| 13.  | 10°C/min                    |
| 14.  | Depth of Erosion: < 1.00 mm |

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