

# Durethan® B 38 F KA 000000

Polyamide 6  
LANXESS Corporation

Message:  
PA 6, non-reinforced,Extrusion, medium viscosity, slip agent, nucleated

| General Information                                      |                 |                      |                        |              |
|----------------------------------------------------------|-----------------|----------------------|------------------------|--------------|
| Additive                                                 |                 | Slip                 |                        |              |
| Features                                                 |                 | Medium Viscosity     |                        |              |
|                                                          |                 | Slip                 |                        |              |
| Agency Ratings                                           |                 | EC 1907/2006 (REACH) |                        |              |
| Processing Method                                        |                 | Extrusion            |                        |              |
| Physical                                                 | Dry             | Conditioned          | Unit                   | Test Method  |
| Density (23°C)                                           | 1.14            | --                   | g/cm <sup>3</sup>      | ISO 1183     |
| Apparent Density                                         | 0.70            | --                   | g/cm <sup>3</sup>      | ISO 60       |
| Melt Volume-Flow Rate (MVR) (235°C/2.16 kg)              | 5.00            | --                   | cm <sup>3</sup> /10min | ISO 1133     |
| Water Absorption                                         |                 |                      |                        | ISO 62       |
| Saturation, 23°C                                         | 10              | --                   | %                      |              |
| Equilibrium, 23°C, 50% RH                                | 3.0             | --                   | %                      |              |
| Hardness                                                 | Dry             | Conditioned          | Unit                   | Test Method  |
| Ball Indentation Hardness                                | 130             | 40.0                 | MPa                    | ISO 2039-1   |
| Mechanical                                               | Dry             | Conditioned          | Unit                   | Test Method  |
| Tensile Modulus (23°C)                                   | 2800            | 800                  | MPa                    | ISO 527-2/1  |
| Tensile Stress (Yield, 23°C)                             | 75.0            | 35.0                 | MPa                    | ISO 527-2/50 |
| Tensile Strain (Yield, 23°C)                             | 4.0             | 25                   | %                      | ISO 527-2/50 |
| Nominal Tensile Strain at Break (23°C)                   | 20              | > 50                 | %                      | ISO 527-2/50 |
| Flexural Modulus <sup>1</sup> (23°C)                     | 2600            | 700                  | MPa                    | ISO 178/A    |
| Flexural Stress <sup>2</sup> (3.5% Strain)               | 90.0            | 20.0                 | MPa                    | ISO 178/A    |
| Flexural Strain at Flexural Strength <sup>3</sup> (23°C) | 5.0             | 8.0                  | %                      |              |
| ISO Shortname                                            | PA-6,ES,22-030N | --                   |                        | ISO 1874     |
| Impact                                                   | Dry             | Conditioned          | Unit                   | Test Method  |
| Charpy Notched Impact Strength                           |                 |                      |                        | ISO 179/1eA  |
| -30°C                                                    | 5.0             | < 5.0                | kJ/m <sup>2</sup>      |              |
| 23°C                                                     | 5.0             | 50                   | kJ/m <sup>2</sup>      |              |

|                                         |                             |             |                   |              |
|-----------------------------------------|-----------------------------|-------------|-------------------|--------------|
| Charpy Unnotched Impact Strength        |                             |             | ISO 179/1eU       |              |
| -30°C                                   | No Break                    | No Break    |                   |              |
| 23°C                                    | No Break                    | No Break    |                   |              |
| Notched Izod Impact Strength            |                             |             | ISO 180/1A        |              |
| -30°C                                   | 7.0                         | 7.5         | kJ/m <sup>2</sup> |              |
| 23°C                                    | 7.0                         | 50          | kJ/m <sup>2</sup> |              |
| Thermal                                 | Dry                         | Conditioned | Unit              | Test Method  |
| Heat Deflection Temperature             |                             |             |                   |              |
| 0.45 MPa, Unannealed                    | 150                         | --          | °C                | ISO 75-2/B   |
| 1.8 MPa, Unannealed                     | 50.0                        | --          | °C                | ISO 75-2/A   |
| 8.0 MPa, Unannealed                     | 40.0                        | --          | °C                | ISO 75-2/C   |
| Vicat Softening Temperature             | 200                         | --          | °C                | ISO 306/B120 |
| Melting Temperature <sup>4</sup>        | 222                         | --          | °C                | ISO 11357-3  |
| CLTE                                    |                             |             | ISO 11359-2       |              |
| Flow : 23 to 55°C                       | 8.0E-5                      | --          | cm/cm/°C          |              |
| Transverse : 23 to 55°C                 | 8.0E-5                      | --          | cm/cm/°C          |              |
| Electrical                              | Dry                         | Conditioned | Unit              | Test Method  |
| Surface Resistivity                     | 1.0E+14                     | 1.0E+13     | ohms              | IEC 60093    |
| Volume Resistivity (23°C)               | 1.0E+14                     | 1.0E+12     | ohms·cm           | IEC 60093    |
| Electric Strength (23°C, 1.00 mm)       | 30                          | 35          | kV/mm             | IEC 60243-1  |
| Relative Permittivity                   |                             |             | IEC 60250         |              |
| 23°C, 100 Hz                            | 3.90                        | 18.0        |                   |              |
| 23°C, 1 MHz                             | 3.50                        | 4.00        |                   |              |
| Comparative Tracking Index (Solution A) | 600                         | --          | V                 | IEC 60112    |
| Flammability                            | Dry                         | Conditioned | Unit              | Test Method  |
| Flame Rating                            |                             |             | UL 94             |              |
| 1.60 mm                                 | HB                          | --          |                   |              |
| 3.20 mm                                 | HB                          | --          |                   |              |
| Oxygen Index <sup>5</sup>               | 24                          | --          | %                 | ISO 4589-2   |
| Injection                               | Dry                         | Unit        |                   |              |
| Drying Temperature - Dry Air Dryer      | 80.0                        |             | °C                |              |
| Drying Time - Dry Air Dryer             | 2.0 to 6.0                  |             | hr                |              |
| NOTE                                    |                             |             |                   |              |
| 1.                                      | 2.0 mm/min                  |             |                   |              |
| 2.                                      | 2.0 mm/min                  |             |                   |              |
| 3.                                      | Pull Rate: 2 mm/min; 50% RH |             |                   |              |
| 4.                                      | 10°C/min                    |             |                   |              |

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