

# Durethan® B 30 S F30 000000

Polyamide 6

LANXESS GmbH

## Message:

PA 6, non-reinforced, injection molding, flame retardant

| General Information                                      |                                         |                   |              |
|----------------------------------------------------------|-----------------------------------------|-------------------|--------------|
| UL YellowCard                                            | E245249-100654671                       |                   |              |
| Additive                                                 | Flame Retardant                         |                   |              |
| Features                                                 | Flame Retardant                         |                   |              |
| Processing Method                                        | Injection Molding                       |                   |              |
| Physical                                                 | Nominal Value                           | Unit              | Test Method  |
| Density (23°C)                                           | 1.35                                    | g/cm <sup>3</sup> | ISO 1183     |
| Molding Shrinkage                                        |                                         |                   | ISO 2577     |
| Across Flow : 260°C, 2.00 mm <sup>1</sup>                | 1.1                                     | %                 |              |
| Across Flow : 120°C, 4 hr, 2.00 mm <sup>2</sup>          | 0.40                                    | %                 |              |
| Flow : 260°C, 2.00 mm <sup>3</sup>                       | 1.1                                     | %                 |              |
| Flow : 120°C, 4 hr, 2.00 mm <sup>4</sup>                 | 0.40                                    | %                 |              |
| Mechanical                                               | Nominal Value                           | Unit              | Test Method  |
| Tensile Modulus (23°C)                                   | 3600                                    | MPa               | ISO 527-2/1  |
| Tensile Stress (Yield, 23°C)                             | 70.0                                    | MPa               | ISO 527-2/50 |
| Tensile Strain (Yield, 23°C)                             | 3.7                                     | %                 | ISO 527-2/50 |
| Nominal Tensile Strain at Break (23°C)                   | 9.0                                     | %                 | ISO 527-2/50 |
| Flexural Modulus <sup>5</sup> (23°C)                     | 3200                                    | MPa               | ISO 178/A    |
| Flexural Stress                                          |                                         |                   | ISO 178/A    |
| 3.5% Strain, 23°C                                        | 100                                     | MPa               |              |
| 23°C <sup>6</sup>                                        | 110                                     | MPa               |              |
| Flexural Strain at Flexural Strength <sup>7</sup> (23°C) | 5.5                                     | %                 | ISO 178/A    |
| ISO Shortname                                            | PA 6, GFHR, 14-040; ISO 1043-PA FR (17) |                   | ISO 1874     |
| Admissible Residence Time at Tmax                        | > 10.0                                  | min               |              |
| Residual Moisture Content                                | 0.030 to 0.12                           | %                 | Karl Fisher  |
| Impact                                                   | Nominal Value                           | Unit              | Test Method  |
| Charpy Notched Impact Strength                           |                                         |                   | ISO 179/1eA  |
| -30°C                                                    | < 10                                    | kJ/m <sup>2</sup> |              |
| 23°C                                                     | < 10                                    | kJ/m <sup>2</sup> |              |
| Charpy Unnotched Impact Strength                         |                                         |                   | ISO 179/1eU  |
| -30°C                                                    | 130                                     | kJ/m <sup>2</sup> |              |
| 23°C                                                     | 150                                     | kJ/m <sup>2</sup> |              |
| Notched Izod Impact Strength                             |                                         |                   | ISO 180/1A   |
| -30°C                                                    | < 10                                    | kJ/m <sup>2</sup> |              |

|                                                   |                             |                   |                |
|---------------------------------------------------|-----------------------------|-------------------|----------------|
| 23°C                                              | < 10                        | kJ/m <sup>2</sup> |                |
| Unnotched Izod Impact Strength                    |                             |                   | ISO 180/1U     |
| -30°C                                             | 100                         | kJ/m <sup>2</sup> |                |
| 23°C                                              | 120                         | kJ/m <sup>2</sup> |                |
| Thermal                                           | Nominal Value               | Unit              | Test Method    |
| Heat Deflection Temperature (1.8 MPa, Unannealed) | 70.0                        | °C                | ISO 75-2/A     |
| Melting Temperature <sup>8</sup>                  | 222                         | °C                | ISO 11357-3    |
| Electrical                                        | Nominal Value               | Unit              | Test Method    |
| Comparative Tracking Index (Solution A)           | 300                         | V                 | IEC 60112      |
| Flammability                                      | Nominal Value               | Unit              | Test Method    |
| Flame Rating                                      |                             |                   | UL 94          |
| 0.400 mm                                          | V-0                         |                   |                |
| 0.750 mm                                          | V-0                         |                   |                |
| 1.50 mm                                           | V-0                         |                   |                |
| 2.00 mm                                           | 5VA                         |                   |                |
| 3.00 mm                                           | 5VA                         |                   |                |
| Glow Wire Flammability Index                      |                             |                   | IEC 60695-2-12 |
| 0.800 mm                                          | 960                         | °C                |                |
| 1.50 mm                                           | 960                         | °C                |                |
| 3.00 mm                                           | 960                         | °C                |                |
| Glow Wire Ignition Temperature                    |                             |                   | IEC 60695-2-13 |
| 0.750 mm                                          | 825                         | °C                |                |
| 1.50 mm                                           | 825                         | °C                |                |
| 3.00 mm                                           | 800                         | °C                |                |
| Injection                                         | Nominal Value               | 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 270                  | °C                |                |
| Mold Temperature                                  | 80.0 to 100                 | °C                |                |
| NOTE                                              |                             |                   |                |
| 1.                                                | 60x60x2mm, 80°C MT, 600 bar |                   |                |
| 2.                                                | 60x60x2mm                   |                   |                |
| 3.                                                | 60x60x2mm, 80°C MT, 600 bar |                   |                |
| 4.                                                | 60x60x2mm                   |                   |                |
| 5.                                                | 2.0 mm/min                  |                   |                |
| 6.                                                | 2.0 mm/min                  |                   |                |
| 7.                                                | 2 mm/min                    |                   |                |
| 8.                                                | 10°C/min                    |                   |                |

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