

# DYNAMID DYN-RN6G35IM HSL BK

Polyamide 6  
Dynamic Polymer Solutions

| Technical Data                                                                                                              |                                                                                           |                                                                                       |                                                     |              |
|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------|--------------|
| Product Description                                                                                                         |                                                                                           |                                                                                       |                                                     |              |
| Polyamide 6, 35% glass fiber reinforced, impact modified, heat stabilized & lubricated black Produced with recycled content |                                                                                           |                                                                                       |                                                     |              |
| General                                                                                                                     |                                                                                           |                                                                                       |                                                     |              |
| Material Status                                                                                                             | • Commercial: Active                                                                      |                                                                                       |                                                     |              |
| Literature <sup>1</sup>                                                                                                     | • <a href="#">Technical Datasheet (English)</a>                                           |                                                                                       |                                                     |              |
| Availability                                                                                                                | • North America                                                                           |                                                                                       |                                                     |              |
| Filler / Reinforcement                                                                                                      | • Glass Fiber, 35% Filler by Weight                                                       |                                                                                       |                                                     |              |
| Additive                                                                                                                    | • Heat Stabilizer                                                                         | • Impact Modifier                                                                     | • Lubricant                                         |              |
| Recycled Content                                                                                                            | • Yes                                                                                     |                                                                                       |                                                     |              |
| Features                                                                                                                    | • Abrasion Resistant<br>• Chemical Resistant<br>• Good Processability<br>• Good Stiffness | • Good Strength<br>• Heat Stabilized<br>• High Impact Resistance<br>• Impact Modified | • Low Temperature Impact Resistance<br>• Lubricated |              |
| Appearance                                                                                                                  | • Black                                                                                   |                                                                                       |                                                     |              |
| Processing Method                                                                                                           | • Injection Molding                                                                       |                                                                                       |                                                     |              |
| Physical                                                                                                                    |                                                                                           | Nominal Value (English)                                                               | Nominal Value (SI)                                  | Test Method  |
| Density / Specific Gravity                                                                                                  |                                                                                           |                                                                                       |                                                     |              |
| --                                                                                                                          |                                                                                           | 1.35                                                                                  | 1.35 g/cm³                                          | ASTM D792    |
| 73°F (23°C)                                                                                                                 |                                                                                           | 1.35 g/cm³                                                                            | 1.35 g/cm³                                          | ISO 1183     |
| Mechanical                                                                                                                  |                                                                                           | Nominal Value (English)                                                               | Nominal Value (SI)                                  | Test Method  |
| Tensile Modulus                                                                                                             |                                                                                           |                                                                                       |                                                     |              |
| -- <sup>3</sup>                                                                                                             |                                                                                           | 1.01E+6 psi                                                                           | 6930 MPa                                            | ASTM D638    |
| --                                                                                                                          |                                                                                           | 1.00E+6 psi                                                                           | 6930 MPa                                            | ISO 527-1/10 |
| Tensile Strength                                                                                                            |                                                                                           |                                                                                       |                                                     |              |
| Yield <sup>4</sup>                                                                                                          |                                                                                           | 19200 psi                                                                             | 132 MPa                                             | ASTM D638    |
| Yield                                                                                                                       |                                                                                           | 19000 psi                                                                             | 131 MPa                                             | ISO 527-2/50 |
| Tensile Elongation                                                                                                          |                                                                                           |                                                                                       |                                                     |              |
| Break <sup>4</sup>                                                                                                          |                                                                                           | 5.0 %                                                                                 | 5.0 %                                               | ASTM D638    |
| Break                                                                                                                       |                                                                                           | 3.6 %                                                                                 | 3.6 %                                               | ISO 527-2/50 |
| Flexural Modulus <sup>5</sup>                                                                                               |                                                                                           |                                                                                       |                                                     |              |
| --                                                                                                                          |                                                                                           | 1.00E+6 psi                                                                           | 6890 MPa                                            | ASTM D790    |
| --                                                                                                                          |                                                                                           | 1.17E+6 psi                                                                           | 8060 MPa                                            | ISO 178      |
| Flexural Strength <sup>5</sup>                                                                                              |                                                                                           |                                                                                       |                                                     |              |
| --                                                                                                                          |                                                                                           | 30000 psi                                                                             | 207 MPa                                             | ASTM D790    |
| --                                                                                                                          |                                                                                           | 33400 psi                                                                             | 230 MPa                                             | ISO 178      |
| Impact                                                                                                                      |                                                                                           | Nominal Value (English)                                                               | Nominal Value (SI)                                  | Test Method  |
| Charpy Notched Impact Strength (73°F (23°C))                                                                                |                                                                                           | 4.1 ft·lb/in²                                                                         | 8.7 kJ/m²                                           | ISO 179      |
| Notched Izod Impact                                                                                                         |                                                                                           |                                                                                       |                                                     |              |
| 73°F (23°C)                                                                                                                 |                                                                                           | 2.8 ft·lb/in                                                                          | 150 J/m                                             | ASTM D256    |
| 73°F (23°C)                                                                                                                 |                                                                                           | 8.0 ft·lb/in²                                                                         | 17 kJ/m²                                            | ISO 180      |

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| Thermal                           | Nominal Value (English) | Nominal Value (SI) | Test Method            |
|-----------------------------------|-------------------------|--------------------|------------------------|
| Deflection Temperature Under Load |                         |                    |                        |
| 66 psi (0.45 MPa), Unannealed     | 408 °F                  | 209 °C             | ASTM D648              |
| 66 psi (0.45 MPa), Unannealed     | 423 °F                  | 217 °C             | ISO 75-2/B             |
| 264 psi (1.8 MPa), Unannealed     | 394 °F                  | 201 °C             | ASTM D648              |
| 264 psi (1.8 MPa), Unannealed     | 399 °F                  | 204 °C             | ISO 75-2/A             |
| Peak Melting Temperature          | 430 °F                  | 221 °C             | ASTM D3418<br>ISO 3146 |

| Injection              | Nominal Value (English) | Nominal Value (SI) |
|------------------------|-------------------------|--------------------|
| Drying Temperature     | 140 to 176 °F           | 60 to 80 °C        |
| Drying Time            | 3.0 to 5.0 hr           | 3.0 to 5.0 hr      |
| Suggested Max Moisture | < 0.15 %                | < 0.15 %           |
| Processing (Melt) Temp | 482 to 536 °F           | 250 to 280 °C      |
| Mold Temperature       | 122 to 167 °F           | 50 to 75 °C        |
| Injection Rate         | Fast                    | Fast               |
| Back Pressure          | 80.0 to 130 psi         | 0.552 to 0.896 MPa |

Notes

- <sup>1</sup> These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.
- <sup>2</sup> Typical properties: these are not to be construed as specifications.
- <sup>3</sup> 0.39 in/min (10 mm/min)
- <sup>4</sup> 2.0 in/min (50 mm/min)
- <sup>5</sup> 0.20 in/min (5.0 mm/min)

