

## Technical Data Sheet



# Schulamid 66 GF 50 H

Polyamide 66  
LyondellBasell Industries  
Engineering Plastics

### Product Description

50% glass fiber reinforced, heat stabilized Polyamide 66

### General

|                        |                                                                |                                                                           |                                           |
|------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------|-------------------------------------------|
| Material Status        | • Commercial: Active                                           |                                                                           |                                           |
| Availability           | • Africa & Middle East<br>• Asia Pacific                       | • Europe<br>• Latin America                                               | • North America                           |
| Filler / Reinforcement | • Glass Fiber, 50% Filler by Weight                            |                                                                           |                                           |
| Features               | • Crack Resistant<br>• Good Processability<br>• Good Toughness | • Heat Aging Resistant<br>• Low Moisture Absorption<br>• Medium Viscosity | • Oil Resistant<br>• Ultra High Stiffness |
| UL File Number         | • E86615                                                       |                                                                           |                                           |
| Processing Method      | • Injection Molding                                            |                                                                           |                                           |

| Physical                             | Dry                | Conditioned        | Unit                                          | Test Method                |
|--------------------------------------|--------------------|--------------------|-----------------------------------------------|----------------------------|
| Density                              | 1.57               | --                 | g/cm <sup>3</sup>                             | ISO 1183/A                 |
| Water Absorption                     |                    |                    |                                               | ISO 62                     |
| Equilibrium, 73°F (23°C), 50% RH     | 1.2                | --                 | %                                             |                            |
| Mechanical                           | Dry                | Conditioned        | Unit                                          | Test Method                |
| Tensile Modulus                      | 2.39E+6<br>(16500) | 1.89E+6<br>(13000) | psi<br>(MPa)                                  | ISO 527-1/1A/1             |
| Tensile Stress (Break)               | 33100<br>(228)     | 26100<br>(180)     | psi<br>(MPa)                                  | ISO 527-2/1A/5             |
| Tensile Strain (Break)               | 2.3                | 3.3                | %                                             | ISO 527-2/1A/5             |
| Impact                               | Dry                | Conditioned        | Unit                                          | Test Method                |
| Charpy Notched Impact Strength       |                    |                    |                                               | ISO 179/1eA                |
| -22°F (-30°C)                        | 5.7<br>(12)        | --                 | ft-lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |                            |
| 73°F (23°C)                          | 6.7<br>(14)        | 8.6<br>(18)        | ft-lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |                            |
| Charpy Unnotched Impact Strength     |                    |                    |                                               | ISO 179/1eU                |
| -22°F (-30°C)                        | 33<br>(70)         | --                 | ft-lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |                            |
| 73°F (23°C)                          | 43<br>(90)         | 45<br>(94)         | ft-lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |                            |
| Hardness                             | Dry                | Conditioned        | Unit                                          | Test Method                |
| Ball Indentation Hardness (H 358/30) | 43500<br>(300)     | 31900<br>(220)     | psi<br>(MPa)                                  | ISO 2039-1                 |
| Thermal                              | Dry                | Conditioned        | Unit                                          | Test Method                |
| Deflection Temperature Under Load    |                    |                    |                                               |                            |
| 66 psi (0.45 MPa), Unannealed        | > 482<br>(> 250)   | --                 | °F<br>(°C)                                    | ISO 75-2/Bf                |
| 264 psi (1.8 MPa), Unannealed        | > 482<br>(> 250)   | --                 | °F<br>(°C)                                    | ISO 75-2/Af                |
| Vicat Softening Temperature          | > 482<br>(> 250)   | --                 | °F<br>(°C)                                    | ISO 306/B50<br>ISO 306/A50 |

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| Thermal                      | Dry           | Conditioned | Unit               | Test Method             |
|------------------------------|---------------|-------------|--------------------|-------------------------|
| RTI Elec                     |               |             |                    | UL 746B                 |
| 0.030 in (0.75 mm)           | 248<br>(120)  | --          | °F<br>(°C)         |                         |
| 0.06 in (1.5 mm)             | 248<br>(120)  | --          | °F<br>(°C)         |                         |
| 0.12 in (3.0 mm)             | 248<br>(120)  | --          | °F<br>(°C)         |                         |
| RTI Imp                      |               |             |                    | UL 746B                 |
| 0.030 in (0.75 mm)           | 221<br>(105)  | --          | °F<br>(°C)         |                         |
| 0.06 in (1.5 mm)             | 221<br>(105)  | --          | °F<br>(°C)         |                         |
| 0.12 in (3.0 mm)             | 239<br>(115)  | --          | °F<br>(°C)         |                         |
| RTI Str                      |               |             |                    | UL 746B                 |
| 0.030 in (0.75 mm)           | 248<br>(120)  | --          | °F<br>(°C)         |                         |
| 0.06 in (1.5 mm)             | 248<br>(120)  | --          | °F<br>(°C)         |                         |
| 0.12 in (3.0 mm)             | 266<br>(130)  | --          | °F<br>(°C)         |                         |
| Electrical                   | Dry           | Conditioned | Unit               | Test Method             |
| Surface Resistivity          | > 1.0E+15     | > 1.0E+12   | ohms               | IEC 60093               |
| Volume Resistivity           | > 1.0E+13     | > 1.0E+10   | ohms·m             | IEC 62631-3-1           |
| Comparative Tracking Index   | 450           | --          | V                  | IEC 60112               |
| Flammability                 | Dry           | Conditioned | Unit               | Test Method             |
| Burning Rate                 |               |             |                    |                         |
| 0.0787 in (2.00 mm)          | 1.2<br>(30)   | --          | in/min<br>(mm/min) | ISO 3795                |
| 0.0787 in (2.00 mm)          | 1.2<br>(30)   | --          | in/min<br>(mm/min) | FMVSS 302               |
| Flammability Classification  |               |             |                    | IEC 60695-11-10,<br>-20 |
| 0.030 in (0.75 mm)           | HB            | --          |                    |                         |
| 0.06 in (1.5 mm)             | HB            | --          |                    |                         |
| 0.12 in (3.0 mm)             | HB            | --          |                    |                         |
| Glow Wire Flammability Index |               |             |                    | IEC 60695-2-12          |
| 0.06 in (1.5 mm)             | 1110<br>(600) | --          | °F<br>(°C)         |                         |
| 0.12 in (3.0 mm)             | 1110<br>(600) | --          | °F<br>(°C)         |                         |

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| Injection              | Dry (English)  | Dry (SI)       |
|------------------------|----------------|----------------|
| Drying Temperature     | 176 °F         | 80 °C          |
| Drying Time            | 3.0 to 4.0 hr  | 3.0 to 4.0 hr  |
| Suggested Max Moisture | 0.04 to 0.10 % | 0.04 to 0.10 % |
| Processing (Melt) Temp | 536 to 572 °F  | 280 to 300 °C  |
| Mold Temperature       | 140 to 248 °F  | 60 to 120 °C   |

### Notes

These are typical property values not to be construed as specification limits.

### Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

### Product Storage and Handling

- Product should be stored in dry conditions at temperatures below 50°C and protected from UV-light
- Improper storage may bring damage to the packaging and can negatively affects on the quality of this product
- Keep material completely dry for good processing

### Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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