

## Technical Data Sheet



# Schulamid 6 GF 30 HI FR 4

Polyamide 6  
LyondellBasell Industries  
Engineering Plastics

### Product Description

30% glass fibre reinforced and impact modified PA 6; flame retardant containing halogens without PBDE

### General

|                        |                                          |                             |                   |
|------------------------|------------------------------------------|-----------------------------|-------------------|
| Material Status        | • Commercial: Active                     |                             |                   |
| Availability           | • Africa & Middle East<br>• Asia Pacific | • Europe<br>• Latin America | • North America   |
| Filler / Reinforcement | • Glass Fiber, 30% Filler by Weight      |                             |                   |
| Additive               | • Impact Modifier                        |                             |                   |
| Features               | • Flame Retardant                        | • Halogenated               | • Impact Modified |
| Processing Method      | • Injection Molding                      |                             |                   |
| Resin ID (ISO 1043)    | • PA6-I GF30 FR(17)                      |                             |                   |

| Physical                          | Dry                | Conditioned       | Unit                                          | Test Method    |
|-----------------------------------|--------------------|-------------------|-----------------------------------------------|----------------|
| Density                           | 1.59               | --                | g/cm <sup>3</sup>                             | ISO 1183/A     |
| Mechanical                        | Dry                | Conditioned       | Unit                                          | Test Method    |
| Tensile Modulus                   | 1.60E+6<br>(11000) | 1.23E+6<br>(8500) | psi<br>(MPa)                                  | ISO 527-1/1A/1 |
| Tensile Stress (Break)            | 21800<br>(150)     | 15100<br>(104)    | psi<br>(MPa)                                  | ISO 527-2/1A/5 |
| Tensile Strain (Break)            | 2.5                | 4.0               | %                                             | ISO 527-2/1A/5 |
| Impact                            | Dry                | Conditioned       | Unit                                          | Test Method    |
| Charpy Notched Impact Strength    |                    |                   |                                               | ISO 179/1eA    |
| -22°F (-30°C)                     | 4.0<br>(8.5)       | --                | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |                |
| 73°F (23°C)                       | 4.8<br>(10)        | 5.7<br>(12)       | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |                |
| Charpy Unnotched Impact Strength  |                    |                   |                                               | ISO 179/1eU    |
| -22°F (-30°C)                     | 26<br>(54)         | --                | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |                |
| 73°F (23°C)                       | 29<br>(60)         | 31<br>(65)        | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |                |
| Thermal                           | Dry                | Conditioned       | Unit                                          | Test Method    |
| Deflection Temperature Under Load |                    |                   |                                               |                |
| 66 psi (0.45 MPa), Unannealed     | 421<br>(216)       | --                | °F<br>(°C)                                    | ISO 75-2/Bf    |
| 264 psi (1.8 MPa), Unannealed     | 405<br>(207)       | --                | °F<br>(°C)                                    | ISO 75-2/Af    |
| Vicat Softening Temperature       |                    |                   |                                               |                |
| --                                | 397<br>(203)       | --                | °F<br>(°C)                                    | ISO 306/B50    |
| --                                | 412<br>(211)       | --                | °F<br>(°C)                                    | ISO 306/A120   |
| Electrical                        | Dry                | Conditioned       | Unit                                          | Test Method    |
| Surface Resistivity               | > 1.0E+15          | --                | ohms                                          | IEC 60093      |
| Volume Resistivity                | > 1.0E+13          | --                | ohms·m                                        | IEC 62631-3-1  |
| Comparative Tracking Index        | 225                | --                | V                                             | IEC 60112      |

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| Flammability                   | Dry           | Conditioned | Unit       | Test Method          |
|--------------------------------|---------------|-------------|------------|----------------------|
| Flammability Classification    |               |             |            | IEC 60695-11-10, -20 |
| 0.030 in (0.75 mm)             | V-0           | --          |            |                      |
| 0.06 in (1.5 mm)               | V-0           | --          |            |                      |
| 0.12 in (3.0 mm)               | V-0           | --          |            |                      |
| Glow Wire Flammability Index   |               |             |            | IEC 60695-2-12       |
| 0.030 in (0.75 mm)             | 1760<br>(960) | --          | °F<br>(°C) |                      |
| 0.06 in (1.5 mm)               | 1760<br>(960) | --          | °F<br>(°C) |                      |
| 0.12 in (3.0 mm)               | 1760<br>(960) | --          | °F<br>(°C) |                      |
| Glow Wire Ignition Temperature |               |             |            | IEC 60695-2-13       |
| 0.030 in (0.75 mm)             | 1470<br>(800) | --          | °F<br>(°C) |                      |
| 0.06 in (1.5 mm)               | 1470<br>(800) | --          | °F<br>(°C) |                      |
| 0.12 in (3.0 mm)               | 1470<br>(800) | --          | °F<br>(°C) |                      |
| Oxygen Index                   | 34            | --          | %          | ISO 4589-2           |

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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 | 464 to 518 °F   | 240 to 270 °C    |
| Mold Temperature       | 140 to 212 °F   | 60 to 100 °C     |
| Injection Rate         | Slow-Moderate   | Slow-Moderate    |
| Back Pressure          | 290 to 1160 psi | 2.00 to 8.00 MPa |
| Screw Speed            | < 591 in/min    | < 15 m/min       |

### Injection Notes

Mould surfaces in contact with melt should be of non-corrosive steel, chrome content >12%

### 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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