

# Schulamid 6 GBF 3015 FR 4

Polyamide 6  
LyondellBasell Industries  
Engineering Plastics

## Product Description

30% glass fiber and glass beads reinforced flame-retardant Polyamide 6 grade with low warpage, high mechanical stability and high dimensional stability; without PBDE

## General

|                        |                                                |
|------------------------|------------------------------------------------|
| Filler / Reinforcement | • Glass Bead\Glass Fiber, 30% Filler by Weight |
| Features               | • Flame Retardant • Low Warpage                |
| UL File Number         | • E86615                                       |
| Processing Method      | • Injection Molding                            |
| Resin ID (ISO 1043)    | • PA6 (GF+GB)30 FR(17)                         |

| Physical | Dry  | Conditioned | Unit              | Test Method |
|----------|------|-------------|-------------------|-------------|
| Density  | 1.60 | --          | g/cm <sup>3</sup> | ISO 1183/A  |

|                  |     |    |                    |         |
|------------------|-----|----|--------------------|---------|
| Viscosity Number | 145 | -- | cm <sup>3</sup> /g | ISO 307 |
|------------------|-----|----|--------------------|---------|

| Mechanical             | Dry               | Conditioned      | Unit         | Test Method    |
|------------------------|-------------------|------------------|--------------|----------------|
| Tensile Modulus        | 1.28E+6<br>(8800) | 725000<br>(5000) | psi<br>(MPa) | ISO 527-1/1A/1 |
| Tensile Stress (Break) | 18900<br>(130)    | 11600<br>(80.0)  | psi<br>(MPa) | ISO 527-2/1A/5 |
| Tensile Strain (Break) | 2.5               | 6.0              | %            | ISO 527-2/1A/5 |

| Impact                           | Dry          | Conditioned  | Unit                                          | Test Method |
|----------------------------------|--------------|--------------|-----------------------------------------------|-------------|
| Charpy Notched Impact Strength   |              |              |                                               | ISO 179/1eA |
| -22°F (-30°C)                    | 1.9<br>(4.0) | --           | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |             |
| 73°F (23°C)                      | 2.9<br>(6.0) | 3.3<br>(7.0) | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |             |
| Charpy Unnotched Impact Strength |              |              |                                               | ISO 179/1eU |
| -22°F (-30°C)                    | 19<br>(40)   | --           | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |             |
| 73°F (23°C)                      | 24<br>(50)   | 25<br>(53)   | 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      | 410<br>(210) | --          | °F<br>(°C) | ISO 75-2/Bf    |
| 264 Psi (1.8 Mpa), Unannealed      | 374<br>(190) | --          | °F<br>(°C) | ISO 75-2/Af    |
| Vicat Softening Temperature        |              |             |            |                |
| --                                 | 401<br>(205) | --          | °F<br>(°C) | ISO 306/B50    |
| --                                 | 410<br>(210) | --          | °F<br>(°C) | ISO 306/A50    |
| Ball Pressure Test (392°F (200°C)) | Pass         | --          |            | IEC 60695-10-2 |



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| Thermal                                 | Dry            | Conditioned | Unit               | Test Method                      |
|-----------------------------------------|----------------|-------------|--------------------|----------------------------------|
| RTI Elec                                |                |             |                    | UL 746B                          |
| 0.04 In (1.0 Mm)                        | 149<br>(65.0)  | --          | °F<br>(°C)         |                                  |
| 0.06 In (1.5 Mm)                        | 149<br>(65.0)  | --          | °F<br>(°C)         |                                  |
| 0.12 In (3.0 Mm)                        | 149<br>(65.0)  | --          | °F<br>(°C)         |                                  |
| RTI Imp                                 |                |             |                    | UL 746B                          |
| 0.04 In (1.0 Mm)                        | 149<br>(65.0)  | --          | °F<br>(°C)         |                                  |
| 0.06 In (1.5 Mm)                        | 149<br>(65.0)  | --          | °F<br>(°C)         |                                  |
| 0.12 In (3.0 Mm)                        | 149<br>(65.0)  | --          | °F<br>(°C)         |                                  |
| RTI Str                                 |                |             |                    | UL 746B                          |
| 0.04 In (1.0 Mm)                        | 149<br>(65.0)  | --          | °F<br>(°C)         |                                  |
| 0.06 In (1.5 Mm)                        | 149<br>(65.0)  | --          | °F<br>(°C)         |                                  |
| 0.12 In (3.0 Mm)                        | 149<br>(65.0)  | --          | °F<br>(°C)         |                                  |
| Electrical                              | Dry            | Conditioned | Unit               | Test Method                      |
| Comparative Tracking Index              | 200            | --          | V                  | IEC 60112                        |
| Flammability                            | Dry            | Conditioned | Unit               | Test Method                      |
| Burning Rate                            |                |             |                    | ISO 3795                         |
| 0.0394 In (1.00 Mm), Self-extinguishing | 0.0            | --          | in/min<br>(mm/min) |                                  |
| 0.0591 In (1.50 Mm), Self-extinguishing | 0.0            | --          | in/min<br>(mm/min) |                                  |
| 0.118 In (3.00 Mm), Self-extinguishing  | 0.0            | --          | in/min<br>(mm/min) |                                  |
| Flame Rating                            |                |             |                    | UL 94<br>IEC 60695-11-10,<br>-20 |
| 0.04 In (1.0 Mm)                        | V-0            | --          |                    |                                  |
| 0.06 In (1.5 Mm)                        | • V-0<br>• 5VA | --          |                    |                                  |
| 0.12 In (3.0 Mm)                        | • V-0<br>• 5VA | --          |                    |                                  |
| Glow Wire Flammability Index            |                |             |                    | IEC 60695-2-12                   |
| 0.04 In (1.0 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                   |
| 0.04 In (1.0 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)         |                                  |





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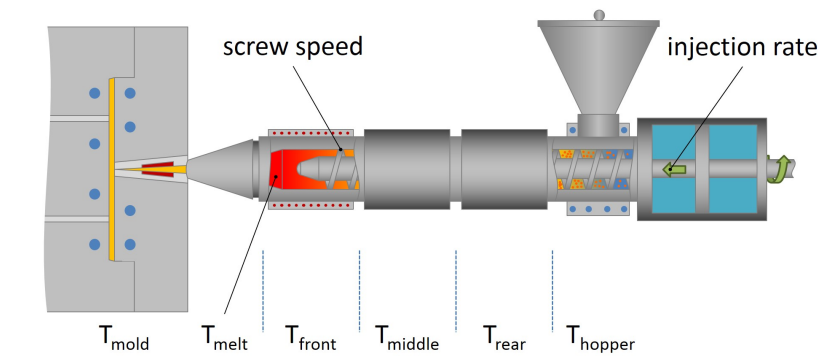
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| Flammability | Dry | Conditioned | Unit | Test Method |
|--------------|-----|-------------|------|-------------|
| Oxygen Index | 35  | --          | %    | ISO 4589-2  |



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| Injection              | Dry (English)  | Dry (SI)       |
|------------------------|----------------|----------------|
| Drying Temperature     | 176 °F         | 80 °C          |
| Drying Time            | 4.0 to 6.0 hr  | 4.0 to 6.0 hr  |
| Suggested Max Moisture | 0.04 to 0.10 % | 0.04 to 0.10 % |
| Processing (Melt) Temp | 464 to 500 °F  | 240 to 260 °C  |
| Mold Temperature       | 140 to 194 °F  | 60 to 90 °C    |
| Back Pressure          | < 591 in/min   | < 15 m/min     |
| Screw Speed            | < 591 in/min   | < 15 m/min     |

Injection Notes

Mould surface contacting melt should  
be of non-corrosive steel (content of chrome > 12%)

Notes

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

