

# Schulamid 6 GF 30 H

Polyamide 6  
LyondellBasell Industries  
Engineering Plastics

## Product Description

30% glass fiber reinforced, heat stabilized Polyamide 6

## General

|                           |                                             |                                                                  |                                                                  |
|---------------------------|---------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------|
| Filler / Reinforcement    | • Glass Fiber, 30% Filler by Weight         |                                                                  |                                                                  |
| Features                  | • Good Toughness<br>• Heat Aging Resistant  | • High Stiffness<br>• Oil Resistant                              |                                                                  |
| Automotive Specifications | • FORD WSK-M4D664-A<br>• FORD WSS-M4D993-B1 | • GM GMP.PA6.054 Color: Black<br>• GM GMP.PA6.054 Color: Natural | • GM GMP.PA6.056 Color: Black<br>• GM GMP.PA6.056 Color: Natural |
| UL File Number            | • E86615                                    |                                                                  |                                                                  |
| Processing Method         | • Injection Molding                         |                                                                  |                                                                  |

| Physical                         | Dry  | Conditioned | Unit               | Test Method |
|----------------------------------|------|-------------|--------------------|-------------|
| Density                          | 1.35 | --          | g/cm <sup>3</sup>  | ISO 1183/A  |
| Water Absorption                 |      |             |                    | ISO 62      |
| Equilibrium, 73°F (23°C), 50% Rh | 2.0  | --          | %                  |             |
| Viscosity Number                 | 145  | --          | cm <sup>3</sup> /g | ISO 307     |

| Mechanical                           | Dry               | Conditioned      | Unit         | Test Method    |
|--------------------------------------|-------------------|------------------|--------------|----------------|
| Tensile Modulus                      | 1.38E+6<br>(9500) | 725000<br>(5000) | psi<br>(MPa) | ISO 527-1/1A/1 |
| Tensile Stress (Break)               | 24700<br>(170)    | 14500<br>(100)   | psi<br>(MPa) | ISO 527-2/1A/5 |
| Tensile Strain (Break)               | 3.5               | 8.0              | %            | ISO 527-2/1A/5 |
| Flexural Modulus                     | 1.13E+6<br>(7800) | --               | psi<br>(MPa) | ISO 178        |
| Flexural Stress                      | 30500<br>(210)    | --               | psi<br>(MPa) | ISO 178        |
| Flexural Strain at Flexural Strength | 3.7               | --               | %            | ISO 178        |

| Impact                           | Dry                                                 | Conditioned | Unit                                          | Test Method |
|----------------------------------|-----------------------------------------------------|-------------|-----------------------------------------------|-------------|
| Charpy Notched Impact Strength   |                                                     |             |                                               | ISO 179/1eA |
| -22°F (-30°C)                    | 4.3<br>(9.0)                                        | --          | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |             |
| 73°F (23°C)                      | 5.7<br>(12)                                         | 14<br>(30)  | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |             |
| Charpy Unnotched Impact Strength |                                                     |             |                                               | ISO 179/1eU |
| -22°F (-30°C)                    | 29<br>(60)                                          | --          | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |             |
| 73°F (23°C)                      | 38 ft·lb/in <sup>2</sup><br>(80 kJ/m <sup>2</sup> ) | No Break    | (kJ/m <sup>2</sup> )                          |             |

| Hardness                             | Dry            | Conditioned | Unit         | Test Method |
|--------------------------------------|----------------|-------------|--------------|-------------|
| Ball Indentation Hardness (H 358/30) | 29000<br>(200) | --          | psi<br>(MPa) | ISO 2039-1  |



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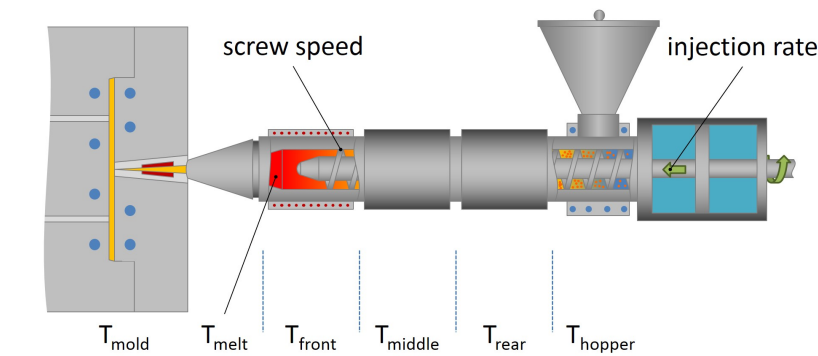
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| Thermal                           | Dry          | Conditioned | Unit               | Test Method             |
|-----------------------------------|--------------|-------------|--------------------|-------------------------|
| Deflection Temperature Under Load |              |             |                    |                         |
| 66 Psi (0.45 Mpa), Unannealed     | 428<br>(220) | --          | °F<br>(°C)         | ISO 75-2/Bf             |
| 264 Psi (1.8 Mpa), Unannealed     | 401<br>(205) | --          | °F<br>(°C)         | ISO 75-2/Af             |
| Vicat Softening Temperature       |              |             |                    |                         |
| --                                | 410<br>(210) | --          | °F<br>(°C)         | ISO 306/B50             |
| --                                | 423<br>(217) | --          | °F<br>(°C)         | ISO 306/A50             |
| RTI Elec                          |              |             |                    | UL 746B                 |
| 0.030 In (0.75 Mm)                | 257<br>(125) | --          | °F<br>(°C)         |                         |
| 0.06 In (1.5 Mm)                  | 257<br>(125) | --          | °F<br>(°C)         |                         |
| 0.12 In (3.0 Mm)                  | 257<br>(125) | --          | °F<br>(°C)         |                         |
| RTI Imp                           |              |             |                    | UL 746B                 |
| 0.030 In (0.75 Mm)                | 239<br>(115) | --          | °F<br>(°C)         |                         |
| 0.06 In (1.5 Mm)                  | 248<br>(120) | --          | °F<br>(°C)         |                         |
| 0.12 In (3.0 Mm)                  | 257<br>(125) | --          | °F<br>(°C)         |                         |
| RTI Str                           |              |             |                    | UL 746B                 |
| 0.030 In (0.75 Mm)                | 266<br>(130) | --          | °F<br>(°C)         |                         |
| 0.06 In (1.5 Mm)                  | 266<br>(130) | --          | °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           | --          |                    |                         |



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| Injection                            | Dry (English)  | Dry (SI)       |
|--------------------------------------|----------------|----------------|
| Drying Temperature - Desiccant Dryer | 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               | 482 to 536 °F  | 250 to 280 °C  |
| Mold Temperature                     | 140 to 212 °F  | 60 to 100 °C   |

Notes

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

