

## Technical Data Sheet



# Schulamid 66 SK 1000

Polyamide 66  
LyondellBasell Industries  
Engineering Plastics

### Product Description

Extrem high impact Polyamide 66

### General

|                           |                                                                       |                                                                                                |                        |
|---------------------------|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------|
| Material Status           | • Commercial: Active                                                  |                                                                                                |                        |
| Availability              | • Africa & Middle East<br>• Asia Pacific                              | • Europe<br>• Latin America                                                                    | • North America        |
| Features                  | • Low Temperature Toughness<br>• Medium Viscosity                     | • Oil Resistant<br>• Ultra High Impact Resistance                                              | • Ultra High Toughness |
| Automotive Specifications | • FORD WSK-M4D666-A Color: Black<br>• FORD WSS-M4D666-A2 Color: Black | • GM GMW15702-013051 PA66-I Color: Natural<br>• GM GMW15702-013051 PA66-I Color: 96.8001 Black |                        |
| UL File Number            | • E86615                                                              |                                                                                                |                        |
| Processing Method         | • Injection Molding                                                   |                                                                                                |                        |
| Resin ID (ISO 1043)       | • PA66-HI                                                             |                                                                                                |                        |

| Physical                             | Dry              | Conditioned    | Unit                                          | Test Method     |
|--------------------------------------|------------------|----------------|-----------------------------------------------|-----------------|
| Density                              | 1.07             | --             | g/cm <sup>3</sup>                             | ISO 1183/A      |
| Water Absorption                     |                  |                |                                               | ISO 62          |
| Equilibrium, 73°F (23°C), 50% RH     | 2.0              | --             | %                                             |                 |
| Mechanical                           | Dry              | Conditioned    | Unit                                          | Test Method     |
| Tensile Modulus                      | 261000<br>(1800) | 87000<br>(600) | psi<br>(MPa)                                  | ISO 527-1/1A/1  |
| Tensile Stress (Yield)               | 7250<br>(50.0)   | 4350<br>(30.0) | psi<br>(MPa)                                  | ISO 527-2/1A/50 |
| Tensile Strain (Yield)               | 7.0              | 32             | %                                             | ISO 527-2/1A/50 |
| Nominal Tensile Strain at Break      | > 40             | > 100          | %                                             | ISO 527-2/1A/50 |
| Flexural Modulus <sup>1</sup>        | 239000<br>(1650) | --             | psi<br>(MPa)                                  | ISO 178         |
| Flexural Stress <sup>1</sup>         | 8990<br>(62.0)   | --             | psi<br>(MPa)                                  | ISO 178         |
| Flexural Strain at Flexural Strength | 7.0              | --             | %                                             | ISO 178         |
| Impact                               | Dry              | Conditioned    | Unit                                          | Test Method     |
| Charpy Notched Impact Strength       |                  |                |                                               | ISO 179/1eA     |
| -22°F (-30°C)                        | 12<br>(25)       | --             | ft-lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |                 |
| 73°F (23°C)                          | 36<br>(75)       | 55<br>(120)    | ft-lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |                 |
| Charpy Unnotched Impact Strength     |                  |                |                                               | ISO 179/1eU     |
| -22°F (-30°C)                        | No Break         | --             |                                               |                 |
| 73°F (23°C)                          | No Break         | No Break       |                                               |                 |
| Thermal                              | Dry              | Conditioned    | Unit                                          | Test Method     |
| Deflection Temperature Under Load    |                  |                |                                               |                 |
| 66 psi (0.45 MPa), Unannealed        | 275<br>(135)     | --             | °F<br>(°C)                                    | ISO 75-2/Bf     |
| 264 psi (1.8 MPa), Unannealed        | 140<br>(60.0)    | --             | °F<br>(°C)                                    | ISO 75-2/Af     |

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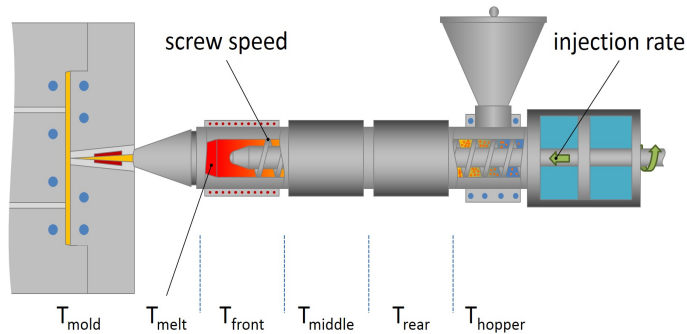
| Thermal                      | Dry              | Conditioned | Unit               | Test Method             |
|------------------------------|------------------|-------------|--------------------|-------------------------|
| Vicat Softening Temperature  |                  |             |                    |                         |
| --                           | 347<br>(175)     | --          | °F<br>(°C)         | ISO 306/B50             |
| --                           | > 482<br>(> 250) | --          | °F<br>(°C)         | ISO 306/A50             |
| RTI Elec                     |                  |             |                    | UL 746B                 |
| 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                 |
| 0.06 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                 |
| 0.06 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             |
| 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           |
| Flammability                 | Dry              | Conditioned | Unit               | Test Method             |
| Burning Rate                 |                  |             |                    |                         |
| 0.0787 in (2.00 mm)          | 1.5<br>(38)      | --          | in/min<br>(mm/min) | ISO 3795                |
| 0.0787 in (2.00 mm)          | 1.5<br>(38)      | --          | in/min<br>(mm/min) | FMVSS 302               |
| Flammability Classification  |                  |             |                    | IEC 60695-11-10,<br>-20 |
| 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 | 518 to 554 °F  | 270 to 290 °C  |
| Mold Temperature       | 140 to 212 °F  | 60 to 100 °C   |

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### Notes

<sup>1</sup> 0.079 in/min (2.0 mm/min)

### 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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