

# Schulamid 66 CF 20 H

Polyamide 66  
LyondellBasell Industries  
Engineering Plastics

## Product Description

20% carbon fiber reinforced, heat stabilized Polyamide 66 with very high tensile strength

## General

|                        |                                            |                                 |                                           |
|------------------------|--------------------------------------------|---------------------------------|-------------------------------------------|
| Filler / Reinforcement | • Carbon Fiber, 20% Filler by Weight       |                                 |                                           |
| Features               | • Good Toughness<br>• Heat Aging Resistant | • Low Density<br>• Low Friction | • Oil Resistant<br>• Ultra High Stiffness |
| Processing Method      | • Injection Molding                        |                                 |                                           |

| Physical                             | Dry                | Conditioned        | Unit                                          | Test Method    |
|--------------------------------------|--------------------|--------------------|-----------------------------------------------|----------------|
| Density                              | 1.21               | --                 | g/cm <sup>3</sup>                             | ISO 1183/A     |
| Water Absorption                     |                    |                    |                                               | ISO 62         |
| Equilibrium, 73°F (23°C), 50% Rh     | 1.7                | --                 | %                                             |                |
| Viscosity Number                     | 145                | --                 | cm <sup>3</sup> /g                            | ISO 307        |
| Mechanical                           | Dry                | Conditioned        | Unit                                          | Test Method    |
| Tensile Modulus                      | 2.47E+6<br>(17000) | 1.60E+6<br>(11000) | psi<br>(MPa)                                  | ISO 527-1/1A/1 |
| Tensile Stress (Break)               | 31900<br>(220)     | 23200<br>(160)     | psi<br>(MPa)                                  | ISO 527-2/1A/5 |
| Tensile Strain (Break)               | 2.8                | 5.2                | %                                             | ISO 527-2/1A/5 |
| Flexural Modulus                     | 1.89E+6<br>(13000) | --                 | psi<br>(MPa)                                  | ISO 178        |
| Flexural Stress                      | 45700<br>(315)     | --                 | psi<br>(MPa)                                  | ISO 178        |
| Flexural Strain at Flexural Strength | 3.6                | --                 | %                                             | ISO 178        |
| Impact                               | Dry                | Conditioned        | Unit                                          | Test Method    |
| Charpy Notched Impact Strength       |                    |                    |                                               | ISO 179/1eA    |
| -22°F (-30°C)                        | 2.4<br>(5.0)       | --                 | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |                |
| 73°F (23°C)                          | 3.8<br>(8.0)       | 7.1<br>(15)        | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |                |
| Charpy Unnotched Impact Strength     |                    |                    |                                               | ISO 179/1eU    |
| -22°F (-30°C)                        | 21<br>(45)         | --                 | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |                |
| 73°F (23°C)                          | 29<br>(60)         | 40<br>(85)         | 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)     | --                 | psi<br>(MPa)                                  | ISO 2039-1     |



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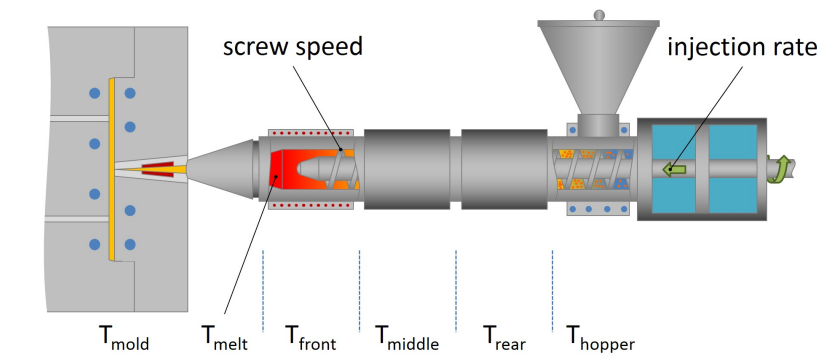
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| Thermal                            | Dry              | Conditioned | Unit       | Test Method                |
|------------------------------------|------------------|-------------|------------|----------------------------|
| Deflection Temperature Under Load  |                  |             |            |                            |
| 66 Psi (0.45 Mpa), Unannealed      | > 482<br>(> 250) | --          | °F<br>(°C) | ISO 75-2/Bf                |
| 264 Psi (1.8 Mpa), Unannealed      | 475<br>(246)     | --          | °F<br>(°C) | ISO 75-2/Af                |
| Vicat Softening Temperature        | > 482<br>(> 250) | --          | °F<br>(°C) | ISO 306/B50<br>ISO 306/A50 |
| Ball Pressure Test (428°F (220°C)) | Pass             | --          |            | IEC 60695-10-2             |
| Electrical                         | Dry              | Conditioned | Unit       | Test Method                |
| Surface Resistivity                | > 1.0E+4         | > 1.0E+6    | ohms       | IEC 60093                  |
| Volume Resistivity                 | > 1.0E+3         | --          | ohms·cm    | IEC 60093                  |
| Comparative Tracking Index         | 100              | --          | V          | IEC 60112                  |
| Flammability                       | Dry              | Conditioned | Unit       | Test Method                |
| Flammability Classification        |                  |             |            | IEC 60695-11-10,<br>-20    |
| 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     | 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.

