

# SCHULAMID® 66 CF 20 BLACK

Polyamide 66  
Engineering Plastics

## Product Description

20% carbon fiber reinforced Polyamide 66, available with different kinds of Heat Stabilizations Systems

## General

|                        |                                      |
|------------------------|--------------------------------------|
| Filler / Reinforcement | • Carbon Fiber, 20% Filler by Weight |
| Processing Method      | • Injection Molding                  |

| Physical                         | Dry                | Conditioned        | Unit                                          | Test Method    |
|----------------------------------|--------------------|--------------------|-----------------------------------------------|----------------|
| Density                          | 1.22               | --                 | g/cm <sup>3</sup>                             | ISO 1183/A     |
| Molding Shrinkage                |                    |                    |                                               | ISO 294-4      |
| Across Flow                      | 0.80               | --                 | %                                             |                |
| Flow                             | 0.30               | --                 | %                                             |                |
| Viscosity Number                 | 145                | --                 | cm <sup>3</sup> /g                            | ISO 307        |
| Mechanical                       | Dry                | Conditioned        | Unit                                          | Test Method    |
| Tensile Modulus                  | 2.41E+6<br>(16600) | 1.46E+6<br>(10100) | psi<br>(MPa)                                  | ISO 527-2/1A/1 |
| Tensile Stress (Break)           | 31900<br>(220)     | 21800<br>(150)     | psi<br>(MPa)                                  | ISO 527-2/1A/5 |
| Tensile Strain (Break)           | 2.8                | 5.3                | %                                             | ISO 527-2/1A/5 |
| Flexural Modulus <sup>1</sup>    | 2.18E+6<br>(15000) | --                 | psi<br>(MPa)                                  | ISO 178        |
| Flexural Stress <sup>1</sup>     |                    |                    |                                               | ISO 178        |
| 3.0% Strain                      | 49300<br>(340)     | --                 | psi<br>(MPa)                                  |                |
| 3.0% Strain <sup>2</sup>         | 47900<br>(330)     | --                 | psi<br>(MPa)                                  |                |
| Impact                           | Dry                | Conditioned        | Unit                                          | Test Method    |
| Charpy Notched Impact Strength   |                    |                    |                                               | ISO 179/1eA    |
| -22°F (-30°C)                    | 2.1<br>(4.5)       | --                 | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |                |
| 73°F (23°C)                      | 3.3<br>(7.0)       | 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)                    | 24<br>(50)         | --                 | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |                |
| 73°F (23°C)                      | 33<br>(70)         | 43<br>(90)         | ft·lb/in <sup>2</sup><br>(kJ/m <sup>2</sup> ) |                |
| Thermal                          | Dry                | Conditioned        | Unit                                          | Test Method    |
| Heat Deflection Temperature      |                    |                    |                                               | ISO 75-2/Af    |
| 264 psi (1.8 MPa), Unannealed    | 482<br>(250)       | --                 | °F<br>(°C)                                    |                |
| Electrical                       | Dry                | Conditioned        | Unit                                          | Test Method    |
| Volume Resistivity               | 1.0E+2             | --                 | ohms·m                                        | IEC 62631-3-1  |





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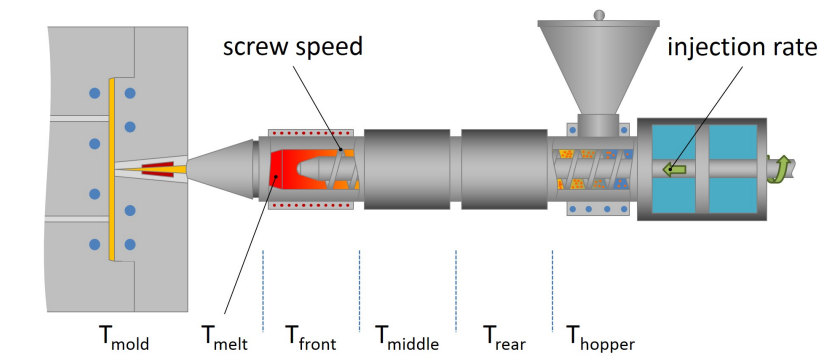
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| Flammability        | Dry              | Conditioned | Unit               | Test Method |
|---------------------|------------------|-------------|--------------------|-------------|
| Burning Rate        |                  |             |                    |             |
| 0.0787 in (2.00 mm) | < 3.9<br>(< 100) | --          | in/min<br>(mm/min) | ISO 3795    |
| 0.0787 in (2.00 mm) | < 3.9<br>(< 100) | --          | in/min<br>(mm/min) | FMVSS 302   |



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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 % |
| Suggested Max Regrind  | 20 %           | 20 %           |
| Processing (Melt) Temp | 500 to 572 °F  | 260 to 300 °C  |
| Mold Temperature       | 140 to 248 °F  | 60 to 120 °C   |

Notes

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

<sup>2</sup> at Break

Notes

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

