Engineered Compounds
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**TECHNICAL DATA AND PROCESS SHEET**

## 20% CARBON FIBER REINFORCED IMPACT MODIFIED NYLON 6/6

# INELEC PA66CF20IM

### TYPICAL PROPERTIES

| PROPERTY | ASTM METHOD | English | UNITS | Metric SI | UNITS |
|---|---|---|---|---|---|
| **GENERAL** | | | | | |
| SPECIFIC GRAVITY | D792 | 1.17 | | 1.17 | |
| SPECIFIC VOLUME | | 23.68 | $in^3/lb$ | 0.855 | $cm^3/gm$ |
| WATER ABSORPTION (24 Hrs) | D570 | 0.8 | % | 0.80 | % |
| MOLD SHRINKAGE | D955 | 0.1-0.3 | % | 0.1-0.3 | % |
| **MECHANICAL** | | | | | |
| TENSILE STRENGTH | D638 | 22,000 | psi | 152 | MPa |
| ELONGATION, YIELD | D638 | 3-5 | % | 3-5 | % |
| FLEXURAL STRENGTH | D790 | 34,000 | psi | 234 | MPa |
| FLEXURAL MODULUS | D790 | 1,500,000 | psi | 10,342 | MPa |
| SHEAR STRENGTH | D732 | | | | |
| IZOD IMPACT STRENGTH | D256 | | | | |
| NOTCHED 1/8" | | 2.5 | ft.lb./in. | 133 | J/m |
| UNNOTCHED 1/8" | | 10 | ft.lb./in. | 533 | J/m |
| ROCKWELL HARDNESS | | | | | |
| **THERMAL** | | | | | |
| HDTUL @ 264 PSI | D648 | 450 | °F | 232 | °C |
| COEFFICIENT OF LINEAR THERMAL EXPANSION | D696 | 2.7 | in./in. F $x10^{-5}$ | 4.86 | mm/mm C $10^{-6}$ |
| FLAMMABILITY[1] | U.L.Subj 94 | HB@1/16 | in | HB@ 1.5 | mm |
| **ELECTRICAL** | | | | | |
| SURFACE RESISTIVITY | | $10e^2$ -$10e^4$ | ohms/sq | $10e^2$ -$10e^4$ | ohms/sq |
| **PROCESSING** | | | | | |
| DRYING TEMPERATURE | | 175 | °F | 79 | °C |
| DRYING TIME | | 4 | hrs | 4 | hrs |
| MELT TEMPERATURE | | 500-575 | °F | 260 - 301 | °C |
| MOLD TEMPERATURE | | 200 | °F | 93 | °C |
| BACK PRESSURE | | 50-100 | psi | 0.3 - 0.7 | MPa |
| SCREW SPEED | | 40-70 | rpm | 40-70 | rpm |
| VENT DEPTH | | 0.0005-0.001 | in | 0.0125 - 0.025 | mm |