

AquaSys® 180 Soluble Support for Additive Manufacturing

Rev 1: 8/21/20

| GENERAL INFORMATION | | | |
|--|---|-----------|-------------------|
| Resin | Water Soluble Copolymer | | |
| Filler | Carbohydrate and Polyamide | | |
| Fill level | 0-100% | | |
| Uses | Extrusion, Injection Molding, 3D Printing | | |
| Form | Pellets or Filament (1.75mm or 2.85mm) | | |
| PHYSICAL PROPERTIES | TYPICAL VALUE | UNITS | METHOD |
| Specific Gravity | 1.26 | | ASTM D792 |
| Coefficient Thermal Expansion | 4.2E-05 | in/in°C | ASTM D696 |
| MECHANICAL PROPERTIES | | UNITS | METHOD |
| Melt Flow Index (260 °C; 5kg) | 15.5 | g/10min | ASTM D1238 |
| Tensile | | | ASTM D638 |
| Modulus | 983,000 | psi | |
| Strength | 18,000 | psi | |
| Elongation @ Break | 2.8 | % | |
| Flexural | | | ASTM D790 |
| Modulus | 872,000 | psi | |
| Strength | 28,700 | psi | |
| Impact (IZOD) | | | ASTM D256 / D4812 |
| Unnotched | 10.3 | ft-lbf/in | |
| Notched | 0.4 | ft-lbf/in | |
| Heat Deflection Temperature (0.45 Mpa) | 70 | °C | ASTM D648 |
| Vicat Softening (10.0N) | 171 | °C | ASTM D1525 |
| RECOMMENDED DRYING CONDITIONS | | | |
| Oven dry for at least 4-6 hours at 85 °C | | | |
| RECOMMENDED MOLDING CONDITIONS | | | |
| Barrel temperatures | 390 – 435 °F | | |
| Mold temperatures | 100 – 130 °F | | |
| STORAGE AND PACKAGING | | | |
| Store AquaSys 180 in metallized foil packaging with desiccant. Reseal after use. | | | |
| See MSDS/SDS for material handling. | | | |

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