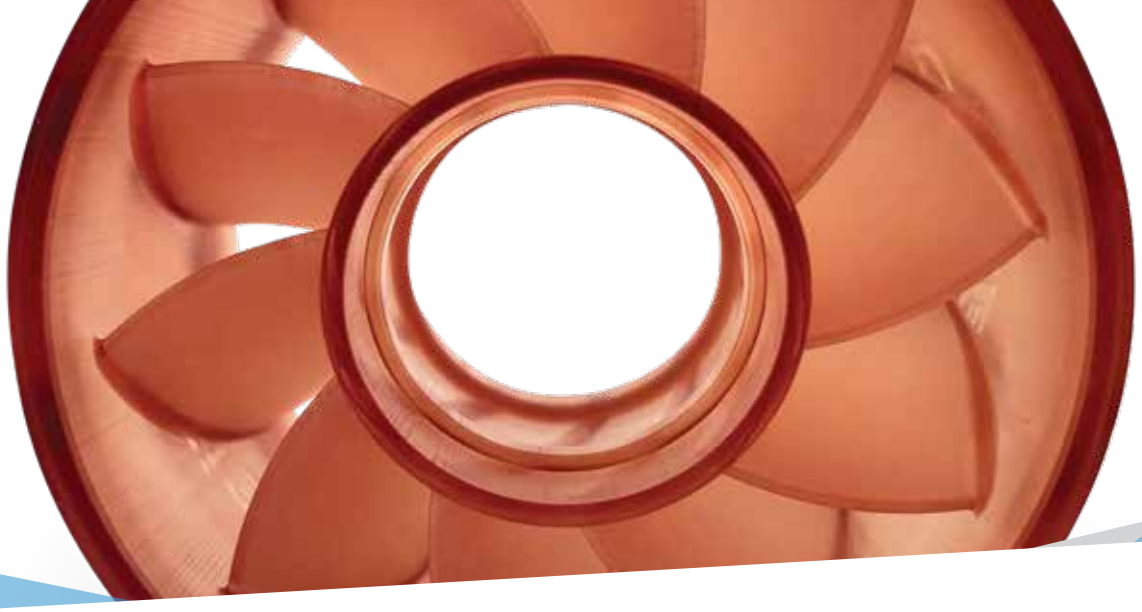

# Figure 4™ HI TEMP 300-AMB

## High Temperature

Industry-leading, ultra-high temperature resistant rigid plastic suitable for the harshest thermal environments

Figure 4®

### HIGH THERMAL-RESISTANCE, TRANSLUCENT AMBER PLASTIC FOR FLOW VISUALIZATION (HDT >300 °C)

Figure 4 HI TEMP 300-AMB is an ultra-high temperature plastic for use in applications requiring high heat resistance. It is the industry's highest heat resistant material with heat deflection temperature of over 300 °C at both low and high stress (at 0.455 and 1.82 MPa). This material is well suited for the testing of high temperature components in applications including HVAC, consumer appliances, motor enclosures, stators, molds, and the like. It does not require a secondary thermal post-cure.

### Liquid Material

| LIQUID PROPERTIES | | | |
|---|---|---|---|
| **MEASUREMENT** | **CONDITION** | **METRIC** | **U.S.** |
| Viscosity | @ 25 °C (77 °F) | 1725 cps | 4170 lb/ft-hr |
| Color | | Amber | |
| Liquid Density | @ 25 °C (77 °F) | 1.19 g/cm$^3$ | 0.043 lb/in$^3$ |
| Package Volume | | 1 kg bottle - Figure 4 Standalone<br>2.5 kg cartridge - Figure 4 Modular<br>10 kg container - Figure 4 Production | |
| Layer Thickness (Standard Mode) | | 0.05 mm | 0.002 in |
| Vertical Build Speed<br>Standard Mode<br>Draft Mode | | <br>36 mm/hr<br>40 mm/hr | <br>1 in/hr<br>1.6 in/hr |

### APPLICATIONS

- High temperature components testing and general use parts including: HVAC, consumer appliances, motor enclosures, stators, etc.
- Low pressure molding/tooling: expanding foams, rubbers, etc.
- Overmolding

### BENEFITS

- Production-grade material
- High heat resistance for testing and use in high heat environments
- No secondary thermal post-cure required
- Excellent visualization for parts requiring evaluation of internal features and fluid flow performance

### FEATURES

- HDT over 300 °C at both low and high stress (HDT at 0.455 and 1.82 MPa)
- Rigid and translucent
- High tensile modulus for use in molds (4000 MPa)

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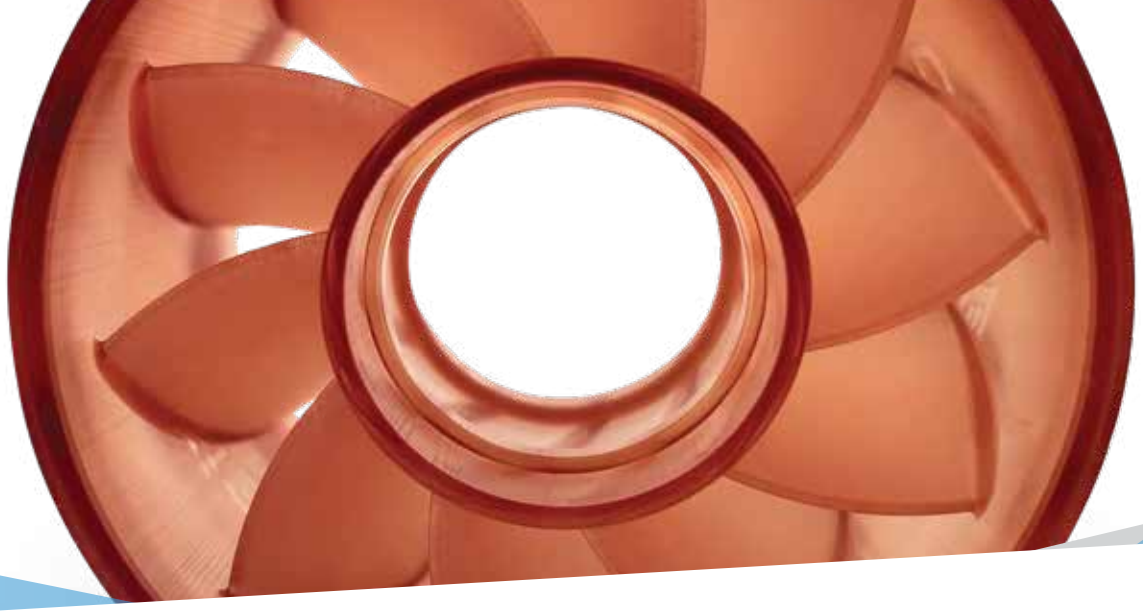

## Post-Cured Material

| MECHANICAL PROPERTIES | | | |
|---|---|---|---|
| **MEASUREMENT** | **CONDITION** | **METRIC** | **U.S.** |
| Solid Density (g/cm³ \| lb/in³) | ASTM D792 | 1.3 | 0.047 |
| Tensile Strength, Ultimate (MPa \| PSI) | ASTM D638 | 81 | 11750 |
| Tensile Modulus (MPa \| KSI) | ASTM D638 | 4000 | 580 |
| Elongation at Break | ASTM D638 | 2.6% | |
| Flexural Strength (MPa \| PSI) | ASTM D790 | 140 | 20305 |
| Flexural Modulus (MPa \| KSI) | ASTM D790 | 4260 | 618 |
| Notched Izod Impact Strength (J/m \| Ft-lbs/in) | ASTM D256 | 10 | 0.2 |
| Unnotched Izod Impact Strength (J/m \| Ft-lbs/in) | ASTM D4812 | 138 | 2.6 |
| Heat Deflection Temperature<br>@ 0.455 MPa (66 PSI)<br>@ 1.82 MPa (264 PSI) | ASTM D648 | <br>>300 °C<br>> 300 °C | <br>>570 °F<br>> 570 °F |
| Coefficient of Thermal Expansion (CTE) (ppm/°C \| ppm/°F)<br>0-100 °C<br>150-250 °C | ASTM E831 | <br>62<br>54 | <br>34<br>30 |
| Hardness, Shore | ASTM D2240 | 89D | |
| Water Absorption (24 hour) | ASTM D570 | 0.36% | |


* Note: Not all products and materials are available in all countries – please consult your local sales representative for availability.

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