

**CYCOLOY* C1000HF Resin**GE Plastics - *Acrylonitrile Butadiene Styrene + PC*

Unit System:

Actions[Legend \(Open\)](#)**General Information****Product Description**

High flow PC+ABS.

General

| | |
|---------------------------|---|
| Material Status | • Commercial: Active |
| Availability | • North America |
| Test Standards Available | • ASTM |
| Features | • Flow, High |
| Automotive Specifications | • FORD WSK-M4D684-A1 • FORD WSK-M4D684-A2 • FORD WSK-M4D685-A |
| Forms | • Pellets |
| Processing Method | • Injection Molding |
| Multi-Point Data | • Coefficient of Thermal Expansion vs. Temperature (ASTM E831) • Instrumented Impact (Energy) (ASTM D3763) • Instrumented Impact (Load) (ASTM D3763) • Pressure-Volume-Temperature (PVT - Zoller Method) • Shear DMA (ASTM D4065) • Specific Heat vs. Temperature (ASTM D3417) • Tensile Creep (ASTM D2990) • Tensile Fatigue • Tensile Stress vs. Strain (ASTM D638) • Thermal Conductivity vs. Temperature (ASTM E1530) • Viscosity vs. Shear Rate (ASTM D3835) |

ASTM and ISO Properties ¹

| Physical | Nominal Value Unit | Test Method |
|---------------------------------------|------------------------|-------------|
| Density -Specific Gravity | 1.12 sp gr 23/23°C | ASTM D792 |
| Melt Mass-Flow Rate (MFR) | | ASTM D1238 |
| (230°C/3.8 kg) | 7.0 g/10 min | |
| (260°C/5.0 kg) | 24.0 g/10 min | |
| Mold Shrink, Linear-Flow (0.126 in) | 0.0050 to 0.0070 in/in | ASTM D955 |
| Mold Shrink, Linear-Trans (0.126 in) | 0.0050 to 0.0070 in/in | ASTM D955 |
| Water Absorption @ 24 hrs | 0.10 % | ASTM D570 |
| Water Absorption @ Equil (73 °F) | 0.40 % | ASTM D570 |
| Mechanical | Nominal Value Unit | Test Method |
| Tensile Modulus ² | 360000 psi | ASTM D638 |
| Tensile Strength @ Yield ³ | 8400 psi | ASTM D638 |

| | | |
|---|-----------------------------------|--------------------|
| Tensile Elongation @ Yld ³ | 5.0 % | ASTM D638 |
| Tensile Elongation @ Brk ³ | 80 % | ASTM D638 |
| Flexural Modulus (1.97 in Span) ⁴ | 360000 psi | ASTM D790 |
| Flexural Strength @ Yield (1.97 in Span) ⁴ | 13200 psi | ASTM D790 |
| Impact | Nominal Value Unit | Test Method |
| Notched Izod Impact | | ASTM D256 |
| (-22 °F) | 2.00 ft·lb/in | |
| (73 °F) | 10.0 ft·lb/in | |
| Instrumented Dart Impact | | ASTM D3763 |
| (-22 °F) | Total Energy: 360 in·lb | |
| (73 °F) | Total Energy: 480 in·lb | |
| Thermal | Nominal Value Unit | Test Method |
| DTUL @66psi - Unannealed (0.126 in) | 240 °F | ASTM D648 |
| DTUL @264psi - Unannealed (0.126 in) | 210 °F | ASTM D648 |
| CLTE, Flow (TMA) (-40 to 104°F (-40 to 40°C)) | 0.000040 in/in/°F | ASTM E831 |
| Thermal Conductivity | 1.4 Btu-in/hr/ft ² /°F | ASTM C177 |

Processing Information

| Injection | Nominal Value Unit |
|------------------------|---------------------------|
| Drying Temperature | 210 to 219 °F |
| Drying Time | 3.0 to 4.0 hr |
| Drying Time, Maximum | 8.0 hr |
| Suggested Max Moisture | 0.040 % |
| Suggested Shot Size | 30 to 80 % |
| Rear Temperature | 480 to 540 °F |
| Middle Temperature | 489 to 550 °F |
| Front Temperature | 489 to 550 °F |
| Nozzle Temperature | 500 to 550 °F |
| Processing (Melt) Temp | 500 to 550 °F |
| Mold Temperature | 171 to 210 °F |
| Back Pressure | 50.0 to 100.0 psi |
| Screw Speed | 40 to 70 rpm |
| Vent Depth | 0.0015 to 0.0030 in |

Notes

¹ Typical properties: these are not to be construed as specifications.

² 2.0 in/min

³ Type I, 2.0 in/min

⁴ 0.051 in/min



Copyright ©, 2007 [IDES - The Plastics Web®](http://www.ides.com)

The information presented on this data sheet was acquired by IDES from various sources, including the producer of the material and recognized testing agencies. In some cases, material updates have been integrated directly into the IDES Plastics Database by the material producer utilizing the Data Maintenance Tool. IDES makes substantial efforts to assure the accuracy of this data. However, IDES assumes no responsibility for the data values and urges that upon final material selection, data points are validated with the manufacturer.