

# INSTRUC ABSGF20

Acrylonitrile Butadiene Styrene

Infinity LTL Engineered Compounds

Message:

Instruc glass and carbon fiber reinforced, mineral and process additive filled structural compounds - Offered in all Infinity base resins  
Provide significant improvements in strength, stiffness, creep resistance, fatigue endurance and impact & dimensional stability  
Increased thermal HDTUL and long term heat resistance

| General Information                                     |   |                    |             |
|---|---|--------------------|-------------|
| Filler / Reinforcement                                  | Glass Fiber,20% Filler by Weight  |                    |             |
| Features  | Fatigue Resistant<br>Good Creep Resistance<br>Good Dimensional Stability<br>Good Heat Aging Resistance<br>Good Impact Resistance<br>High Stiffness<br>High Strength<br>Medium Heat Resistance |                    |             |
| Uses  | Structural Parts  |                    |             |
| Physical  | Nominal Value   | Unit               | Test Method |
| Specific Gravity  | 1.20  | g/cm <sup>3</sup>  | ASTM D792   |
| Specific Volume   | 0.834   | cm <sup>3</sup> /g |             |
| Molding Shrinkage - Flow                                | 0.15 to 0.20  | %                  | ASTM D955   |
| Water Absorption (24 hr)                                | 0.15  | %                  | ASTM D570   |
| Hardness  | Nominal Value   | Unit               | Test Method |
| Rockwell Hardness (M-Scale)                             | 97  |                    | ASTM D785   |
| Mechanical  | Nominal Value   | Unit               | Test Method |
| Tensile Strength (Yield)                                | 93.1  | MPa                | ASTM D638   |
| Tensile Elongation (Yield)                              | 3.0 to 4.0  | %                  | ASTM D638   |
| Flexural Modulus  | 5860  | MPa                | ASTM D790   |
| Flexural Strength                                       | 121   | MPa                | ASTM D790   |
| Shear Strength  | 48.3  | MPa                | ASTM D732   |
| Impact  | Nominal Value   | Unit               | Test Method |
| Notched Izod Impact (3.18 mm)                           | 80  | J/m                | ASTM D256   |
| Unnotched Izod Impact (3.18 mm)                         | 350   | J/m                | ASTM D256   |
| Thermal   | Nominal Value   | Unit               | Test Method |
| Deflection Temperature Under Load (1.8 MPa, Unannealed) | 107   | °C                 | ASTM D648   |
| CLTE - Flow   | 3.6E-5  | cm/cm/°C           | ASTM D696   |

| Electrical             | Nominal Value  | Unit | Test Method |
|------------------------|----------------|------|-------------|
| Surface Resistivity    | 1.0E+17        | ohms | ASTM D257   |
| Flammability           | Nominal Value  | Unit | Test Method |
| Flame Rating (1.59 mm) | HB             |      | UL 94       |
| Injection              | Nominal Value  | Unit |             |
| Drying Temperature     | 76.7           | °C   |             |
| Drying Time            | 4.0            | hr   |             |
| Processing (Melt) Temp | 204 to 288     | °C   |             |
| Mold Temperature       | 82.2           | °C   |             |
| Back Pressure          | 0.345 to 0.689 | MPa  |             |
| Screw Speed            | 40 to 70       | rpm  |             |
| Vent Depth             | 0.038 to 0.076 | mm   |             |

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