

## InStruc® LCP2GF30MD

Americhem - Liquid Crystal Polymer

### General Information

#### Product Description

InStruc® LCP2GF30 is a 30% glass fiber reinforced injection molding grade of liquid crystal polymer (LCP) with superior mechanical properties, good thermal resistance, and high dimensional stability. It is suitable for healthcare applications.

#### General

|                        |                                                                             |                                                                              |                                   |
|------------------------|-----------------------------------------------------------------------------|------------------------------------------------------------------------------|-----------------------------------|
| Material Status        | • Commercial: Active                                                        |                                                                              |                                   |
| Availability           | • Africa & Middle East<br>• Asia Pacific                                    | • Europe<br>• Latin America                                                  | • North America                   |
| Filler / Reinforcement | • Glass Fiber, 30% Filler by Weight                                         |                                                                              |                                   |
| Features               | • Chemical Resistant<br>• Excellent Weather Resistance<br>• Flame Retardant | • Good Thermal Stability<br>• High Dimensional Stability<br>• High Stiffness | • High Strength                   |
| Uses                   | • Electrical/Electronic Applications                                        | • Engineering Parts                                                          | • Medical/Healthcare Applications |
| Processing Method      | • Injection Molding                                                         |                                                                              |                                   |

### Properties <sup>1</sup>

| Physical                                                | Nominal Value    | Unit     | Test Method |
|---------------------------------------------------------|------------------|----------|-------------|
| Density / Specific Gravity                              | 1.62             |          | ASTM D792   |
| Molding Shrinkage - Flow                                | 1.0E-3 to 2.0E-3 | in/in    | ASTM D955   |
| Molding Shrinkage - Across Flow                         | 2.0E-3 to 4.0E-3 | in/in    | ASTM D955   |
| Mechanical                                              | Nominal Value    | Unit     | Test Method |
| Tensile Modulus                                         | 2.20E+6          | psi      | ASTM D638   |
| Tensile Strength                                        | 30000            | psi      | ASTM D638   |
| Tensile Elongation (Yield)                              | 1.5 to 2.0       | %        | ASTM D638   |
| Flexural Modulus                                        | 2.15E+6          | psi      | ASTM D790   |
| Flexural Strength                                       | 28000            | psi      | ASTM D790   |
| Impact                                                  | Nominal Value    | Unit     | Test Method |
| Notched Izod Impact (0.125 in)                          | 2.5              | ft·lb/in | ASTM D256   |
| Thermal                                                 | Nominal Value    | Unit     | Test Method |
| Deflection Temperature Under Load (264 psi, Unannealed) | 450              | °F       | ASTM D648   |

### Processing Information

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 300           | °F   |
| Drying Time            | 6.0 to 8.0    | hr   |
| Suggested Max Moisture | 0.010         | %    |
| Processing (Melt) Temp | 540 to 590    | °F   |
| Mold Temperature       | 175 to 250    | °F   |
| Back Pressure          | 50.0 to 100   | psi  |
| Screw Speed            | 40 to 70      | rpm  |

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

