

**TECHNICAL DATA AND PROCESS SHEET**

**30% GLASS FIBER REINFORCED POLYETHERIMIDE**

**INSTRUC PEIGF30**

**TYPICAL PROPERTIES**

| <b>PROPERTY</b>                         | <b>ASTM METHOD</b> | <b>English</b>    | <b>UNITS</b>                | <b>Metric SI</b>  | <b>UNITS</b>             |
|---|--------------------|-------------------|-----------------------------|-------------------|--------------------------|
| <b>GENERAL</b>                          |                    |                   |                             |                   |                          |
| SPECIFIC GRAVITY                        | D792               | 1.49              |                             | 1.49              |                          |
| SPECIFIC VOLUME                         |                    | 18.6              | in <sup>3</sup> /lb         | 0.671             | cm <sup>3</sup> /gm      |
| WATER ABSORPTION (24 Hrs)               | D570               | 0.18              | %                           | 0.18              | %                        |
| MOLD SHRINKAGE                          | D955               | 0.1-0.2           | %                           | 0.1-0.2           | %                        |
| <b>MECHANICAL</b>                       |                    |                   |                             |                   |                          |
| TENSILE STRENGTH                        | D638               | 26,500            | psi                         | 183               | MPa                      |
| ELONGATION, YIELD                       | D638               | 1-3               | %                           | 1-3               | %                        |
| FLEXURAL STRENGTH                       | D790               | 35,000            | psi                         | 241               | MPa                      |
| FLEXURAL MODULUS                        | D790               | 1,300,000         | psi                         | 8,963             | MPa                      |
| SHEAR STRENGTH                          | D732               | 14,000            | psi                         | 97                | MPa                      |
| IZOD IMPACT STRENGTH                    | D256               |                   |                             |                   |                          |
| NOTCHED 1/8"                            |                    | 1.5               | ft.lb./in.                  | 80                | J/m                      |
| UNNOTCHED 1/8"                          |                    | 12                | ft.lb./in.                  | 640               | J/m                      |
| ROCKWELL HARDNESS                       |                    |                   |                             |                   |                          |
| <b>THERMAL</b>                          |                    |                   |                             |                   |                          |
| HDTUL                                   | D648               | 415               | °F                          | 213               | °C                       |
| @ 264 PSI                               |                    |                   |                             |                   |                          |
| COEFFICIENT OF LINEAR THERMAL EXPANSION | D696               | 1.1               | in./in. F x10 <sup>-5</sup> | 1.98              | mm/mm C 10 <sup>-6</sup> |
| FLAMMABILITY <sup>1</sup>               | U.L.Subj 94        | V0@1/16           | in                          | V0@ 1.5           | mm                       |
| <b>ELECTRICAL</b>                       |                    |                   |                             |                   |                          |
| SURFACE RESISTIVITY                     |                    | 10e <sup>16</sup> | ohms/sq                     | 10e <sup>16</sup> | ohms/sq                  |
| <b>PROCESSING</b>                       |                    |                   |                             |                   |                          |
| DRYING TEMPERATURE                      |                    | 300               | °F                          | 149               | °C                       |
| DRYING TIME                             |                    | 4                 | hrs                         | 4                 | hrs                      |
| MELT TEMPERATURE                        |                    | 680-715           | °F                          | 360 - 380         | °C                       |
| MOLD TEMPERATURE                        |                    | 300               | °F                          | 149               | °C                       |
| BACK PRESSURE                           |                    | 50-100            | psi                         | 0.3 - 0.7         | MPa                      |
| SCREW SPEED                             |                    | 40-70             | rpm                         | 40-70             | rpm                      |
| VENT DEPTH                              |                    | 0.0015-0.003      | in                          | 0.038 - 0.075     | mm                       |

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