

**TECHNICAL DATA AND PROCESS SHEET**

**25% CARBON FIBER REINFORCED 15% PTFE LUBRICATED NYLON 610**

**INLUBE PA610CF25TF15**

**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               | 1.32           |                             | 1.32             |                          |
| SPECIFIC VOLUME                            |                    | 20.98          | in <sup>3</sup> /lb         | 0.758            | cm <sup>3</sup> /gm      |
| WATER ABSORPTION (24 Hrs)                  | D570               | 0.19           | %                           | 0.19             | %                        |
| MOLD SHRINKAGE                             | D955               | 0.3-0.4        | %                           | 0.3-0.4          | %                        |
| <b>MECHANICAL</b>                          |                    |                |                             |                  |                          |
| TENSILE STRENGTH                           | D638               | 21,000         | psi                         | 145              | MPa                      |
| ELONGATION, YIELD                          | D638               | 2-4            | %                           | 2-4              | %                        |
| FLEXURAL STRENGTH                          | D790               | 30,000         | psi                         | 207              | MPa                      |
| FLEXURAL MODULUS                           | D790               | 2,000,000      | psi                         | 13,790           | MPa                      |
| SHEAR STRENGTH                             | D732               |                |                             |                  |                          |
| IZOD IMPACT STRENGTH                       | D256               |                |                             |                  |                          |
| NOTCHED 1/8"                               |                    | 2              | ft.lb./in.                  | 80               | J/m                      |
| UNNOTCHED 1/8"                             |                    | 13             | ft.lb./in.                  | 693              | J/m                      |
| ROCKWELL HARDNESS                          |                    |                |                             |                  |                          |
| <b>THERMAL</b>                             |                    |                |                             |                  |                          |
| HDTUL<br>@ 264 PSI                         | D648               | 415            | °F                          | 213              | °C                       |
| COEFFICIENT OF LINEAR<br>THERMAL EXPANSION | D696               | 1.4            | in./in. F x10 <sup>-5</sup> | 2.52             | mm/mm C 10 <sup>-6</sup> |
| FLAMMABILITY <sup>1</sup>                  | U.L.Subj 94        | HB@1/16        | in                          | HB@ 1.5          | mm                       |
| <b>ELECTRICAL</b>                          |                    |                |                             |                  |                          |
| SURFACE RESISTIVITY                        |                    | 10e2 -10e6     | ohms/sq                     | 10e2 -10e6       | ohms/sq                  |
| <b>PROCESSING</b>                          |                    |                |                             |                  |                          |
| DRYING TEMPERATURE                         |                    | 175            | °F                          | 79               | °C                       |
| DRYING TIME                                |                    | 4              | hrs                         | 4                | hrs                      |
| MELT TEMPERATURE                           |                    | 460-525        | °F                          | 238 - 275        | °C                       |
| MOLD TEMPERATURE                           |                    | 200            | °F                          | 93               | °C                       |
| BACK PRESSURE                              |                    | 50-100         | psi                         | 0.3 - 0.7        | MPa                      |
| SCREW SPEED                                |                    | 40-70          | rpm                         | 40-70            | rpm                      |
| VENT DEPTH                                 |                    | 0.0005-0.001   | in                          | 0.0125 - 0.025   | mm                       |

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