

**TECHNICAL DATA AND PROCESS SHEET**

**30% CARBON FIBER REINFORCED 15% PTFE LUBRICATED PPA**

**INLUBE PPACF30TF15**

**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               | 1.43                               |                             | 1.43                               |                          |
| SPECIFIC VOLUME                         |                    | 19.4                               | in <sup>3</sup> /lb         | 0.699                              | cm <sup>3</sup> /gm      |
| WATER ABSORPTION (24 Hrs)               | D570               | 0.2                                | %                           | 0.20                               | %                        |
| MOLD SHRINKAGE                          | D955               | 0.05-0.2                           | %                           | 0.05-0.2                           | %                        |
| <b>MECHANICAL</b>                       |                    |                                    |                             |                                    |                          |
| TENSILE STRENGTH                        | D638               | 42,000                             | psi                         | 290                                | MPa                      |
| ELONGATION, YIELD                       | D638               |                                    |                             |                                    |                          |
| FLEXURAL STRENGTH                       | D790               | 50,000                             | psi                         | 345                                | MPa                      |
| FLEXURAL MODULUS                        | D790               | 2,500,000                          | psi                         | 17,237                             | MPa                      |
| SHEAR STRENGTH                          | D732               |                                    |                             |                                    |                          |
| IZOD IMPACT STRENGTH                    | D256               |                                    |                             |                                    |                          |
| NOTCHED 1/8"                            |                    | 1.7                                | ft.lb./in.                  | 91                                 | J/m                      |
| UNNOTCHED 1/8"                          |                    | 13                                 | ft.lb./in.                  | 693                                | J/m                      |
| ROCKWELL HARDNESS                       |                    |                                    |                             |                                    |                          |
| <b>THERMAL</b>                          |                    |                                    |                             |                                    |                          |
| HDTUL                                   | D648               | 545                                | °F                          | 285                                | °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        | HB@1/16                            | in                          | HB@1.5                             | mm                       |
| <b>ELECTRICAL</b>                       |                    |                                    |                             |                                    |                          |
| SURFACE RESISTIVITY                     |                    | 10e <sup>2</sup> -10e <sup>4</sup> | ohms/sq                     | 10e <sup>2</sup> -10e <sup>4</sup> | ohms/sq                  |
| <b>PROCESSING</b>                       |                    |                                    |                             |                                    |                          |
| DRYING TEMPERATURE                      |                    | 180                                | °F                          | 82                                 | °C                       |
| DRYING TIME                             |                    | 4                                  | hrs                         | 4                                  | hrs                      |
| MELT TEMPERATURE                        |                    | 625                                | °F                          | 330                                | °C                       |
| MOLD TEMPERATURE                        |                    | 275                                | °F                          | 135                                | °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                          | 0.0125-0.0251                      | mm                       |

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