

| Property                                      | Test Condition      | Test Method ISO | Units                  | Nylon66/Reinforced |                                    |
|-----------------------------------------------|---------------------|-----------------|------------------------|--------------------|------------------------------------|
|                                               |                     |                 |                        | Standard, GF45%    |                                    |
|                                               |                     |                 |                        | CM3001G-45         |                                    |
|                                               |                     |                 |                        | >PA66-GF30<        |                                    |
|                                               |                     |                 |                        | Dry                | 1.0%water                          |
| Physical property                             |                     |                 |                        |                    |                                    |
| Water Absorption                              | 24hrs. in 23℃ water | ISO62           | %                      | 0.4                | -                                  |
| Water Absorption                              | 23℃ in water        | ISO62           | %                      | 4.8                | -                                  |
| Density                                       | 23℃                 | ISO1183         | kg/m <sup>3</sup>      | 1500               |                                    |
| Mechanical property                           |                     |                 |                        |                    |                                    |
| Tensile strength                              | -40℃                | ISO527-1,2      | MPa                    | 280                | 250                                |
| Tensile strength                              | 23℃                 | ISO527-1,2      | MPa                    | 220                | 165                                |
| Tensile strength                              | 80℃                 | ISO527-1,2      | MPa                    | 140                | 115                                |
| Elongation at Break                           | -40℃                | ISO527-1,2      | %                      | 2.5                | -                                  |
| Elongation at Break                           | 23℃                 | ISO527-1,2      | %                      | 3                  | -                                  |
| Elongation at Break                           | 80℃                 | ISO527-1,2      | %                      | 5.5                | -                                  |
| Flexural Strength                             | -40℃                | ISO178          | MPa                    | 380                | 350                                |
| Flexural Strength                             | 23℃                 | ISO178          | MPa                    | 345                | 295                                |
| Flexural Strength                             | 80℃                 | ISO178          | MPa                    | 230                | 195                                |
| Flexural Modulus                              | -40℃                | ISO178          | GPa                    | 15.5               | 14.4                               |
| Flexural Modulus                              | 23℃                 | ISO178          | GPa                    | 13.8               | 11                                 |
| Flexural Modulus                              | 80℃                 | ISO178          | GPa                    | 8.6                | 7.3                                |
| Compressive Strength                          | -40℃                | ISO604          | MPa                    | 265                | -                                  |
| Compressive Strength                          | 23℃                 | ISO604          | MPa                    | 195                | -                                  |
| Compressive Strength                          | 80℃                 | ISO604          | MPa                    | 120                | -                                  |
| Coefficient of friction (Without lubrication) | Vs metal            | Suzuki Method   | -                      | -                  | -                                  |
| Shear Strength                                | 23℃                 | ASTM D732       | MPa                    | 105                |                                    |
| Rockwell Hardness                             | 23℃                 | ISO2039-2       | R Scale                | R121,M103          | -                                  |
| Rockwell Hardness                             | 80℃                 | ISO2039-2       | R Scale                | -                  | -                                  |
| Taper Abrasion                                |                     | ISO9352         | mg/1000times           | -                  | -                                  |
| Charpy Impact Strength (V-notched)            | -40℃                | ISO179          | kJ/m <sup>2</sup>      | 11.5               | 12                                 |
| Charpy Impact Strength (V-notched)            | 23℃                 | ISO179          | kJ/m <sup>2</sup>      | 15                 | 16.5                               |
| Charpy Impact Strength (Unnotched)            | -40℃                | ISO179          | kJ/m <sup>2</sup>      | 85                 | 90                                 |
| Charpy Impact Strength (Unnotched)            | 23℃                 | ISO179          | kJ/m <sup>2</sup>      | 90                 | 100                                |
| Heat property                                 |                     |                 |                        |                    |                                    |
| Melting Point                                 |                     | DSC Method      | ℃                      | 265                | -                                  |
| Specific Heat                                 |                     | -               | J/g · ℃                | 1.5                | -                                  |
| Thermal Conductivity                          |                     | -               | W/m · ℃                | 0.42               | -                                  |
| Coef of Linear Thermal Expansion              |                     | ISO11359-2      | ×10 <sup>-5</sup> /℃   | 2~3                | -                                  |
| Heat Deflection Temp Low Load                 | 0.45MPa             | ISO75-1,2       | ℃                      | 263                | -                                  |
| Flammability                                  |                     | UL94            | rank/thickness m<br>mt | HB(1/32")          | HB(1/32")                          |
| Electrical property                           |                     |                 |                        |                    |                                    |
| Volume Resistivity                            |                     | IEC60093        | Ω · m                  | 10 <sup>13</sup>   | 10 <sup>10</sup> ~10 <sup>11</sup> |
| Dielectric Strength                           |                     | IEC60243-1      | MV/m                   | 19                 | -                                  |
| Dielectric Constant                           | 23℃、60%RH、50Hz      | IEC 60250       | -                      | 4.7                | -                                  |
| Dielectric Constant                           | 23℃、60%RH、1KHz      | IEC 60250       | -                      | 4.5                | -                                  |
| Dielectric Constant                           | 23℃、60%RH、1MHz      | IEC 60250       | -                      | 4.1                | -                                  |
| Dissipation Factor                            | 23℃、60%RH、50Hz      | IEC 60250       | -                      | 0.02               | -                                  |
| Dissipation Factor                            | 23℃、60%RH、1KHz      | IEC 60250       | -                      | 0.02               | -                                  |
| Dissipation Factor                            | 23℃、60%RH、1MHz      | IEC 60250       | -                      | 0.02               | -                                  |
| Arc resistance                                | Tungsten Electrode  | UL-746A         | sec.                   | -                  | -                                  |
| Molding property                              |                     |                 |                        |                    |                                    |
| Mold shrinkage(Machine Direction)             | 80×80×3mmt          | Toray Method    | %                      | 0.2~0.4            | -                                  |
| Mold shrinkage(Transverse Direction)          | 80×80×3mmt          | Toray Method    | %                      | 0.5~0.8            |                                    |

These values are typical data for this product under specific test conditions and not intended for use as limiting specifications.