

| Property                                      | Test Condition      | Test Method ISO | Units                  | Nylon66/Unreinforced               |                                    |
|-----------------------------------------------|---------------------|-----------------|------------------------|------------------------------------|------------------------------------|
|                                               |                     |                 |                        | Standard                           |                                    |
|                                               |                     |                 |                        | CM3001-N                           |                                    |
|                                               |                     |                 |                        | >PA66<                             |                                    |
|                                               |                     |                 |                        | Dry                                | 2.5%water                          |
| Physical property                             |                     |                 |                        |                                    |                                    |
| Water Absorption                              | 24hrs. in 23℃ water | ISO62           | %                      | 1.2                                | -                                  |
| Water Absorption                              | 23℃ in water        | ISO62           | %                      | 8                                  | -                                  |
| Density                                       | 23℃                 | ISO1183         | kg/m <sup>3</sup>      | 1140                               |                                    |
| Mechanical property                           |                     |                 |                        |                                    |                                    |
| Tensile strength                              | -40℃                | ISO527-1,2      | MPa                    | 115                                | 110                                |
| Tensile strength                              | 23℃                 | ISO527-1,2      | MPa                    | 80                                 | 50                                 |
| Tensile strength                              | 80℃                 | ISO527-1,2      | MPa                    | 40                                 | 40                                 |
| Elongation atYield                            | 23℃                 | ISO527-1,2      | %                      | 1.5                                | -                                  |
| Elongation atBreak                            | 23℃                 | ISO527-1,2      | %                      | 25                                 | 50                                 |
| Flexural Strength                             | -40℃                | ISO178          | MPa                    | 140                                | 125                                |
| Flexural Strength                             | 23℃                 | ISO178          | MPa                    | 115                                | 65                                 |
| Flexural Strength                             | 80℃                 | ISO178          | MPa                    | 65                                 | 40                                 |
| Flexural Modulus                              | -40℃                | ISO178          | GPa                    | 4.3                                | 4.1                                |
| Flexural Modulus                              | 23℃                 | ISO178          | GPa                    | 2.8                                | 1.4                                |
| Flexural Modulus                              | 80℃                 | ISO178          | GPa                    | 0.9                                | 0.5                                |
| Compressive Strength                          | 23℃                 | ISO604          | MPa                    | 90                                 | -                                  |
| Coefficient of friction (Without lubrication) | Vs metal            | Suzuki Method   | -                      | 0.15～0.2                           | -                                  |
| Shear Strength                                | 23℃                 | ASTM D732       | MPa                    | 80                                 | 75                                 |
| Rockwell Hardness                             | 23℃                 | ISO2039-2       | R Scale                | 119                                | 100                                |
| Rockwell Hardness                             | 80℃                 | ISO2039-2       | R Scale                | 97                                 | -                                  |
| Taper Abrasion                                |                     | ISO9352         | mg/1000times           | 8                                  | -                                  |
| Charpy Impact Strength (V-notched)            | -40℃                | ISO179          | kJ/m <sup>2</sup>      | 2.5                                | -                                  |
| Charpy Impact Strength (V-notched)            | 23℃                 | ISO179          | kJ/m <sup>2</sup>      | 4                                  | 23.5                               |
| Charpy Impact Strength (Unnotched)            | -40℃                | ISO179          | kJ/m <sup>2</sup>      | 破断せず                               | -                                  |
| Charpy Impact Strength (Unnotched)            | 23℃                 | ISO179          | kJ/m <sup>2</sup>      | 破断せず                               | -                                  |
| Heat property                                 |                     |                 |                        |                                    |                                    |
| Melting Point                                 |                     | DSC Method      | ℃                      | 265                                | -                                  |
| Specific Heat                                 |                     | -               | J/g・℃                  | 2.1                                | -                                  |
| Thermal Conductivity                          |                     | -               | W/m・℃                  | 0.32                               | -                                  |
| Coef of Linear Thermal Expansion              |                     | ISO11359-2      | ×10 <sup>-5</sup> /℃   | 9～10                               | -                                  |
| Heat Deflection Temp Low Load                 | 0.45MPa             | ISO75-1,2       | ℃                      | 220                                | -                                  |
| Flammability                                  |                     | UL94            | rank/thickness m<br>mt | V-2(1/64")                         | V-2(1/64")                         |
| Electrical property                           |                     |                 |                        |                                    |                                    |
| Volume Resistivity                            |                     | IEC60093        | Ω・m                    | 10 <sup>12</sup> ～10 <sup>13</sup> | 10 <sup>10</sup> ～10 <sup>11</sup> |
| Dielectric Strength                           |                     | IEC60243-1      | MV/m                   | 18                                 | -                                  |
| Dielectric Constant                           | 23℃、60% RH、50Hz     | IEC 60250       | -                      | 4                                  | 7.5                                |
| Dielectric Constant                           | 23℃、60% RH、1KHz     | IEC 60250       | -                      | 3.9                                | 6.5                                |
| Dielectric Constant                           | 23℃、60% RH、1MHz     | IEC 60250       | -                      | 3.3                                | 3.8                                |
| Dissipation Factor                            | 23℃、60% RH、50Hz     | IEC 60250       | -                      | 0.03                               | 0.06                               |
| Dissipation Factor                            | 23℃、60% RH、1KHz     | IEC 60250       | -                      | 0.03                               | 0.06                               |
| Dissipation Factor                            | 23℃、60% RH、1MHz     | IEC 60250       | -                      | 0.02                               | 0.07                               |
| IEC Tracking Index(CTI)                       |                     | UL-746B         | -                      | 600                                | -                                  |
| Arc resistance                                | Tungsten Electrode  | UL-746A         | sec.                   | 130                                | -                                  |
| Molding property                              |                     |                 |                        |                                    |                                    |
| Mold shrinkage(Machine Direction)             | 80×80×3mmt          | Toray Method    | %                      | 1.5～2.2                            | -                                  |
| Mold shrinkage(Transverse Direction)          | 80×80×3mmt          | Toray Method    | %                      |                                    | -                                  |
| Mold shrinkage(Machine Direction)             | 80×80×1mmt          | Toray Method    | %                      | 0.8～1.5                            |                                    |

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

