

| Property                             | Test Condition       | Test Method ISO | Units                | GF + Mineral filler reinforced                                                        |
|--------------------------------------|----------------------|-----------------|----------------------|---------------------------------------------------------------------------------------|
|                                      |                      |                 |                      | High filler, High stiffness, High toughness                                           |
|                                      |                      |                 |                      | A400M-D1                                                                              |
|                                      |                      |                 |                      | >PPS-GF+MD55<                                                                         |
| Physical property                    |                      |                 |                      |                                                                                       |
| Water Absorption                     | 24hrs. in 23℃ water  | ISO62           | %                    | 0.02                                                                                  |
| Density                              | 23℃                  | ISO1183         | kg/m <sup>3</sup>    | 1820                                                                                  |
| Color                                |                      |                 |                      | Natural                                                                               |
| Mechanical property                  |                      |                 |                      |                                                                                       |
| Tensile strength                     | 23℃                  | ISO527-1,2      | MPa                  | 170                                                                                   |
| Elongation at Break                  | 23℃                  | ISO527-1,2      | %                    | 1.3                                                                                   |
| Flexural Strength                    | 23℃                  | ISO178          | MPa                  | 255                                                                                   |
| Flexural Modulus                     | 23℃                  | ISO178          | GPa                  | 18.5                                                                                  |
| Coefficient of friction              | Vs metal             | -               | -                    | -                                                                                     |
| Shear Strength                       | 23℃                  | JIS K7214       | MPa                  | -                                                                                     |
| Rockwell Hardness                    |                      | ISO2039-2       | R Scale              | 122                                                                                   |
| Taper Abrasion                       |                      | ISO9352         | mg/1000times         | -                                                                                     |
| Charpy Impact Strength (V-notched)   | 23℃                  | ISO179          | kJ/m <sup>2</sup>    | 8                                                                                     |
| Charpy Impact Strength (Unnotched)   | 23℃                  | ISO179          | kJ/m <sup>2</sup>    | 30                                                                                    |
| Heat property                        |                      |                 |                      |                                                                                       |
| Melting Point                        |                      | ISO11357-3      | ℃                    | 278                                                                                   |
| Coef of Linear Thermal Expansion     | Machine Direction    | ISO11359-2      | ×10 <sup>-5</sup> /K | 1.8                                                                                   |
| Coef of Linear Thermal Expansion     | Transverse Direction | ISO11359-2      | ×10 <sup>-5</sup> /K | 3                                                                                     |
| Heat Deflection Temp High Load       | 1.80MPa              | ISO75-1,2       | ℃                    | 260                                                                                   |
| Flammability                         |                      | UL94            | rank/thickness mmt   | V-0 (0.36mmt)                                                                         |
| Electrical property                  |                      |                 |                      |                                                                                       |
| Volume Resistivity                   |                      | IEC60093        | Ω · m                | 10 <sup>14</sup>                                                                      |
| Dielectric Strength                  |                      | IEC60243-1      | MV/m                 | 22                                                                                    |
| Dielectric Constant                  | 23℃、60%RH、1MHz       | IEC 60250       | -                    | 4.9                                                                                   |
| Dissipation Factor                   | 23℃、60%RH、1MHz       | IEC 60250       | -                    | 0.002                                                                                 |
| Molding property                     |                      |                 |                      |                                                                                       |
| Mold shrinkage(Machine Direction)    | 80×80×3mmt           | Toray Method    | %                    | 0.16                                                                                  |
| Mold shrinkage(Transverse Direction) | 80×80×3mmt           | Toray Method    | %                    | 0.75                                                                                  |
| Bar Flow                             | 320℃,98MPa,1mmt      | Toray Method    | ×10 <sup>-3</sup> m  | 115                                                                                   |
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