

| Property                             | Test Condition       | Test Method ISO | Units                 | Short carbon fiber reinforced PP<br>S                                                 |
|--------------------------------------|----------------------|-----------------|-----------------------|---------------------------------------------------------------------------------------|
|                                      |                      |                 |                       | CF10%, Low Wear and Friction,<br>Flame retardant                                      |
|                                      |                      |                 |                       | A512-X02N3                                                                            |
|                                      |                      |                 |                       | >PPS-CF10<                                                                            |
| Physical property                    |                      |                 |                       |                                                                                       |
| Content of filler                    |                      | -               | wt%                   | 10                                                                                    |
| Water Absorption                     | 23℃×50%RH in water   |                 | %                     | -                                                                                     |
| Density                              | 23℃                  | ISO1183         | kg/m <sup>3</sup>     | 1515                                                                                  |
| Mechanical property                  |                      |                 |                       |                                                                                       |
| Tensile strength                     | 23℃                  | ISO527-1,2      | MPa                   | 110                                                                                   |
| Elongation at Break                  | 23℃                  | ISO527-1,2      | %                     | 1.5                                                                                   |
| Flexural Strength                    | 23℃                  | ISO178          | MPa                   | 156                                                                                   |
| Flexural Modulus                     | 23℃                  | ISO178          | GPa                   | 9.4                                                                                   |
| Coefficient of friction              | Vs S45C、1MPa、0.33m/s | Suzuki Method   | -                     | 0.15                                                                                  |
| Coefficient of friction              | Vs SUS、1MPa、0.33m/s  | Suzuki Method   | -                     | 0.06                                                                                  |
| Amount of wear                       | Vs S45C、1MPa、0.33m/s | Suzuki Method   | mg/h                  | 0.2                                                                                   |
| Amount of wear                       | Vs SUS、1MPa、0.33m/s  | Suzuki Method   | mg/h                  | 0.5                                                                                   |
| Limit of PV                          | Vs S45C              | Suzuki Method   | Mpa・m/s               | 2.9                                                                                   |
| Limit of PV                          | Vs SUS               | Suzuki Method   | Mpa・m/s               | 2                                                                                     |
| Charpy Impact Strength (V-notched)   | 23℃                  | ISO179          | kJ/m <sup>2</sup>     | 4.7                                                                                   |
| Heat property                        |                      |                 |                       |                                                                                       |
| Melting Point                        |                      | DSC Method      | ℃                     | 278                                                                                   |
| Coef of Linear Thermal Expansion     |                      | ISO11359-2      | ×10 <sup>-5</sup> /℃  | 2.1                                                                                   |
| Heat Deflection Temp High Load       | 1.80MPa              | ISO75-1,2       | ℃                     | 260                                                                                   |
| Flammability                         |                      | UL94            | rank/thickness<br>mmt | V-0Equivalent                                                                         |
| Electrical property                  |                      |                 |                       |                                                                                       |
| Volume Resistivity                   |                      | IEC60093        | Ω・m                   | 10 <sup>-1</sup>                                                                      |
| Molding property                     |                      |                 |                       |                                                                                       |
| Mold shrinkage(Machine Direction)    | 80×80×3mmt           | Toray Method    | %                     | 0.2                                                                                   |
| Mold shrinkage(Transverse Direction) | 80×80×3mmt           | Toray Method    | %                     | 0.8                                                                                   |
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#### Applications of torayca

Generic Component/Livingware      housing equipment

