

## FZ-2140-T3

■ **Product Summary:** FZ-2140-T3 is a 40% glass fiber reinforced linear PPS compound with excellent mechanical properties and outstanding stability against coolants and hot water. Also its superior welding property gives flexibility to design of complexly structured components.

■ **Color:** Black

### Engineering Properties of FZ-2140-T3

| Properties  | Test Method | Unit                  | FZ-2140-T3                                      |
|---|-------------|-----------------------|---|
| General Information   |             |                       | GF40%<br>High strength,<br>Hydrolytic stability |
| <b>Physical</b>   |             |                       |   |
| Density   | ISO 1183    | g/cm <sup>3</sup>     | 1.67  |
| Water absorption, 23°C /24hrs.                                | ISO 62      | %                     | 0.01  |
| Mold shrinkage <sup>a</sup>                                   | ISO 294-4   | %                     | 0.3/0.7   |
| <b>Mechanical</b>   |             |                       |   |
| Tensile strength  | ISO 527-1,2 | MPa                   | 200   |
| Tensile modulus   | ISO 527-1,2 | GPa                   | 16.0  |
| Tensile strain at break                                       | ISO 527-1,2 | %                     | 2.0   |
| Flexural strength   | ISO 178     | MPa                   | 300   |
| Flexural modulus  | ISO 178     | GPa                   | 15.0  |
| Flexural strain at break                                      | ISO 178     | %                     | 2.2   |
| Charpy impact strength,<br>notched                            | ISO 179/1eA | kJ/m <sup>2</sup>     | 12  |
| unnotched   | ISO 179/1eU | kJ/m <sup>2</sup>     | 58  |
| Co-eff. of friction <sup>b</sup> , static /dynamic            | -           | -                     | 0.35/0.35                                       |
| <b>Thermal</b>  |             |                       |   |
| Heat deflection temperature, 1.80MPa                          | ISO 75-1,2  | °C                    | 270   |
| Co-eff. of linear thermal expansion <sup>a</sup> , -50~50 °C  | ISO 11359-2 | x 10 <sup>-5</sup> /K | 1.5/4.0   |
| Co-eff. of linear thermal expansion <sup>a</sup> , 100~200 °C | ISO 11359-2 | x 10 <sup>-5</sup> /K | 1.5/10.5  |
| Flammability <sup>c</sup> / thickness(mm)                     | UL-94       | -                     | V-0/0.74  |
| <b>Electrical</b>   |             |                       |   |
| Dielectric strength, t=1.0mm                                  | IEC 60243-1 | kV/mm                 | 26  |
| Dielectric constant, 1MHz                                     | IEC 60250   | -                     | 4   |
| Dissipation factor, 1MHz                                      | IEC 60250   | -                     | 0.003   |
| Comparative Tracking Index (CTI)                              | IEC 60112   | V                     | 175   |
| Volume resistivity  | IEC 60093   | Ω·cm                  | 10 <sup>16</sup>                                |
| <b>Molding Condition</b>                                      |             |                       |   |
| Cylinder temperature  | -           | °C                    | 300-340   |
| Mold temperature  | -           | °C                    | 130-150   |

a: Flow direction / Transverse direction

b: P=150kPa, V=0.3m/s, PPS vs. carbon steel

c: UL file No. E53829