# PRSPEEK® – 880CA30

| Test Item | Test Method | Conditions | Units | Test Data |
|---|---|---|---|---|
| **Mechanical Data** | | | | |
| Tensile Strength | ISO 527 | Break, 23℃ | MPa | 250 |
| Tensile Elongation | ISO 527 | Break, 23℃ | % | 1.6 |
| Flexural Strength | ISO 178 | Break, 23℃ | MPa | 370 |
| Flexural Modulus | ISO 178 | 23℃ | GPa | 22 |
| Compressive Strength | ISO 604 | 23℃ | MPa | 300 |
| Charpy Impact Strength | ISO 179/1eA | Notched | kJ $m^{-2}$ | 7 |
| | ISO 179/1U | Unnotched | kJ $m^{-2}$ | 45 |
| Izod Impact Strength | ISO 180/A | Notched | kJ $m^{-2}$ | 9 |
| | ISO 180/U | Unnotched | kJ $m^{-2}$ | 45 |
| Mould Shrinkage | ISO 294-4 | Along Flow | % | 0.1 |
| | | Across Flow | % | 0.5 |
| **Thermal Data** | | | | |
| Melting Point | ISO 11357 | - | ℃ | 343 |
| Glass Transition (Tg) | ISO 11357 | Onset | ℃ | 143 |
| Special Heat Capacity | DSC | 23℃ | kJ $kg^{-1}$ $℃^{-1}$ | 1.8 |
| Coefficient of Thermal Expansion | ISO 11359 | Along flow below Tg | ppm $K^{-1}$ | 5 |
| | | Along flow above Tg | ppm $K^{-1}$ | 6 |
| Heat Deflection Temperature | ISO 75 | 1.8 Mpa | ℃ | 336 |
| Thermal Conductivity | ISO 22007-4 | 23℃ | W $m^{-1}$ $K^{-1}$ | 0.95 |
| **Flow** | | | | |
| Melt Index | ISO 1133 | 380℃,5kg | g $10min^{-1}$ | 5 |
| **Miscellaneous** | | | | |
| Density | ISO 1183 | Crystalline | $gcm^{-3}$ | 1.4 |
| | | Amorphous | $gcm^{-3}$ | - |
| Shore D Hardness | ISO 868 | 23℃ | | 88 |
| Water Absorption（3.2mm thick Tensile Bar）（by immersion） | ISO 62 | 24h, 23℃ | % | 0.04 |
| | | Equilibrium, 23℃ | % | 0.3 |

## Electrical Data

| | | | | |
|---|---|---|---|---|
| Dielectric Strength | IEC 60243-1 | 2mm | kV $mm^{-1}$ | - |
| Comparative Tracking Index | IEC 60112 | - | V | - |
| Dielectric Constant | IEC 60250 | 23℃, 1kHz | - | - |
| | | 23℃,50Hz | - | - |
| Loss Tangent | IEC 60250 | 23℃, 1MHz | - | - |
| Volume Resistivity | IEC 60093 | 23℃,1V | Ω cm | $10^5$ |
| | | 275℃ | Ω cm | - |

## Injection molding

| | | | | |
|---|---|---|---|---|
| Nozzle temperature | | | ° C | 390 (380~410) |
| Zone1 Temperature | | | ° C | 390 (380~410) |
| Zone2 Temperature | | | ° C | 380 (370~400) |
| Zone3 Temperature | | | ° C | 370(360~390) |
| Melt Temperature | | | ° C | 390 (380~410) |
| Mould Temperature | | | ° C | 180~210 |
| Screw Speed | | | % | 50-80 |
| Back Pressure | | | Bar | 4-12 |

## Predrying

| | | | | |
|---|---|---|---|---|
| Drying temperature/time | | | - | 150°C/3h or 120°C/ over 6h |
| Water absorption | | | % | <0.3 |

*Result based on similar products