

# NJSSPI-1002-2参数表 (对标美国杜邦VESPEL-SP1)

## PI PARAMETER TABLE

| 机械性能 Mechanical properties                          |                    | 温度 Temperature                   | ASTM              | 单位 Unit | 测得值 Measured value |
|---|--------------------|----------------------------------|-------------------|---------|--------------------|
| 拉伸强度<br>Tensile strength                            |                    | 浸没于液氮中30min (In liquid nitrogen) | D-1708            | MPa     | 45.1               |
|   |                    | -100°C                           |                   |         | 62.6               |
|   |                    | 23°C                             |                   |         | 92                 |
|   |                    | 100°C                            |                   |         | 84                 |
|   |                    | 150°C                            |                   |         | 70.5               |
|   |                    | 200°C                            |                   |         | 57.8               |
|   |                    | 260°C                            |                   |         | 42.1               |
| 断裂伸长率<br>Elongation at break                        |                    | 浸没于液氮中30min (In liquid nitrogen) | D-1708            | %       | 7.2                |
|   |                    | -100°C                           |                   |         | 9.5                |
|   |                    | 23°C                             |                   |         | 12.5               |
|   |                    | 100°C                            |                   |         | 23.5               |
|   |                    | 150°C                            |                   |         | 32.6               |
|   |                    | 200°C                            |                   |         | 30.2               |
|   |                    | 260°C                            |                   |         | 25.6               |
| 弯曲强度<br>Bending strength                            |                    | 浸没于液氮中30min (In liquid nitrogen) | D-790             | MPa     | 62.7               |
|   |                    | -100°C                           |                   |         | 77.3               |
|   |                    | 23°C                             |                   |         | 112                |
|   |                    | 100°C                            |                   |         | 106                |
|   |                    | 150°C                            |                   |         | 100.2              |
|   |                    | 200°C                            |                   |         | 77.6               |
|   |                    | 260°C                            |                   |         | 57.6               |
| 弯曲模量<br>Flexural modulus                            |                    | 浸没于液氮中30min (In liquid nitrogen) | D-790             | MPa     | 1667               |
|   |                    | -100°C                           |                   |         | 2261               |
|   |                    | 23°C                             |                   |         | 2976               |
|   |                    | 100°C                            |                   |         | 2543               |
|   |                    | 150°C                            |                   |         | 2230               |
|   |                    | 200°C                            |                   |         | 2080               |
|   |                    | 260°C                            |                   |         | 1763.8             |
| 压缩强度<br>Compressive strength                        | 1%                 | 23°C                             | D-695             | MPa     | 8.96               |
|   | 10%                |                                  |                   |         | 111                |
| 压缩模量 Compression modulus                            |                    | 23°C                             | D-795             | MPa     | 1930               |
| 缺口冲击强度 Notch impact strength                        |                    | 23°C                             | D-256             | J/m     | 72                 |
| 摩擦磨损 Friction and wear                              |                    |                                  |                   |         |                    |
| 摩擦系数, PV = 0.875 MPa·m/s<br>Coefficient of friction |                    | -                                | -                 | -       | 0.30               |
| 热性能 Thermal performance                             |                    |                                  |                   |         |                    |
| 热失重5%<br>Thermal weight loss 5%                     |                    |                                  | TGA, N2, 20°C/min | °C      | 572                |
| 熔点及tg点 Melting point and tg point                   |                    | 50-450°C                         | DSC, N2, 20°C/min | °C      | 无                  |
| 线性热膨胀系数 Linear thermal expansion                    |                    | 23°C-260°C                       | D-696             | µm/m/°C | 52                 |
| 导热系数 Thermal conductivity                           |                    | 25°C                             | E-1461            | W/(m·K) | 0.358              |
| 挠曲温度, 264 psi Deflection temperature                |                    | -                                | D-648             | °C      | 330                |
| 电学性能 Electrical property                            |                    |                                  |                   |         |                    |
| 介电常数<br>Dielectric constant                         | 10 <sup>3</sup> Hz | 23°C                             | D-150             |         | 3.56               |
|   | 10 <sup>6</sup> Hz |                                  |                   |         | 3.45               |
| 耗散因子10 <sup>6</sup> Hz Dissipation factor           |                    | 23°C                             | D-150             |         | 0.0035             |
| 体积电阻率 Volume resistivity                            |                    | 23°C                             | D-257             | Ω·m     | > 10 <sup>12</sup> |
| 表面电阻率 Surface resistivity                           |                    | 23°C                             | D-257             | Ω       | > 10 <sup>12</sup> |
| 其他性能 Other performance                              |                    |                                  |                   |         |                    |
| 吸水率 24h Water absorption rate                       |                    | 23°C                             | D-570             | %       | 0.21               |
| 比重 Proportion                                       |                    | -                                | D-792             | -       | 1.43               |
| 氧指数 Oxygen index                                    |                    | -                                | D-2863            | %       | 52                 |

备注：此数据并非保证值，而是典型值。 Note: This data is not a guaranteed value, but a typical value.