# テクニカルデータシート

# EtroX® V natural

PEEK

## 製品の特徴

- 良好な機械加工性
- Low burring
- 低吸湿性
- 優れた寸法安定性

## 製品の用途例

- クリーンルーム
- エレクトロニクス
- 機械工学
- 半導体
- 半導体-フロントエンド用途
- 半導体-バックエンド用途
- 半導体-CMP

| | 試験法 | 単位 | 値 |
|---|---|---|---|
| **一般的物性** | | | |
| 密度 | DIN EN ISO 1183-1 | g / $cm^3$ | 1,62 |
| 吸水率 | DIN EN ISO 62 | % | 0,15 |
| **機械的物性** | | | |
| 引張降伏応力 | DIN EN ISO 527 | MPa | 105 |
| 引張破壊呼び歪 | DIN EN ISO 527 | % | 2,5 |
| 引張弾性率 | DIN EN ISO 527 | MPa | 5300 |
| ノッチ付き衝撃耐性 | ISO 179-1/1eA | kJ / $m^2$ | 1,0 |
| ショア硬度 | DIN EN ISO 868 | scale D | 88 |
| ボールインデンテーション硬度 | DIN EN ISO 2039-1 | MPa | 275 |
| **熱的物性** | | | |
| 融点 | ISO 11357-3 | °C | 341 |
| 熱伝導率 | ISO 22007-4 | W / (m * K) | 0,44 |
| 使用温度（長期） | 平均値 | °C | -30 … 250 |
| 使用温度（短期、最大） | 平均値 | °C | 310 |
| **電気的物性** | | | |
| 体積固有抵抗 | DIN EN 62631-3-1 | Ω * cm | $>10^{12}$ |
| 表面固有抵抗 | DIN EN 62631-3-2 | Ω | $>10^{12}$ |
| 比較トラッキング指数 | IEC 60112 | | 150 |

| | 試験法 | 単位 | 値 |
|---|---|---|---|
| 絶縁破壊電圧 | IEC 60243 | kV / mm | 35 |
| Dielectric constant @ 50Hz | DIN EN IEC 62631-2-1 | | 4,9 |
| Dielectric constant @ 1MHz | DIN EN IEC 62631-2-1 | | 4,9 |
| 誘電正接 (50 Hz) | DIN EN IEC 62631-2-1 | | 0,04 |
| 誘電正接 (1 MHz) | DIN EN IEC 62631-2-1 | | 0,0007 |

The short-term maximum application temperature only applies to very low mechanical stress for a few hours. The long-term maximum application temperature is based on the thermal ageing of plastics by oxidation, resulting in a decrease of the mechanical properties. This applies to an exposure to temperatures for at least 5.000 hours causing a 50% loss of the tensile strength from the original value (measured at room temperature). This value says nothing about the mechanical strength of the material at high application temperatures. In case of thick-walled parts, only the surface layer is affected by oxidation from high temperatures. With the addition of antioxidants, a better protection of the surface layer is achieved. In any case, the center area of the material remains unaffected. The minimum application temperature is basically influenced by possible stress factors like impact and/or shock under application. The values stated refer to an minimum degree of impact stress. The electrical properties as stated result from measurements on natural, dry material. With other colours (in particular black) or saturated material, there may be clear differences in the electrical properties. The data stated above are average values ascertained by statistical tests on a regular basis. They are in accordance with DIN EN 15860. They serve as information about our products and are presented as a guide to choose from our range of materials. This, however, does not include an assurance of specific properties or the suitability for particular application purposes that are legally binding. Since the properties also depend on the dimension of the semi-finished products and the degree of crystallization (e.g. nucleating by pigments), the actual values of the properties of a particular product may differ from the indicated values.