

VESTAKEEP® Film 0FH90

Polyetheretherketone
Evonik Industries AG

Message:

VESTAKEEP® film 0FH90 is a cast film based on 100% unreinforced polyether ether ketone (PEEK). The film is amorphous with a matte/glossy surface finish.

The material features low extrusion related internal stresses and is ideal to thermoform 3D parts from, e.g. small speaker membranes.

Application examples:

- electrical insulation
- thermoformed thin parts
- loudspeaker membranes

Important notice: Amorphous PEEK film undergoes crystallization at above its glass transition temperature around 150°C. This should be taken into account upon processing as well as in final applications. The crystallization can only be reversed by heating to the melt followed by quenching.

| General Information | | | |
|---|----------------------------|-------------------|---------------|
| Features | Amorphous | | |
| | Electrically Insulating | | |
| | Flame Retardant | | |
| | Food Contact Acceptable | | |
| | Good Chemical Resistance | | |
| | Good Impact Resistance | | |
| | Good Toughness | | |
| | Low Friction | | |
| | Low to No Water Absorption | | |
| | Recyclable Material | | |
| RoHS Compliance | RoHS Compliant | | |
| Forms | Film | | |
| Processing Method | Thermoforming | | |
| Physical | Nominal Value | Unit | Test Method |
| Density (23°C) | 1.26 | g/cm ³ | ISO 1183 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus | 2000 | MPa | ISO 527-2 |
| Films | Nominal Value | Unit | Test Method |
| Tensile Stress | | | ISO 527-3/100 |
| Yield | 60.0 | MPa | |
| -- | 90.0 | MPa | |
| Tensile Elongation (Break) | > 150 | % | ISO 527-3/100 |
| Thermal | Nominal Value | Unit | |
| Glass Transition Temperature ¹ | 150 | °C | |
| Crystallization Point - Cold | > 165 | °C | |
| Surface Resistance | 1.0E+ 14 | ohms | IEC 60093 |
| Volume Resistance | 1.0E+ 14 | ohms | IEC 60093 |

| | | | |
|----------------------------|-----------------|---------|-------------|
| Breakdown Voltage | | | EN 60243-1 |
| 75.0 μm | 13500 | V | |
| 125.0 μm | 17500 | V | |
| Electrical | Nominal Value | Unit | Test Method |
| Surface Resistivity | 1.0E+15 | ohms | IEC 60093 |
| Volume Resistivity | 1.0E+15 | ohms·cm | IEC 60093 |
| Electric Strength | | | IEC 60243-1 |
| 0.0750 mm | 190 | kV/mm | |
| 0.125 mm | 140 | kV/mm | |
| Relative Permittivity | | | IEC 60250 |
| 50 Hz | 2.80 | | |
| 1 kHz | 2.90 | | |
| 1 MHz | 2.80 | | |
| Dissipation Factor | | | IEC 60250 |
| 1 kHz | 3.0E-3 | | |
| 1 MHz | 5.0E-3 | | |
| Comparative Tracking Index | | | IEC 60112 |
| -- | 200 | V | |
| Solution A ² | 175 | V | |
| NOTE | | | |
| 1. | 2nd Heating | | |
| 2. | 100 drops value | | |

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

