

Product Information

VESTAKEEP® Care M33 G HP**MEDIUM-VISCOSITY, UNREINFORCED POLYETHER
ETHER KETONE DESIGNED FOR THE MEDICAL DEVICE INDUSTRY**

VESTAKEEP® Care-grades are ideal materials for the fabrication of medical devices with short time contact to human blood, tissue or bone for up to 30 days.

VESTAKEEP® Care M33 G-HP is a medium viscosity, unreinforced polyether ether ketone for injection molding and extrusion. The product is refined by Evonik's special filtration technology. The semi-crystalline polymer features superior thermal and chemical resistance.

Parts made from VESTAKEEP® Care M33G-HP are of low flammability. VESTAKEEP® Care M33 G-HP can be processed by common machines for thermoplastics.

Biocompatibility of VESTAKEEP® Care

Biocompatibility was tested following ISO10993-1 recommendations for a surface medical device with up to 30 days body contact.

The material fulfills the requirements of USP<88> class VI.

Tests were performed by independent, certified laboratories.

Biocompatibility tests for VESTAKEEP® Care:**Processing of VESTAKEEP® Care**

VESTAKEEP® Care resins can be processed using all conventional melt processing techniques such as injection moulding, extrusion, and compression moulding.

VESTAKEEP® Care M33 G-HP can be processed by common machines for thermoplastics. We recommend a melt temperature between 360°C and 380°C during the injection molding process. The mold temperature should be within a range of 160°C to 200°C, preferably 180°C.

Our technical experts would appreciate to give you support regarding the special requirements for the processing of VESTAKEEP® Care M33 G-HP.

Delivery of VESTAKEEP® Care

VESTAKEEP® Care M33 G-HP is supplied as granules in 25 kg boxes with moisture-proof polyethylene liners.

The results shown have been generated from a low number of production lots. Therefore, they are preliminary and not yet the result of a statistical evaluation. Therefore they must not be used to establish specifications.

The values presented are typical or average values, they do not constitute a specification.

FOR FURTHER INFORMATION PLEASE CONTACT US AT EVONIK-HP@EVONIK.COM
OR VISIT OUR PRODUCT AT WWW.EVONIK.COM/MEDICAL-TECHNOLOGY

Key Features

Industrial Sector
Medical Devices

Processing
Injection molding

Delivery form
Pellets, Granules

Resistance to
Heat (thermal stability), Fire / burn

Conformity
Biocompatibility, Medical application

Additives
Unfilled

| Mechanical properties ISO | dry | Unit | Test Standard |
|---------------------------------------|-------------|-------------------|---------------|
| Tensile modulus | 3600 | MPa | ISO 527 |
| Yield stress | 98 | MPa | ISO 527 |
| Yield strain | 5 | % | ISO 527 |
| Nominal strain at break, tB | 25 | % | ISO 527 |
| Charpy impact strength, +23°C | N | kJ/m ² | ISO 179/1eU |
| Charpy impact strength, -30°C | N | kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength, +23°C | 6 | kJ/m ² | ISO 179/1eA |
| Type of failure | C | - | - |
| Charpy notched impact strength, -30°C | 6 | kJ/m ² | ISO 179/1eA |
| Type of failure | C | - | - |

| Thermal properties | dry | Unit | Test Standard |
|--|-----------|-------|----------------|
| Coeff. of linear therm. expansion, 23°C to 55 °C, parallel | 60 | E-6/K | ISO 11359-1/-2 |

| Physical properties | dry | Unit | Test Standard |
|---------------------|-------------|-------------------|---------------|
| Density | 1300 | kg/m ³ | ISO 1183 |
| Density | 1300 | kg/m ³ | ASTM D 792 |

Burning Behav.

| | dry | Unit | Test Standard |
|------------------------------|------------|-------------|----------------------|
| Burnin behav. at thickness h | V-0 | class | IEC 60695-11-10 |
| Thickness tested | 3.2 | mm | - |
| GWFI - thickness tested | 960 | mm | - |
| GWIT - thickness tested | 800 | mm | - |

Electrical properties

| | dry | Unit | Test Standard |
|----------------------------|-----------------|-------------|----------------------|
| Volume resistivity, ρ | >1E13 | Ohm*m | IEC 62631-3-1 |

Rheological properties

| | dry | Unit | Test Standard |
|-----------------------------|------------|------------------------|----------------------|
| Melt volume-flow rate, MVR | 20 | cm ³ /10min | ISO 1133 |
| Temperature | 380 | °C | - |
| Load | 5 | kg | - |
| Molding shrinkage, parallel | 0.9 | % | ISO 294-4, 2577 |
| Molding shrinkage, normal | 1.1 | % | ISO 294-4, 2577 |
| Mold temperature | 180 | °C | - |

Characteristics
Special Characteristics

Semi-crystalline, Medium viscosity

Regulatory

US Pharmacopeia Class VI conformity

Color

Natural color

Chemical Resistance

General chemical resistance

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