

Product Information

# VESTAKEEP® 5000 FE20

## HIGH VISCOSITY, LOW-FRICTION PEEK



**VESTAKEEP® 5000 FE20** is a highly viscous, innovative PTFE-modified (20%) polyether ether ketone for the production of molded parts with high wear resistance produced by extrusion or injection molding. The semi-crystalline polymer exhibits superior chemical and thermal resistance. Molded parts made of this polymer provide quiet and low-friction operation for non-lubricated bearings. It has a FDA food contact compliancy.

**VESTAKEEP® 5000 FE20** can be processed by common extrusion or injection molding machines for thermoplastics. For injection molding, a mass temperature of 380°C to 400°C is recommended. The mold temperature should be in the range of 160°C to 200°C, preferably 180°C.

**VESTAKEEP® 5000 FE20** is delivered as cylinder granules in ready-to-process condition in moisture-tight packaging in polyethylene containers.

The use of colorants may change property values.

### Key Features

#### Industrial Sector

Automotive and Mobility, Aircraft and Aerospace, Industry and Engineering, Energy, Oil and Gas

#### Processing

Injection molding

#### Delivery form

Pellets, Granules

#### Resistance to

Heat (thermal stability), Fire / burn, Hydrolysis / hot water, Wear / abrasion, Oil / fuels

#### Electrical

Insulating

#### Conformity

Food contact

#### Additives

Lubricant, Unfilled

Mechanical properties ISO	dry	Unit	Test Standard
Tensile modulus	<b>435000</b>	psi	ISO 527
Tensile strength	<b>10600</b>	psi	ISO 527
Yield stress	<b>10600</b>	psi	ISO 527
Yield strain	<b>6</b>	%	ISO 527
Stress at break	<b>10200</b>	psi	ISO 527
Strain at break, B	<b>24</b>	%	ISO 527
Nominal strain at break, tB	<b>24</b>	%	ISO 527
Charpy impact strength, +23°C	<b>92.8</b>	ftlb/in <sup>2</sup>	ISO 179/1eU
Type of failure	<b>C</b>	-	-
Charpy impact strength, -30°C	<b>66.6</b>	ftlb/in <sup>2</sup>	ISO 179/1eU
Type of failure	<b>C</b>	-	-
Charpy notched impact strength, +23°C	<b>5.23</b>	ftlb/in <sup>2</sup>	ISO 179/1eA
Type of failure	<b>C</b>	-	-
Charpy notched impact strength, -30°C	<b>4.28</b>	ftlb/in <sup>2</sup>	ISO 179/1eA
Type of failure	<b>C</b>	-	-

Physical properties	dry	Unit	Test Standard
Density	<b>1.4</b>	g/cm <sup>3</sup>	ISO 1183
Moisture content	<b>0.1</b>	wt.-%	ISO 15512

Rheological properties	dry	Unit	Test Standard
Melt volume-flow rate, MVR	<b>4.7</b>	cm <sup>3</sup> /10min	ISO 1133
Temperature	<b>380</b>	°C	-
Load	<b>5</b>	kg	-

### Characteristics

**Special Characteristics**

High heat resistant, High viscosity

**Features**

Low coefficient of friction

**Color**

Natural color

**Delivery form**

Cylindrical pellets

**Chemical Resistance**

Grease resistance, Hydrolytically stable, Oil resistance, General chemical resistance