

Product Information

**VESTAKEEP® 2000 UFP20**

**UNREINFORCED, MEDIUM-VISCOSITY POLYETHER ETHER KETONE ULTRA-FINE POWDER**



**VESTAKEEP® 2000 UFP20** is an unreinforced, medium-viscosity polyether ether ketone ultra-fine powder. The product can be used for coatings according to the tribo-method or can be applied in a suspension.

The semi-crystalline polymer features superior thermal and chemical resistance. VESTAKEEP® 2000 UFP20 is of low flammability.

VESTAKEEP® 2000 UFP20 is supplied as a powder in boxes with moisture-proof polyethylene liners.

Pigmentation may affect values.

Values measured on VESTAKEEP® 2000 P.

Inside the original and undamaged packaging, the product has a shelf life of at least 2 years when stored in dry rooms at temperatures not exceeding 30°C.

**Key Features**

**Industrial Sector**

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

**Processing**

Press and sintering, Coating

**Delivery form**

Powder

**Optics**

Laser transparent

**Resistance to**

Heat (thermal stability), Fire / burn, Hydrolysis / hot water, UV / light / weathering, Wear / abrasion, Fatigue resistance, Oil / fuels

**Electrical**

Insulating

**Conformity**

Food contact

**Additives**

Unfilled

**Mechanical properties ISO**

Tensile modulus

dry

**537000**

Unit

psi

Test Standard

ISO 527

|                                       |              |                      |             |
|---------------------------------------|--------------|----------------------|-------------|
| Tensile strength                      | <b>14500</b> | psi                  | ISO 527     |
| Yield stress                          | <b>14500</b> | psi                  | ISO 527     |
| Yield strain                          | <b>5</b>     | %                    | ISO 527     |
| Stress at break                       | <b>10200</b> | psi                  | ISO 527     |
| Nominal strain at break, tB           | <b>30</b>    | %                    | ISO 527     |
| Charpy impact strength, +23°C         | <b>N</b>     | ftlb/in <sup>2</sup> | ISO 179/1eU |
| Charpy impact strength, -30°C         | <b>N</b>     | ftlb/in <sup>2</sup> | ISO 179/1eU |
| Charpy notched impact strength, +23°C | <b>2.85</b>  | ftlb/in <sup>2</sup> | ISO 179/1eA |
| Type of failure                       | <b>C</b>     | -                    | -           |
| Charpy notched impact strength, -30°C | <b>2.85</b>  | ftlb/in <sup>2</sup> | ISO 179/1eA |
| Type of failure                       | <b>C</b>     | -                    | -           |

| <b>Thermal properties</b>                   | <b>dry</b> | <b>Unit</b> | <b>Test Standard</b> |
|---|------------|-------------|----------------------|
| Melting temperature                         | <b>644</b> | °F          | ISO 11357-1/-3       |
| Temp. of deflection under load A, 1.80 MPa  | <b>311</b> | °F          | ISO 75-1/-2          |
| Temp. of deflection under load B, 0.45 MPa  | <b>401</b> | °F          | ISO 75-1/-2          |
| Vicat softening temperature A, 10 N, 50 K/h | <b>635</b> | °F          | ISO 306              |
| Vicat softening temperature B, 50 N, 50 K/h | <b>590</b> | °F          | ISO 306              |
| Melting Temperature                         | <b>644</b> | °F          | ASTM D 3418          |

| <b>Physical properties</b> | <b>dry</b> | <b>Unit</b>       | <b>Test Standard</b> |
|----------------------------|------------|-------------------|----------------------|
| Density                    | <b>1.3</b> | g/cm <sup>3</sup> | ISO 1183             |
| Density                    | <b>1.3</b> | g/cm <sup>3</sup> | ASTM D 792           |

| <b>Burning Behav.</b>        | <b>dry</b>    | <b>Unit</b> | <b>Test Standard</b> |
|------------------------------|---------------|-------------|----------------------|
| Burnin behav. at thickness h | <b>V-0</b>    | class       | IEC 60695-11-10      |
| Thickness tested             | <b>0.1260</b> | in          | -                    |

**Rheological properties**

|                            | dry | Unit                   | Test Standard |
|----------------------------|-----|------------------------|---------------|
| Melt volume-flow rate, MVR | 71  | cm <sup>3</sup> /10min | ISO 1133      |
| Temperature                | 380 | °C                     | -             |
| Load                       | 5   | kg                     | -             |

**Powder properties**

|                      | dry | Unit | Test Standard              |
|----------------------|-----|------|----------------------------|
| Bulk density, powder | 230 | g/l  | EN ISO 60                  |
| Particle size, Max.  | 85  | µm   | ISO 13320, DIN ISO 8130-13 |
| Particle size, D(50) | 20  | µm   | ISO 13320, DIN ISO 8130-13 |
| Particle size, D(90) | 35  | µm   | ISO 13320, DIN ISO 8130-13 |

**Characteristics**

**Applications**

Electrical and Electronical

**Processing**

Electrostatic coating

**Special Characteristics**

Semi-crystalline, Environmental stress crack resistance, Medium viscosity

**Features**

Dispersion coating

**Delivery form**

Ultrafine powder (UFP)

**Chemical Resistance**

General chemical resistance