

DESIGN YOUR FUTURE PRODUCT

VESTAKEEP®

AN EXTRAORDINARY
HIGH-PERFORMANCE
POLYMER FOR FUTURE
TECHNOLOGIES



Evonik's innovative materials and processes provide solutions for better cost efficiency, more environmentally friendly systems and give materials more resistance to chemical or mechanical stresses.

With our customized high-performance materials, we improve your quality of life. Today and tomorrow.

As a technology leader with almost 60 years of experience, we create high-performance polymers, foams and membranes that take your products to the top!

Efficiency and reliability are our key drivers when developing sustainable, customized solutions for our customers. Our goal is to design products for the future that hold up to the challenge of elevating your quality of life – every day.



MEETING THE CHALLENGES OF TODAY AND TOMORROW

VESTAKEEP® PEEK

VESTAKEEP® PEEK is a member of the semi-crystalline thermoplastics family, generally referred to as polyaryletherketone (PAEK). Evonik provides this high-performance polymer since 15 years as both granule and powder grades.

The aromatic polyetheretherketone molding compounds are suitable for manufacturing long-lasting, heavy-duty components. Such components are used for, e.g., semiconductors, cable, filament and film production, in the oil exploration, automotive and aviation industries, in mechanical engineering, for food and drinking water applications, and in medical technology. Our grades for medical technology are described in various other brochures.



We take you to the top with our high-performance polymers!

Withstands the toughest conditions

VESTAKEEP® PEEK is distinguished by the following material properties:

- Excellent thermal stability
- High reliability over a wide temperature range
- High glass transition temperature
- Excellent chemical resistance
- Low water absorption
- High dimensional stability
- Hydrolytic resistance
- High abrasion resistance
- Low friction
- Outstanding electrical properties
- Inherent flame resistance
- High radiation resistance

Superior to metal

VESTAKEEP® PEEK outperforms metals by improving the system durability and lowering manufacturing costs. These benefits derive from providing the material properties of corrosion resistance, abrasion resistance, high rigidity combined with low weight, and versatile processability.

Thanks to these properties, PEEK is gaining ground and replacing such materials as aluminum, titanium, and steel in aircraft construction and in bearing and gear parts. Bushings used in the mining, pulp, and paper industries are also made from this high-temperature polymer.

Superior to other polymers

Of all thermoplastics, PEEK offers the best combination of inertness and heat resistance. It retains its original properties even after long exposure to steam, ethylene oxide, hot oil and gamma radiation.

VESTAKEEP® PEEK molding compounds have an extremely high oxidative stability in the melt and can be used continuously at temperatures exceeding 260 °C.



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Lightweight & inherent flame-retardant

- Weight reduction
- Low fire, smoke and toxic emissions
- High mechanical strength



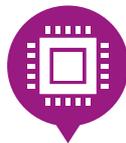
Energy efficient for low CO₂ emissions

- Light weight
- Low friction and high abrasion resistance
- Eco-friendly processing



Precise & accurate data process

- Good dielectric properties
- Uniformed and stable ESD property
- Excellent chemical resistance

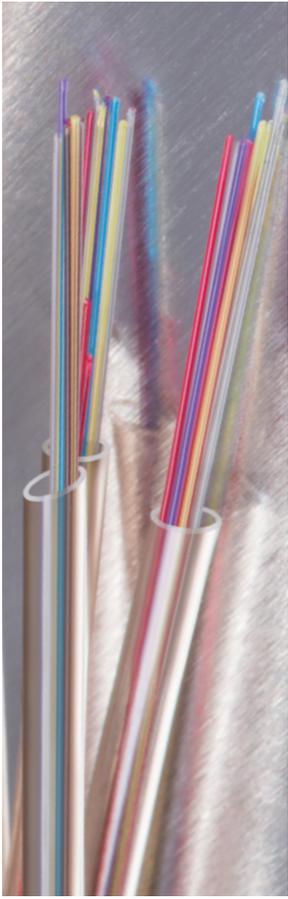


Metal replacement in drinking water applications

- Hydrolysis resistance
- Low water absorption
- High abrasion resistance
- Long service life



APPLICATIONS FOR THE FUTURE



Oil & gas upstream

- Extended service life
- Optimized efficiency
- Reliable performance at high temperature and high pressure



Gear technology

- Weight reduction
- High wear resistance with low friction
- Noise, vibration and harshness reduction

We offer CAE support for drivetrain and gear systems.



Chemical resistance

- Compatible with most organic solvents
- Resistant to a wide range of acids and bases
- Withstanding aggressive industrial, aircraft, and automotive fluids



Food contact

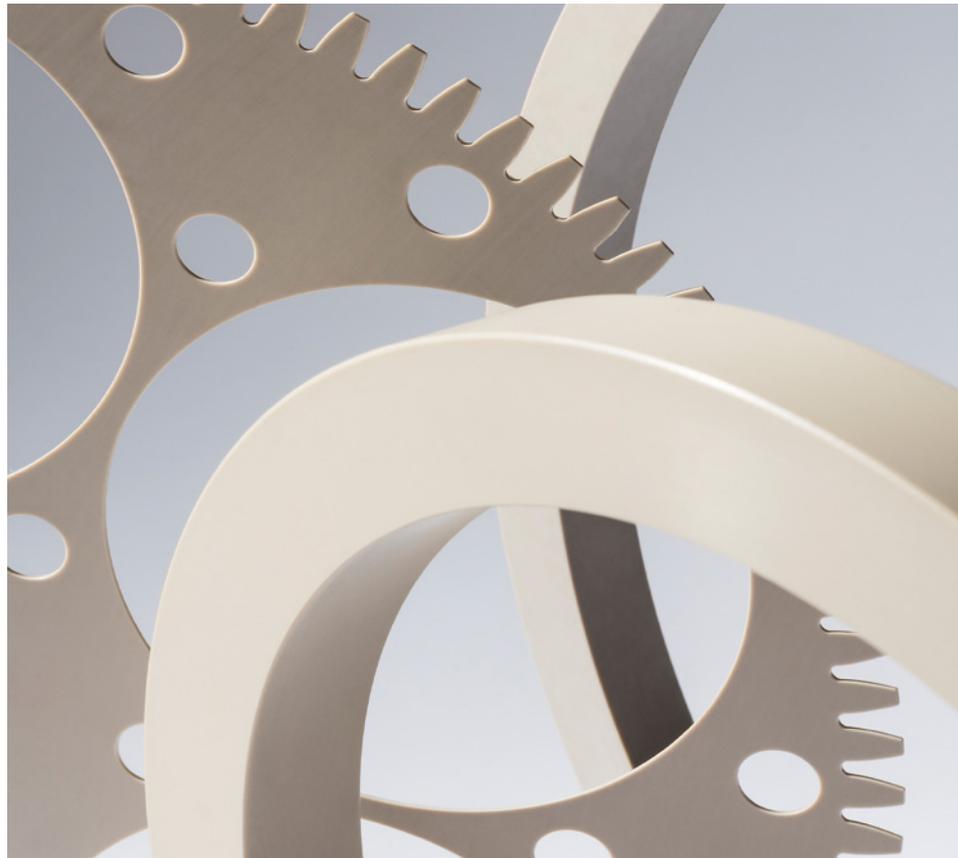
- Excellent long-term heat stability
- Resistant to vegetable oils and animal fats
- Highly scratch resistant



APPLICATIONS FOR THE **EXTREME**

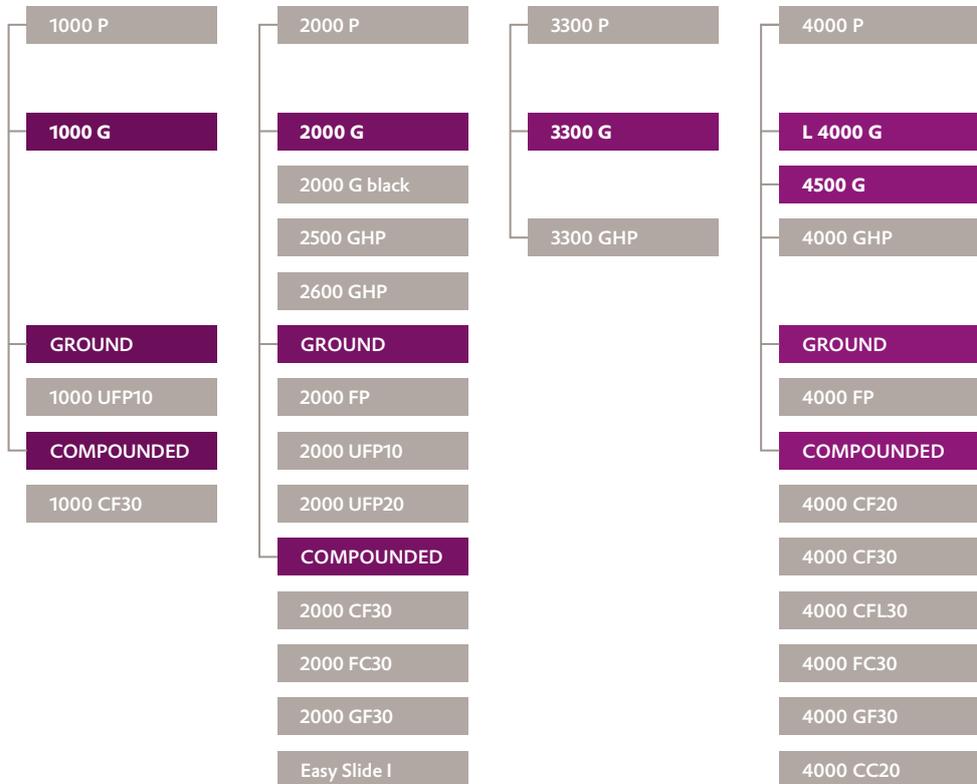
Our product portfolio ranges from low to high viscosity grades

- G** Granules
- P** Powder
- FP** Fine powder
- GHP** High purity granules
- UFP** Ultrafine powder
- GF** Glass fiber
- FC30** PTFE, graphene, carbon fiber (10:10:10)
- CF/CFL** Carbon fiber
- CC20** Ceramic-filled 20%



LOW VISCOSITY ←

OUR RANGE



If you are interested in the detailed property values of our VESTAKEEP® PEEK products, you can find them in our database: www.plastics-database.com



- 5000 P
- 5000 G
- GROUND
- 5000 FP
- COMPOUNDED
- 50001 XT

We are happy to support you every step of the way in your next project.

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° = registered trademark

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