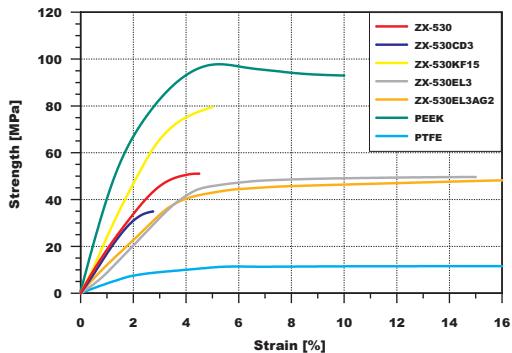
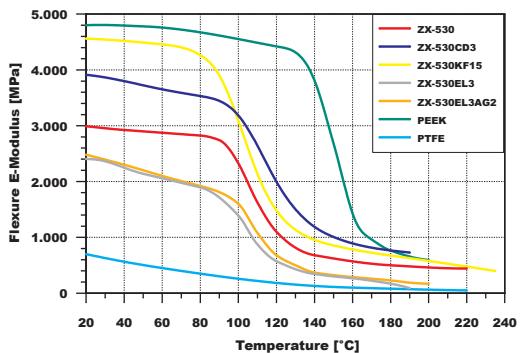


Stress/Strain (ISO 527)



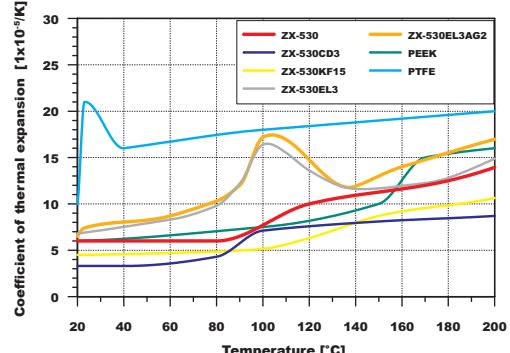
Defiance a fibre reinforcement, ZX-530KF15 has got an elongation at break of 5%. The polymer reinforced ZX-530EL3 has got an elongation at break of 15%.

Flexural E-Modulus (ISO 178)



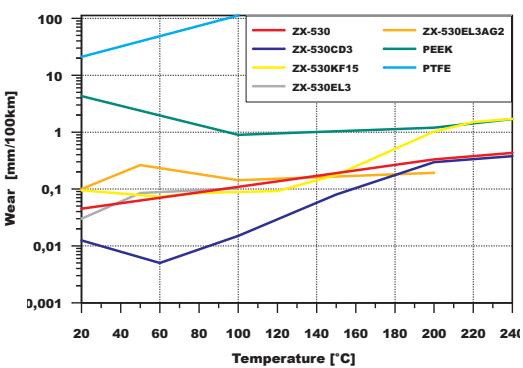
From 90°C, the modulus in flexure of the ZX-530 declines and from 180°C, is at the same level of PEEK. ZX-530EL3 has got a low modulus in flexure.

Thermal expansion coefficient (ISO E830)



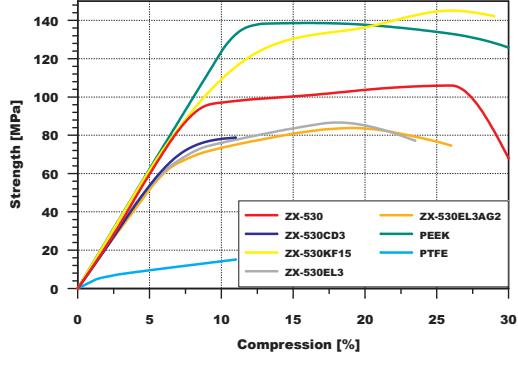
ZX-530KF15 and ZX-530CD3 are more dimensionally stable than PEEK and equally good as the ZX-530.

Wear (PVLAB11)*

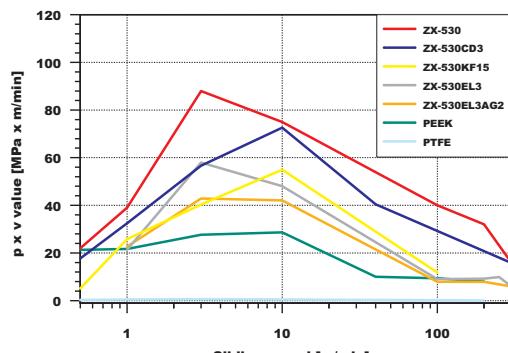


ZX-530CD3 offers up to 100 °C an extreme high wear resistance. Even polyimide, PAI or strong reinforced plastics are worse.

Strength/Compression (ISO 604)



Admissible PV-value (PVLAB07)*



The PV-values of all the types of ZX-530 are significantly higher than the PEEK's ones. PTFE offers a maximum PV-value of 2 MPa m/min.

Substitution examples

Which material can replace the ZX-530?

PEEK

taking into account the permissible operation temperature and the strength required, replaceable Targets: cost reduction, wear and friction reduction, increment of the chemical resistance and of the PV-value.

PTFE and PTFE Compounds

no replaceable in circumstance of concentrated sulfuric, nitric, and chlorosulfonic acid and where, an extremely high requirement of friction coefficient reduction, is requested.

PVDF

Targets: improvement of the chemical resistance, increment of the thermal application limit. Wear reduction and increment of the stiffness and hardness.

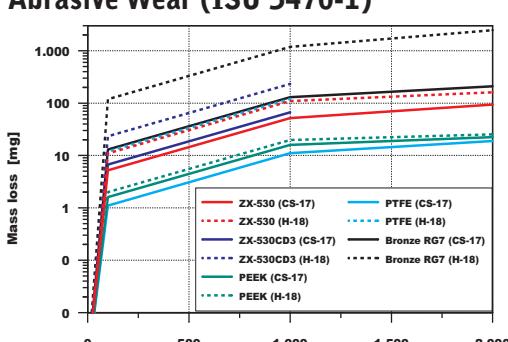
PCTFE, ETFE

Targets: improvement of the chemical resistance, increment of the thermal application limit, stiffness and hardness. Cost reduction through injection moulding.

Ceramic

taking into account the operating temperature range, hardness and chemical resistance required, replaceable. Targets: increment of the heat shock resistance and brittleness, reduction of the project outlay, reduction of the sensitivity to edge pressure, cost reduction.

Abrasive Wear (ISO 5470-1)



ZX-530 is up to 15 times more resistant to coarse abrasive particles (H-18) in comparison to bronze.

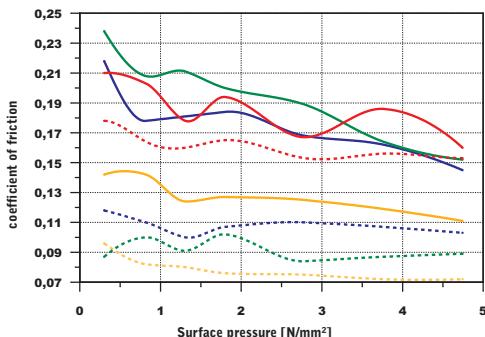
* Information about factory standards can be found on the last page

ZX-530 family - Coefficient of friction*

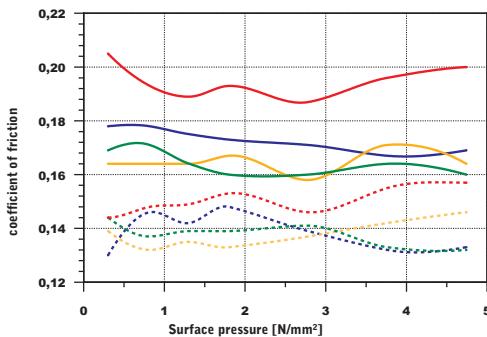
ZX-530

ZX-530CD3

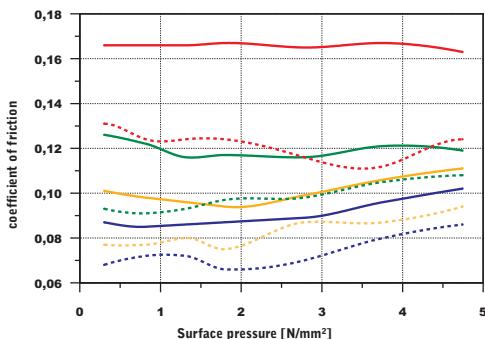
Dry running



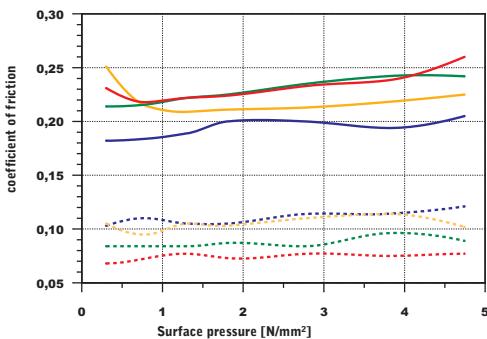
Dry running



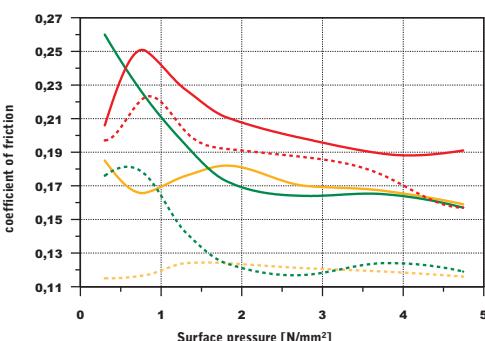
Oil lubrication



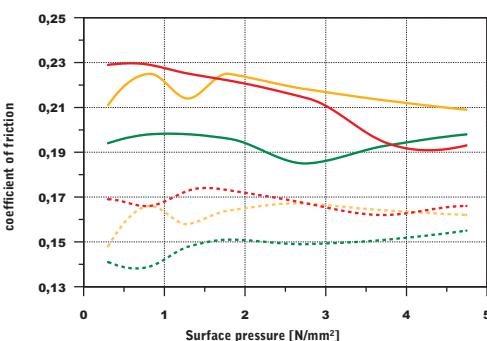
Oil lubrication



Water lubrication



Water lubrication



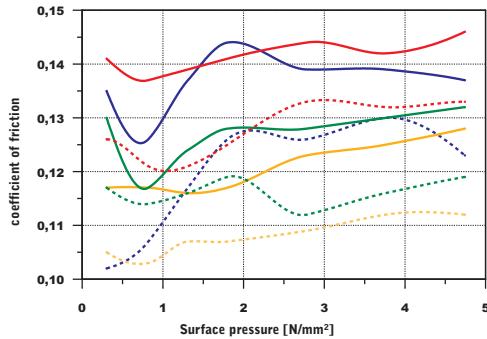
μ_{stat} μ_{dyn} \blacksquare 25°C ■ 50°C □ 75°C ▨ 100°C

* Determined to factory standard. Information about the test parameters can be found on the last page

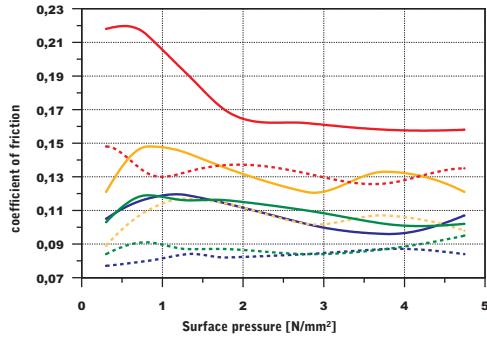
ZX-530KF15

ZX-530EL3AG2

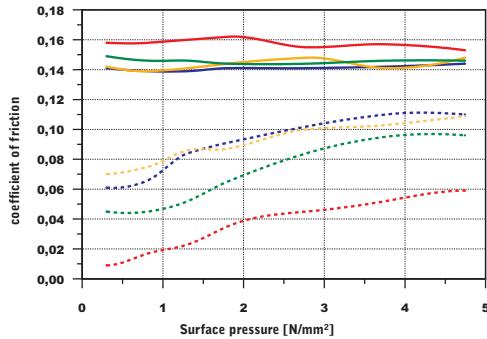
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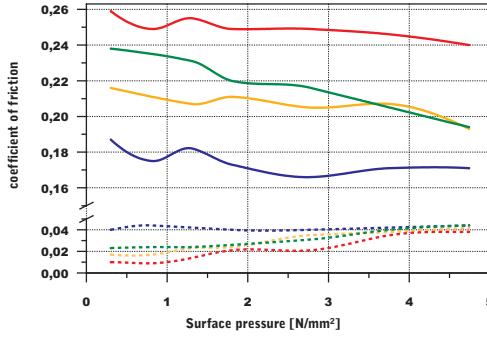
Dry running



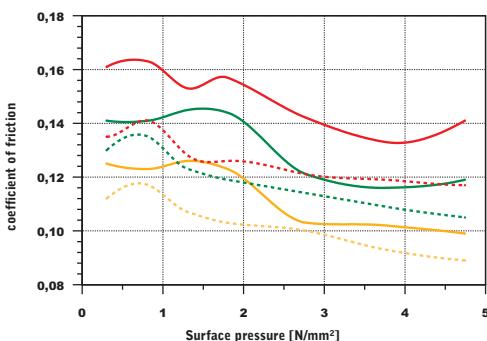
Oil lubrication



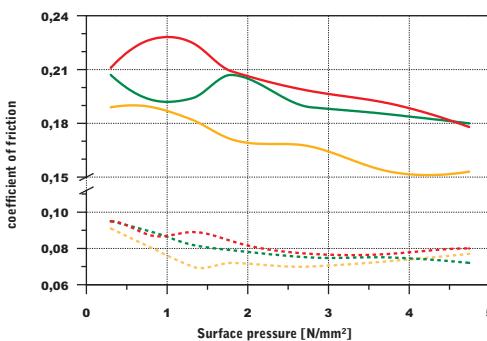
Oil lubrication



Water lubrication



Water lubrication



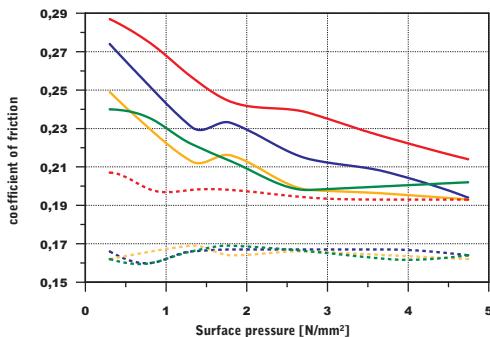
— $\mu_{\text{stat.}}$ ■ 25°C ■ 75°C
- - - $\mu_{\text{dyn.}}$ ■ 50°C ■ 100°C

* Determined to factory standard. Information about the test parameters can be found on the last page

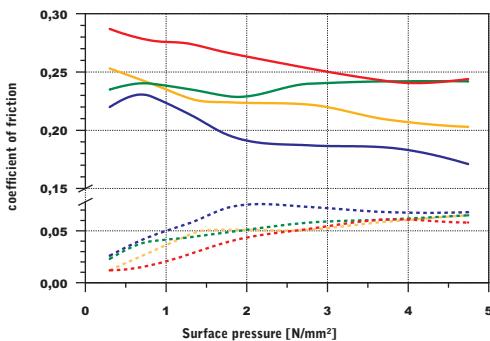
ZX-530 family - Coefficient of friction*

ZX-530EL3

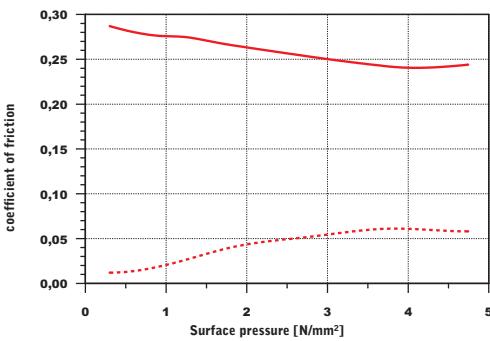
Dry running



Oil lubrication



Water lubrication



— $\mu_{stat.}$ ■ 25°C
- - - $\mu_{dyn.}$ ■ 50°C ■ 75°C ■ 100°C

* Determined to factory standard. Information about the test parameters can be found on the last page

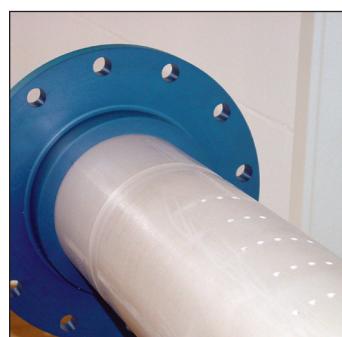
Examples of usage



Due to its antimicrobial effect ZX-530EL3AG2 is suitable for applications with high hygiene requirements and it convinces with high chemical resistance.



ZX-530CD3 is used as piston guides in pneumatic cylinders. Thanks to the very low wear and low thermal expansion a very tight clearance is possible.



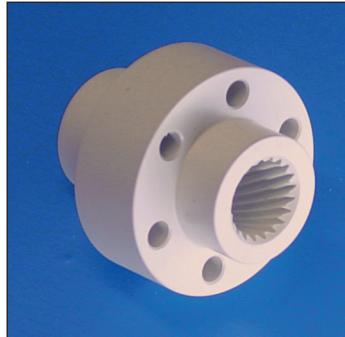
In refineries manifolds made of ZX-530 are installed. The manifolds withstand high loads at temperatures of 120 ° C under simultaneous contact with acid.



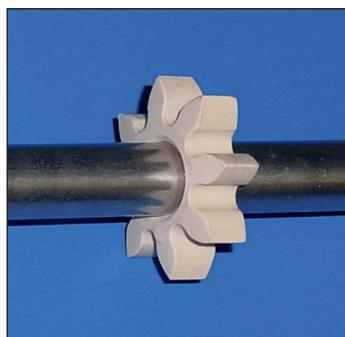
Due to the high chemical resistance molded ZX-530 bearings are used in mammography devices.



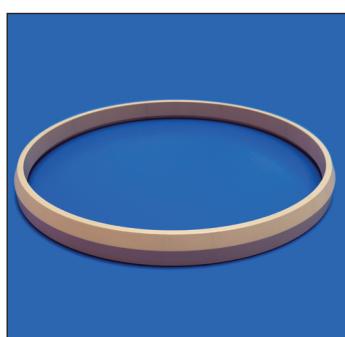
In the food industry bearing shells of augers made of ZX-530 are used. ZX-530 meets the conformity according to EU 10/2011 and it is suitable for steam sterilization.



ZX-530, due to the high PV-value and the high wear resistance, is used especially as spindle nut with high spindle speeds.



This injection moulded ZX-530, thanks to a very high chemical and wear resistance, is used in the circuit board industry as a cylindrical lantern gear.



ZX-530 is used, till over 180°, as sealing ring in ball valves. This thanks to the outstanding endurance strength and good anti-friction properties, compared to PTFE.



Sensor housings made of ZX-530 are used for level sensors in the water supply of passenger aircrafts. The demand for high diffusion resistance is met with ZX-530.



Bearings, as well as inner cages and outer cages of anti-friction bearings, are made of ZX-530 because of the extreme chemical resistance, wear resistance and high PV-value.