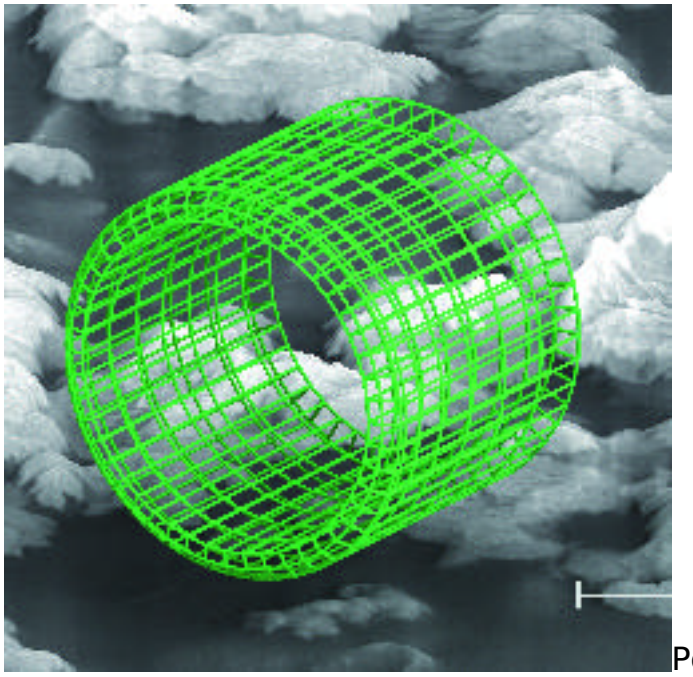
Nano Bearings Material Offers up to Six Times More Wear Resistant



Polymer plain bearings made from iglide T500 have been around since the mid-1980s. They run dry at a long-term application temperature of -148°F to 482°F (up to 599°F for short periods). Even at a permanent temperature of 482°F, the bearings can still withstand a surface pressure of about 21,750 psi. In addition, this material absorbs very little moisture and is resistant to almost all chemicals. This high-temperature material, which has proved its worth in thousands of applications over many years, is available from stock in more than 250 dimensions.
In 25 years of polymer research, the possible applications for lubrication-free polymer plain bearings have been continually expanded. Following comprehensive testing and many initial trials, igus' iglide X6 material has topped previous standards. This new material is up to six times more wear-resistant than iglide T500 under the influence of temperature and demonstrates significantly reduced relaxation behavior. For the user, this means the press fit of the bearings is improved by up to 50 percent. In addition, the material has an even greater resistance to chemicals.

Nano technology was used to optimize the new X6 material. In this area, surface properties play an increasingly important role compared with the material volume properties. In nano technology, the size of the object determines properties. These are "size-induced functionalities." The use of nano particles has a decisive influence on the superior performance of iglide X6 plain bearings, especially under the influence of temperature.

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