

Eco benefits of plastic plain bearings

A study has found that no less than half of all machine lubricants currently used in Germany seeps into soil and waters or evaporates into the atmosphere. According to a research team of chemists, mechanical engineers and environmentalists from the RWTH in Aachen, the estimates for Germany alone consume 250,000 tonnes per year, This corresponds to the amount required to fill 8,000 tankers.

The tribo-optimised "iglidur" plastic plain bearings from igus GmbH in Cologne require neither oil nor grease. They are lubricant-free, so that no contaminants escape into the environment. Due to continuous advanced developments the bearings specialist igus now supplies alternatives more in line with environmental considerations for more and more applications that work with lubricated metallic plain and rolling bearings.

The energy balance for the manufacture of plastics is very positive. Whereas the energy from 15 litres of oil is necessary to produce 1 litre of aluminium, and 1 litre of steel requires 11 litres of oil, the production of 1 litre of plastic only needs an average of 1.8 litres of oil. As far as annual worldwide oil requirements are concerned, the production of plastics only requires 4 percent. This value will probably continue to decrease, since the vegetable production of polymers is making great progress.

Lubricant-free and light

Not only will the incorporated solid lubricants make "iglidur" polymer plain bearings ecologically valuable. The lightweight bearings will also help to reduce fuel consumption and carbon dioxide output in, for example, vehicles or aircrafts. Basically the reduced weight leads to lower mas-

ses and subsequently lower energy consumption. The high chemical resistance of plastic bearings is another positive ecological aspect, because metals are often coated to achieve this effect. This takes place in "unhealthy" and high-energy zinc, treatment and galvanising baths.

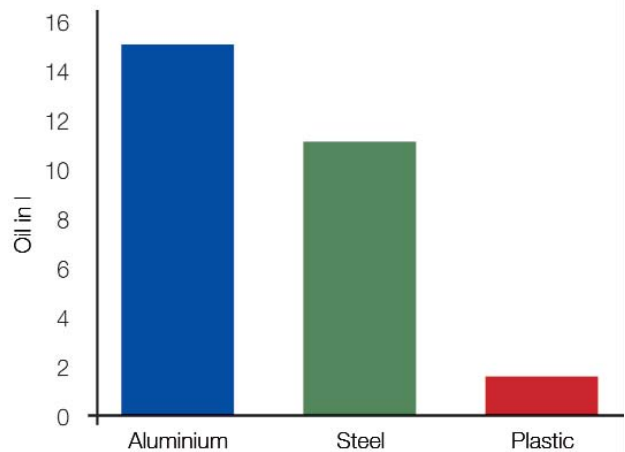


Photo PM0508-02: igus GmbH, Cologne

The energy required to produce one volume litre of material (converted to litres of oil).



Picture PM0508-01: igus GmbH, Cologne

In contrast to metallic plain and rolling bearings, "iglidur" plastic plain bearings from igus require no oil or grease.

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