

A Well-Rounded Thing: igus Develops Ball Bearings Made Of Recycled Plastic

The plastics specialist presents a green recycling variant of the proven xiros deep groove ball bearing

STAMFORD, CT, US, November 16, 2022 /EINPresswire.com/ -- igus®, the Germany-based manufacturer of motion plastics, announced the company has taken a further step towards sustainable plastic production. The company uses scrap produced from the injection molding process of its high-performance plastic xirodur® B180 to produce an [ECO variant](#) of the proven xiros® deep groove ball bearing. The recycled version achieves almost the same technical properties and load capacity.

Even the best injection molding production cannot recycle plastics 100 percent. Defective parts and sprues are often unavoidable. This also applies to the production of deep groove ball bearings from igus, whose inner and outer rings are made of xirodur B180, among other materials. However, manufacturers can choose what happens to the excess material – discarding them as industrial waste is not an option for obvious reasons. It means that valuable raw material is lost forever. And emissions from incineration add to pollution.

"As a plastics manufacturer, we are aware of our responsibility to people and nature. So we have developed a process to recycle leftovers of the high-performance plastic xirodur B180 into a



With xirodur B180, igus has now developed a ball bearing made of recycled plastic. (Source: igus GmbH)

regranulate," says Marcus Semsroth, Head of Business Unit xiros Polymer Ball Bearings

Excess amounts of the engineered plastic xirodur B180 ECO, a characteristic green color, are used in injection molding production at igus to produce a recycled version of the xiros deep groove ball bearing.

Recycling variant with proven physical properties in tests

The new ECO variant is made of four components. The inner and outer races are made of recycled xirodur B180 ECO. The cage is made of recycled iglide® J4 material, and the balls are optionally made of stainless steel or glass – a combination that ensures that customers do not have to sacrifice quality.

"Our test laboratory in Cologne proves that the recycled version of the ball bearing achieves almost the same technical properties and load capacity as the original," says Semsroth. "The only drawback is that the recycled plastic xirodur B180 ECO is no longer FDA-compliant and therefore no longer suitable for direct contact with food."

But there are so many non-food applications that make a recycled version worthwhile. Like the original, the green ball bearings enable quiet, hygienic dry-running in machines and systems, for example, in the printing, labeling, and packaging industries. Compared to traditional metal bearings, the ECO version of the polymer bearings also has many advantages. The deep groove ball bearing made of recycled plastic is corrosion-free, particularly resistant to chemicals, non-magnetic, and electrically insulating. In addition, it is up to 60 percent lighter and costs 40 percent less than the equivalent metal bearings.

Step by step to sustainable plastic production

Cylindrical plain bearings made of high-performance plastics have already been available in an ECO variant since mid-2022. For igus, the new recycled material xirodur B180 ECO is another step toward more [sustainability](#) in plastics production. For 16 of its iglide® materials, igus reports the same CO2 footprint as Scope 3 emissions.

In addition, the company launched its Chainge program in 2019, a recycling initiative for discarded cable carriers from any manufacturer. As a result, the cradle-chain® E2.1CG is the world's first e-chain® cable carrier made from 100 percent regranulate. Since the program's start, igus has collected and recycled over 60 tons of high-performance plastics, thus transferring them from the traditional linear economy to the circular economy.

Another exciting "net zero" measure from igus is the company's recent investment in Mura Technology Limited, whose technology converts non-recyclable plastic waste into oil within 20 minutes. The oil can then be used to produce new plastic granulate.

PRESS CONTACT:

Michael Rielly

1.800.521.2747

mrielly@igus.net

www.igus.com

ABOUT IGUS:

igus GmbH develops and produces motion plastics. These self-lubricating, high-performance polymers improve technology and reduce costs wherever things move. In energy supplies, highly flexible cables, plain and linear bearings, and lead screw technology made of tribo-polymers, igus is the worldwide market leader. The family-run company based in Cologne, Germany, is represented in 35 countries and employs 4,900 people across the globe. In 2021, igus generated a turnover of €961 million. Research in the industry's largest test laboratories constantly yields innovations and more user security. Two hundred thirty-four thousand articles are available from stock, and service life can be calculated online. In recent years, the company has expanded by creating internal startups, for example, ball bearings, robot drives, 3D printing, the RBTX platform for Lean Robotics, and intelligent "smart plastics" for Industry 4.0. Among the most significant environmental investments are the "chainge" program – recycling used e-chains and participating in an enterprise that produces oil from plastic waste.

Michael Rielly

igus

+1 800-521-2747

mrielly@igus.net

This press release can be viewed online at: <https://www.einpresswire.com/article/601625379>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2022 Newsmatics Inc. All Right Reserved.