

## *Green Dot, BioInspiration and 3dk.berlin Partner to Create WillowFlex, a New Flexible Filament for 3D Printer*

BioInspiration introduces WillowFlex, a new flexible filament for 3D printers that offers unmatched superior performance with greater temperature resistance, better adhesion and faster printing speeds. The filament is made with Green Dot's Terratek® Flex compostable elastomeric bioplastic. Green Dot has just published a case study detailing the project and the unique physical characteristics of the material.

When BioInspiration (Eberswalde, Greater-Berlin, Germany) sought to create a new flexible 3D printer filament made with compostable materials they turned to Green Dot (Cottonwood Falls, KS). BioInspiration prides itself on identifying materials that follow nature's lead - compostable, upcyclable, harmless, innovative, resilient. In this pursuit, BioInspiration learned about Terratek® Flex, Green Dot's compostable elastomeric bioplastic. In collaboration with 3dk.berlin, a plastics manufacturer with 30 years experience, the companies developed WillowFlex, a flexible 3D printer filament made from compostable raw materials.

WillowFlex offers Makers and the decentralized production community a filament that is not just greener but also offers unique physical properties unmatched by other flexible filaments currently available. Brian Crotty from BioInspiration explained, "We see over and over that nature has a way of surprising us. When we began experimenting with WillowFlex, we found that as a bioplastic filament it had several advantages inherent to the material." The material maintains structural integrity at temperatures above 212°F (100°C) and maintains flexibility at temperatures as low as 5°F (-15°C). WillowFlex has excellent layer adhesion and can also be printed at higher speeds, allowing for faster part production. Florian Deurer, who works in the filament laboratory at 3dk.berlin was immediately impressed with the material. "It's totally uncommon for a plastic to be this flexible, this heat resistant and to also have a melting point that is that low that you can print it at temperatures uncommon for other

plastics,” he said. “That’s what’s very interesting about this material.”

BioInspiration is introducing their ground-breaking filament with a Kickstarter campaign. Contributors can be the first to receive the innovative WillowFlex filament. BioInspiration plans to have the filament commercially available in late fall 2015.

Green Dot has published a case study about the development of WillowFlex. The study details how the U.S. and German companies collaborated to develop this unique flexible filament. “This brings together two merging branches of plastic development, next-generation bioplastics and 3D print integration,” explained Green Dot CEO, Mark Remmert.

### *About Green Dot Bioplastics*

Green Dot is a bioscience social enterprise headquartered in Cottonwood Falls, Kansas. The company serves the plastics industry and style-conscious consumers with a full line of biobased and compostable materials sold under the Terratek® brand name. Green Dot aspires to improve the environment in which we live by building a more sustainable world with renewable biobased resins and promoting their use through invention, creation and research.

### *About BioInspiration*

Based in Berlin, Germany, BioInspiration expands access to materials and processes that follow nature’s lead – compostable, upcyclable, harmless, innovative, resilient. BioInspiration is dedicated to advancing the Organic Material Revolution. Learn more at [www.BioInspiration.eu](http://www.BioInspiration.eu).





# *Finding BioInspiration with Terratek Flex*

Learn how a group of product designers used our elastomer to fill a gap in the 3D printing filament market.

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