

Sustainable Star Wars: BioInspiration Experiments with Their Compostable WillowFlex Filament

 3dprint.com/114939/bioinspiration-willow-flex/

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I'm not sure how Darth Vader feels about environmental issues. My guess is that he doesn't give a bantha's behind about the ecological impact of his actions, considering his penchant for vaporizing entire planets. The man liked to leave his mark, which is why he'd probably be most displeased to learn that his iconic helmet is now fully compostable, thanks to [BioInspiration](#), the German filament manufacturer behind the biodegradable, corn starch-based filament WillowFlex.

[WillowFlex was introduced last year](#), after a successful [Kickstarter campaign](#). The flexible, nontoxic filament, as well as all objects printed with it, can be safely composted should you ever break or just tire of your printed items. It's guilt-free manufacturing at its finest. Not only are BioInspiration's founders passionate about environmental conservation, they're also huge *Star Wars* fans, so in honor of the new film's release, they decided to print some fun stuff with their WillowFlex. They designed and printed a finely detailed miniature X-Wing from the original trilogy, as well as Darth Vader's helmet – not the original, but the melty destroyed one that can be seen in *Kylo Ren's* designated moping chamber in *The Force Awakens*.

While WillowFlex filament is available in ten colors, further painting of the printed models was still needed. In keeping with their eco-friendly philosophy, BioInspiration decided to go with biodegradable watercolor paints, and were pleased to see that they took to the models beautifully.





“We were surprised (at) how accepting the material is!” said Thorsten Perl, CVO and Co-founder of BioInspiration. “One of the first things we tried was the ecological watercolors from my son’s backpack. And it bonded well to the WillowFlex toy. And because it is watercolor – if you want to change the painting of your 3D printed toy, you can just wash it away and paint again. Let your creativity flow to Sustainability!”

There are a lot of environmentally safe paints out there to experiment with; after all, if you’re trying to be eco-friendly by printing something with a compostable filament, it hardly makes sense to finish it off with a harmful, non-biodegradable paint job. According to BioInspiration, WillowFlex’s matte surface is highly receptive to watercolor. I like the idea of it being washable and repaintable, too – you know, just in case you get bored and want to paint your X-Wing in holiday colors for a while, as an example.



BioInspiration just finished shipping the last round of rewards from their Kickstarter campaign this past week; they raised well over their €8,450 goal by the time the campaign ended. The company is now looking for “3D printing pioneers and early adopters for further experiments with the world’s first flexible filament from compostable raw materials.” You can contact them [here](#). In the meantime, BioInspiration remains dedicated to furthering the production and marketing of organic, safe materials, with help from a partnership with the [Eberswalde University for Sustainable Development](#). According to their Kickstarter page, they will be following up their WillowFlex line with a standard Willow filament, and then, presumably, additional organic and biodegradable filaments. BioInspiration may be a young company, but they appear to be well on the road to furthering what their slogan calls “Organic Material Evolution.” Discuss this story in the [WillowFlex forum](#) thread on 3DPB.com.



3D Print: BioInspiration
Photo: Stefan Vydra