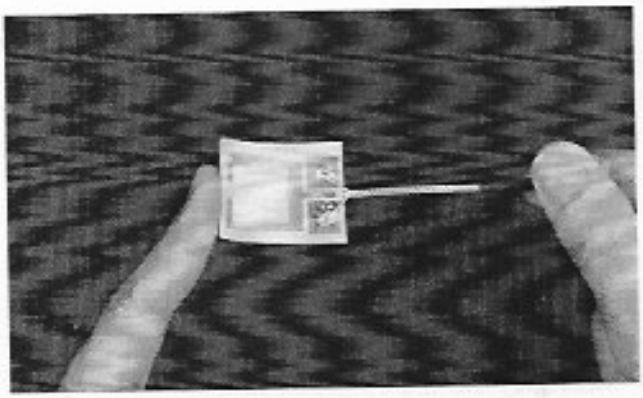
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Startup announces development of flexiramics—ceramics with paper-like properties

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(Phys.org)—Dutch startup Eurekite has announced on their web page that they have developed a new kind of ceramic, one that is both flexible and easily made at varying degrees of thickness. The company (affiliated with the University of Twente in the Netherlands) is initially marketing the new product as a replacement for traditional printed circuit board materials.

Traditionally, ceramics have been made by forming clay into shapes and then heating it—the result being a hard, brittle, glass-like material. In more recent years, scientists have broadened the definition to include a class of materials that are defined by the bonds that hold their molecules together. Most often they are highly crystalline, making them heat resistant , e.g. the Space Shuttle heat shields, or as material used in electronics for parts that call for very low conductivity. That has generally meant that ceramics can be strong, but they can also shatter if dropped or abused. They also tend to not react to other materials making them useful in a wide variety of products. Now, Eurekite claims to have developed a ceramic that retains the positive attributes of ceramics yet is flexible, which explains its name.

The company describes its product as a ceramic with paper-like qualities—in a video, Eurekite CEO Gerard Cadafalch Gazquez holds a square of the material, which looks a lot like toilet paper, over a flame, and it does not catch fire. Actually, it does not even get warm, the team reports on their site, though they cannot say just yet how heat resistant the material is, their lab only has facilities for testing it to 1,200 degrees Celsius, which is quite obviously, much hotter than general purpose applications would require.

The company plans to start selling their flexiramics as an alternative to conventional materials such as those used as a substrate for printed circuit boards, antennas or radio frequency identification tags, noting that test products have already been shown to be price competitive. They acknowledge that there are other flexible ceramics on the market, but point out that theirs is the only one that can be made in thicknesses ranging from "a few micrometers to over a millimeter."

More information: www.eurekite.com/

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