

Toray ready to mass produce self-repair coating for touch screens

April 9 2012, by Bob Yirka



Image via Techon.

(Phys.org) -- Japanese thin film maker Toray Advanced Film Co Ltd., has announced that it is ready to begin production volume of its new self-repairing film coating, which it calls appropriately enough, “Self-cure Coat Film” for electronic devices. Up to now, the company has been supplying low volume amounts of the film coating to specialty

applications. With this new announcement, third party vendors can now order the film and apply it to devices such as Smartphones for sale directly to customers.

The film repairs itself automatically when scratched, thereby helping to solve a problem that has been a plague on the [touch screen](#) industry; scratches that mar the finish and reduce visibility.

The company says the film is made by using a wet [coating](#) method to form the self-repairing layer of the film, though exactly how that's done is obviously a trade secret. Underneath the self-healing layer is a 125 μ m polyethylene terephthalate base. They will only say that the material has both high elasticity and viscosity. The end result is a film that, according to the company, heals itself in as little as ten seconds at room temperature. A demonstration of the product was offered recently where a Smartphone screen coated with the new film was scratched with a wire brush, and then healed itself, resulting in what appeared to be a return to its previous shiny condition.

The company says it can make the film in various thicknesses which is normally tens of micrometers. Thickness is important because the film can only heal itself if a scratch is less than or equal to the depth of the self healing layer of the film. Of course, the thicker the film, the less amount of light that will be able to pass through and at some point, it would seem blurring would become an issue. At the normal thickness, the company says that ninety percent of light can get through with a haze factor of just 0.1%. As for how much abuse it can take, the company says in a test, one coated device was subjected to 20,000 scratches and still kept on healing. They also point out that even after extended use the coating won't crack or peel.

With this announcement, it's likely that Smartphone and perhaps electronic pad makers will begin offering the film as an option on such

devices perhaps as early as the end of this year, though there is apparently no word yet on how much that might add to the cost of a device.

More information:
via [TechOn](#)

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