



## **SILICONES IN TEXTILES – CONCLUDING PART**

REF: TT/ JULY 2018 / WK 4

### **New generation inventions of silicone technology**

The new generation discovery of silicone technology helped to create functional fabrics and high-performance textile products. This complements the functional needs of a modern lifestyle.



Consumers are benefited with silicone-based textiles as it gives long-lasting comfort and performance. With the introduction of granular silicone softening technology, denims are made soft and comfortable to wear.

According to reports, silicone nanoparticles are used to develop a superior type of mosquito-repellant clothing. In this process, the textiles are infused with silicon dioxide nanoparticles. These nanoparticles contain a non-toxic active substance which keeps mosquitoes away.

Silicon dioxide is environment-friendly. As the substance in the nanoparticles are infused into the textile and do not spread on the outer surface, it was also inferred that the particles remained in the material for up to 90 washes.

A new research has developed fibers which will work as solar cells. These are silicon-based fibers which are photovoltaic. It can be used to make power-generating fabric, clothing, tents, backpacks, etc.

Apart from making solar power fabric, this material can be made into long, flexible silicone solar cell fibers. These long solar cell fibers can be used in many applications like weaving them into a fabric, generating power, charging the battery, chemical detection and also as a biomedical tool. The silicon-based fibers can charge smartphones and other gadgets. It can be a useful source of power to the soldiers who carry heavy batteries to charge their devices or replace Kevlar material which is used in a spaceship.

Smart sports apparel with silicone sensors has been introduced in the market by a few brands. In which the sensor is placed on a silicon circuit and then sewn into the clothing. The sensor would give signals from the user's body, which can be used to monitor heart rate, blood pressure, etc.

**Wishing you a great week ahead!**

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[arc@resil.com](mailto:arc@resil.com) | [www.resil.com](http://www.resil.com).