kuraray

Press information

# New flexible high-speed film for 5G technology: Kuraray is expanding FCCL production

**Copper-clad laminated LCP films (FCCL) are central to the development of 5G technologies. Kuraray is expanding production capacity for its VECSTAR™ brand of LCP film and its FCCL to 1.8 million square metres by mid-2020.**

**Hattersheim (Germany)/Kashima (Japan), June 25, 2020. The 5G standard is the prerequisite for innovations such as self-driving vehicles and new communication technologies. Flexible copper-clad laminates play a key role in the development of 5G applications such as high-frequency printed circuit boards. Speciality chemicals producer Kuraray is opening a new production facility for flexible copper-clad laminates (FCCL) based on its VECSTAR™ high-performance liquid crystal polymer (LCP) film at its site in Kashima, Japan. Kuraray, a Tokyo-based company which has its European headquarters in Hattersheim, near Frankfurt am Main, Germany, has already expanded production capacity for LCP film at its facility in Saijo, Japan. From mid-2020, the combined production capacity of the two plants will be 1.8 million square metres a year.**

“5G is the central standard for the development of tomorrow’s key technologies - from autonomous driving and the internet of things to state-of-the-art communication technology and high-tech media applications,” says Dr. Matthias Gutweiler, Managing Director of Kuraray Europe GmbH. “At the same time, powerful electronics components are needed to handle the high data rates offered by this new communication standard. Our VECSTAR™ brand of high-frequency-compatible LCP films plays a central role in this. Installation of a new production line at our site in Kashima means we can now offer as a copper-clad laminate based on our LCP film, which is required, for example, for the manufacture of printed circuit boards.”

**Liquid crystal polymers for high data frequencies**

VECSTAR™, the world’s first LCP film, offers outstanding properties for the manufacture of high-performance electronic components. The excellent electrical insulation and low water absorption of this LCP film make it an ideal dielectric material for high-speed circuitry, high-frequency electronic appliances and printed circuit boards. Thanks to its heat resistance, dimensional stability and low flammability, VECSTAR™ is suitable for technologies for demanding safety requirements and challenging operating conditions.

**Flexible circuit boards for demanding 5G technologies**

As a copper-clad laminate, a key application for VECSTAR™ is in the manufacture of printed circuit boards. Kuraray's new production facility at its site in Kashima, Japan, produces VECSTAR™ LCP film laminates with an ultra-thin layer of copper. Electronics producers etch precise circuits onto the copper laminate to link chips, capacitors and other electronic components. One special feature of the high-performance film is its flexibility: it can be used to produce curved and multi-layer circuits. Consequently, it provides the greatest possible freedom in the design of innovative technologies.

“FCCL materials are a basis for high-performance technologies for the new 5G standard. We expect the progressive rollout of the 5G network around the world to increase demand for our LCP films,” says Naoya Uehara, Co-Managing Director of Kuraray Europe GmbH. “Expansion of our production capacity in Saijo means we are well prepared for that. By mid-2020, our Japanese facilities in Saijo and Kashima will have total annual production capacity of 1.8 million square metres of LCP film. And by establishing a production facility for copper clad laminate in Kashima, we can offer technology manufacturers greater vertical integration and an advanced new VECSTAR™ FCCL material.”

**Captions/source of photos: Kuraray**

[Photo 1] High data rates for future networks: The 5G standard paves the way for innovations in autonomous driving, medical technology and telecommunications. Advanced materials such as Kuraray's VECSTAR™ LCP film are essential for the development of 5G technologies. VECSTAR™ FCCL has outstanding electrical insulating properties, making an ideal basis for high-frequency electronic devices.

[Photo 2] Flexible liquid crystal film enhances design options: VECSTAR™ FCCL copper-clad LCP films can be used for high-frequency, flexible circuit boards - for maximum freedom in the design of new devices for 5G applications. Kuraray is prepared for rising global demand: it is increasing production and building a new plant for copper laminates.

**About Kuraray**

Established in 1991, Kuraray Europe GmbH is based in Hattersheim, near Frankfurt am Main, Germany. In 2019 the company generated annual sales of EUR 661 million. It has more than 700 employees in Germany at its sites in Hattersheim, Frankfurt and Troisdorf. Kuraray is a global speciality chemicals company and one of the largest suppliers of industrial polymers and synthetic microfibres for many sectors of industry. Examples are KURARAY POVAL™, Mowital®, Trosifol® and CLEARFIL™. Kuraray Europe also has around 200 employees at six other European sites. They are also working on the development and application of innovative high-performance materials for a wide range of sectors, including the automotive, paper, glass and packaging industries, as well as for architects and dentists.

Kuraray Europe is a wholly owned subsidiary of the publicly listed Kuraray Co., Ltd., which is based in Tokyo, Japan, and has more than 11,100 employees worldwide and sales of EUR 4.7 billion.

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