

SUKANO[®] Masterbatches demonstrate long-term antiviral effect¹

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- The antiviral effect was tested by an external laboratory specialized in microbiological tests against Influenza H1N1 and Feline Coronavirus
- Results showed that over 98 % of the Feline Coronavirus was eliminated within the first two hours
- Tested on both PET and PA applications in various end applications, including fabrics, injection molded parts and films extrusion
- Sukano's Masterbatch uses proprietary technology, registered as preservative²

Schindellegi, Switzerland, September 16, 2020 — Many viruses have been shown to survive on surfaces including metal, cardboard and plastic. However, plastic items can be treated to trap and inhibit the replication of viruses. Sukano has developed Antiviral Masterbatches for PET and PA fibers that have a strong antiviral effect on the plastic parts, while also potentially helping to reduce waste and improve the sustainability credentials of the final articles produced.

Sukano's Antiviral Masterbatches work by directly integrating an antiviral additive into the polymer, using proprietary technologies. The power of this technology is that the antiviral effect not only remains stable during the usage of the product, but that it is maintained after washing. This is because the additive is consistently present on the surface of the product, without being released into the environment.

Sukano conducted tests at an external laboratory specialized in microbiological testing and in accordance with ISO 18184:2019 (fabrics) and ISO 21702:2019 (plastics inject molded parts and films) to independently confirm the effectiveness of its antiviral effect on the plastic parts. The result showed that over 98 % of the Feline Coronavirus was eliminated within the first two hours. The tests were performed using the Influenza H1N1 virus and a Feline Coronavirus, which has structures and mechanisms similar to SARS-Cov-2.

Our SUKANO[®] Antiviral Masterbatches offer not only the highest performance, but also durability: the antiviral efficacy of the fibers shall remain after multiple washing cycles at 40° C. All this is possible without impacting the fibers' physical properties or yellowing.

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Disclaimer: Antiviral claims are permitted in Germany on most treated articles and must be evaluated case-by-case in other EU territory. This
press release reflects the regulatory situation in Europe. For the US press release visit our website. Antimicrobial properties are built in to protect
the product. The product does not protect users or others against pathogens. Always clean the product thoroughly after each use.
 2 Disclaimer: The active ingredient is registered at the US Environmental Protection Agency (EPA). This press release is not intended for US audiences. For the US press release, visit our website.



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Application in personal protective equipment (PPE)

Personal protective equipment (PPE), and especially face masks, have become an increasingly common everyday item. There are a variety of masks available in the market, and the World Health Organization (WHO) defines three categories (disposable medical masks, respirators, and reusable non-medical masks). All are made from different layers of textiles. How a fabric mask is handled and cared for is understood to be one of the key factors in its effectiveness, regardless of whether it is disposable or reusable.

Many people are explicitly choosing alternatives to disposable medical masks in order to conserve natural resources and prevent waste. However, reusable non-medical masks are typically made from fibers without antiviral properties. Manufacturing textile masks using fabrics that include SUKANO[®] Antiviral Masterbatch could help reduce viral contamination via surfaces, even if the mask is not washed after each usage.

The SUKANO[®] Antiviral Masterbatch is already included when spinning the fiber, which eliminates additional finishing steps like external coating. This helps the environment by reducing waste and energy, saving natural resources.

"Our SUKANO® Antiviral Masterbatch is already in use by our existing customers who have successfully and effectively produced face masks during the pandemic outbreak. We now have additional, external lab results to back up our claims regarding its antiviral effect," said Alessandra Funcia, Head of Marketing and Sales, Sukano. "The masterbatch is readily available from our stock to support the significant market demand."

While a mask and PPE are critical in the fight against COVID-19, combined layers of safety are still strongly recommended. This includes following the existing WHO recommendations of frequent hand washing, physical distancing, regular cleaning and higher hygiene maintenance levels.

Extending viral protection beyond PPE

Antiviral plastics could provide antiviral protection beyond personal protection items like face masks, gowns and gloves. For example, they could be effectively used more broadly in other potentially contaminated surfaces like medical devices, interior parts and textiles of vehicles, door handles, light switches and even packaging applications.

SUKANO[®] Antiviral Masterbatches for PET and PA applications are the only known masterbatch technologies that have externally proven their efficacy against viruses at different dosage levels, polymers and conversion processes, all of which can impact potential antiviral protection performance.

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"Beyond the textile and fiber applications, our external lab results confirm the efficacy of our technology used in our PET and PA based masterbatches when applied in film extrusion processes and injection molded parts," states Michael Kirch, Global Head of R&D for Sukano. "This opens the door to a potential array of additional applications to feature antiviral properties."

Antiviral effectiveness

Antimicrobials are widely used already and globally in the plastics market, and may be effective against a range of microorganisms including bacteria, viruses, protozoans, and fungi such as mold and mildew. The efficacy of Sukano's Antiviral Masterbatches against specific viruses is based on external laboratory trials and is exclusive to Sukano's offering.

The active ingredient used in Sukano's Antiviral Masterbatches is a registered preservative in the EU, Switzerland and USA. However, to claim antiviral effect and promote the final product, producers using Sukano's Antiviral Masterbatches must test the final product, have the results confirmed by a specialized external laboratory, and must comply with local legal regulations.

Sukano's commitment

The company aims for a collaborative and strong customer relationship to truly understand and meet their needs with our local team of experts and regional manufacturing facilities. In order to become the partner of choice for convertors and brand owners, that delivers innovative products and highly specialized and customized solutions. The company is driven by expertise and focuses its technical knowledge on developing innovative products and services for conventional polymers and biodegradables that can be used for applications in textiles, packaging, medical, durable goods, building and construction, and industrial.

Efficient, durable and sustainable! Benefit from Sukano's expertise and proprietary formulations to reach unprecedented performance levels both during manufacturing and on final product functionality.

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About Sukano

Sukano is a global specialist in the development and production of additive and colour masterbatches and compounds for polyester and specialty resins. The company is driven by expertise – Sukano focuses its technical knowledge on developing innovative products and services for oil and bio-based polymers that can be used for applications such as thin and thick films, bottles and containers, fibers, filaments, and sheets.

Founded in 1988, Sukano developed the state-of-the-art, market reference slip/ antiblock additive masterbatch for PET film and sheet applications. Headquartered in Switzerland, it is a family-owned business with a global distribution network and three production facilities strategically located in Europe, the Americas and Asia.

Providing unparalleled service, knowhow, and quality to its customers worldwide, Sukano is the global partner of choice for plastic converters and brand owners to develop their innovative products and highly specialized solutions.

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