



Driven by expertise

Sukano and Omya collaborate to develop novel voiding agent for BOPET films

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The two world leaders combine their efforts to create high performing calcium carbonate voiding agent masterbatches for BOPET and BOPLA films that can provide benefits in functionality and productivity, enhancing the overall profitability and value of the films.

Schindellegi, Switzerland, February 27, 2018 – Sukano, a world leader in the development and production of additive and colour masterbatches and compounds for polyester, bioplastics and specialty resins, and Omya, a leading global producer of industrial minerals and a worldwide distributor of specialty chemicals, announce that they have jointly developed a novel voiding agent technology for biaxially-oriented films for Polyethylene terephthalate (BOPET) and Polylactic acid (BOPLA) resins. A combination of Sukano's masterbatch formulations, manufacturing and process expertise plus a new proprietary calcium carbonate (CaCO₃) technology from Omya allows calcium carbonate to be used as voiding agents in masterbatch form for biaxially-oriented films, enhancing performance with higher opacity, lower film density and improved productivity.

Creating white BOPET films using voiding agents is well established, with barium sulfate (BaSO₄) being one of the most commonly used raw materials today. While calcium carbonate is often used to achieve the same effect in biaxially oriented polypropylene film (BOPP) applications, until now technical challenges have prevented its widespread use in more demanding resins such as PET or PLA. Groundbreaking work by the Sukano and Omya R&D teams have successfully overcome these difficulties, allowing calcium carbonate to potentially become the future go-to voiding agent for biaxially oriented films produced in specialty resins such as PET and PLA.

A shift from barium sulfate to these selected grades of Omya's calcium carbonates with Sukano's masterbatch technology could provide a number of benefits to BOPET and BOPLA manufacturers. First, calcium carbonate can improve opacity during film orientation and stretching and its enhanced whiteness can achieve similar, or even lower quantities of filler providing the same film opacity level. "We have leveraged our combined expertise and capabilities to overcome some obstacles – such as dispersability and discoloration – that are common issues when using calcium carbonate as a voiding agent," says Michael Kirch, Global Head of R&D at Sukano.

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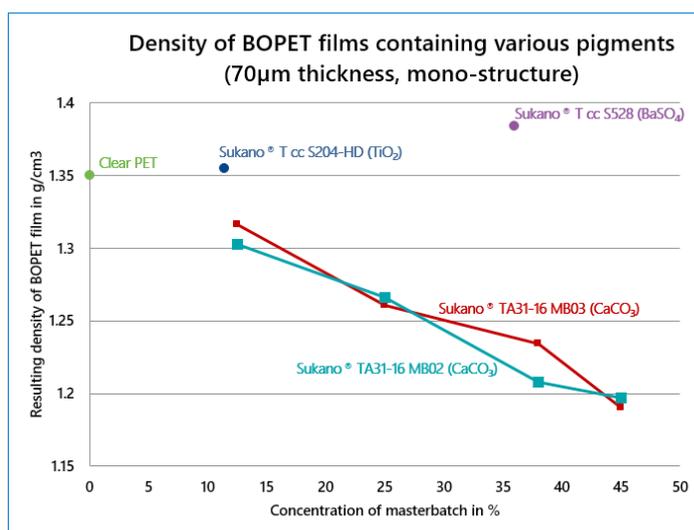
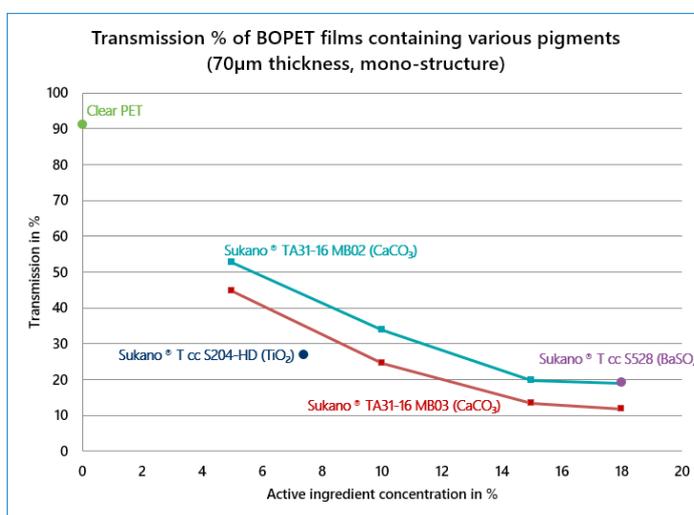
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BOPET and BOPLA films voided with calcium carbonate present a less glossy surface than white films produced using titanium dioxide (TiO₂), offering a “paper-like” effect to the film. Finally, calcium carbonate can also lower the film density in comparison to voided barium sulfate or pigmented titanium dioxide films, helping improve yields and reducing total weight, thus enhancing the film’s commercial value. In addition, the use of calcium carbonate can contribute to increased productivity. For example, it is expected to be substantially easier to clean machinery filters thanks to its solubility in acidic media.



“Omya developed a proprietary technology to improve the performance of calcium carbonate in PET and PLA because using conventional calcium carbonate products



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has led to poor product performance as a result of hydrolysis and poor dispersion during processing,” says Karsten Schulz, Key Account Manager Packaging from Omya. “We believe that, when combined with Sukano’s masterbatch and process expertise, the new developed Calcium Carbonate can be an effective and economical solution to produce white opaque BOPET- and BOPLA film, even for sophisticated and technical applications.”

For Sukano, its expertise extends beyond research and development. In order to minimize issues common to early stage project development, Sukano can also evaluate performance at lab scale using the company’s in-house COEX film line dedicated to PET and validate the optical and physical properties using its KARO IV labstretcher. This allows customers to carefully and thoughtfully select the most promising product performance before going to pilot or industrial line trials –The company’s experts can also help pre-select the most suitable calcium carbonate grades according to process and end-application requirements, as well as providing tailor-made masterbatch formulations.

About Sukano

Sukano is a world leader 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 masterbatches 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 applications. Headquartered in Switzerland, it is a family-owned business with a global distribution network and production facilities in Europe, the Middle-East & Africa, the Americas and Asia Pacific.

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.

For more information, visit www.sukano.com.

About Omya

Omya is a leading global producer of industrial minerals – mainly fillers and pigments derived from calcium carbonate and dolomite and a worldwide distributor of specialty chemicals.



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Omya provides a wealth of product solutions that contribute to its customers' competitiveness and productivity in multiple industries such as Construction, Printing & Writing, Technical Polymers, Packaging, Food, Personal & Home Care, Pharmaceuticals, Agriculture, Forestry, Water and Energy. Founded in 1884 in Switzerland, Omya has a global presence extending to more than 175 locations in over 50 countries with 8,000 employees. Committed to implementing the principals of sustainability at all company levels, Omya provides added value products and services from responsibly sourced materials to meet the essential needs of current and future generations.

For more information, visit www.omya.com.