

Plastics coloring – Expertise from design to production stage

For almost 70 years Karl Finke GmbH & Co. KG has specialized in assisting plastics processors, designers and brand manufacturers in the quick and economic conversion of their color designs into production stage products.

Finke's competence in plastics coloring is founded on long standing tradition. For 70 years Karl Finke GmbH & Co. KG has developed granulated masterbatches, pigment powders, liquid dyes and coloring pastes in Wuppertal, Germany. In addition to its own colorant developments Finke offers a wide range of sales products, enabling the company to supply tailor made solutions for almost any kind of plastic material. At Finke's well equipped technical center, specific production conditions can be simulated, ranging from various injection molding and extrusion methods to blow molding. All common plastics materials, especially PE, PP and PET can be processed to form injection-molded caps, blow-molded bottles and blown or cast films and sheets, so plastics processors can easily assess the effect of a colorant in their application, saving valuable time in color matching.

State-of-the-art technical center

Finke places great emphasis on continuous investments in its own technical center and analytics department. The right dye or pigment composition does not only depend on the polymer and envisaged application, but also to a large extent on the type of processing. Therefore Finke simulates individual production conditions of numerous processing methods on state-of-the-art equipment. Most consumer items made from plastics are produced by injection molding. To meet the demand for individual product samples at all times, the company operates several injection molding machines in Wuppertal.

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Bottles

The color impression of a colorant in an injection-molded product is not necessarily the same in an extruded product. As the polymer is being stretched in the extrusion process, as opposed to being compressed during injection molding, even the same pigment produces a different effect. As a rule Finke provides color samples according to the manufacturer's type of processing and application, enabling quick and reliable color decisions. Additional time consuming color matching during product development is not necessary.

Finke's technical center is equipped with the technology to produce PE and PP sample bottles. Product samples, for example for cosmetic bottles, are produced here, using mono- and co-extrusion processes. Recently the company has installed a new blow molding system for colored PET-bottles, as used in the beverage industry, speeding up the conversion of color concepts into production stage coloring and additive systems for this material as well.

Films and sheets

Blown films as well as cast films can be produced on several extruders to test the colorant's properties during the production process. As the polymer material is stretched during film production the colorant is put under physical strain as well. Each formula for film applications should therefore be tested in a process that involves stretching in order to make sure the product shows the right properties and produces the envisaged effect on the processors own machine. In film applications embedded pigments must harmonize extremely well with the carrier polymer. Especially for cast films, sampling is of great importance to test properties and light resistance of the product in advance.

Permanent laser marking

Finke technical center is also equipped with a pulsed Nd:YAG solid-state laser, working at a wavelength of 1064 nm. Colored injection-molded samples,

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blow-molded bottles and hollow bodies or films can be inscribed with various designs at a speed of up to 5,000 mm/s. Finke once more does justice to its own claim of providing authentic product samples for all applications.

Tailored coloristic concepts

Finke's excellent coloristics department is the core of the company. During the color selection process, Finke's colorists work in close co-operation with plastics processors. Each year, they develop more than 8,000 new color shades in accordance with customer specification. "We place great emphasis on the comprehensive support of our customers. Our experienced technicians and colorists advise the users from the design stage to the end product," says managing partner Felix Finke, explaining the success of his concept.

For optimum results, Finke's colorists work with the customer's original material. Almost all common thermoplastic carrier polymers are on stock and can be processed at Finke's technical center. Plastics manufacturers can choose from three service concepts for the color matching process for their individual ready-to-use Finke colorant: color matching and sampling according to specification, custom color matching at Finke's laboratory, or on-site colorist service. Besides the color samples, the two Finke Apps – RAL-Finder and PAN-Finder – are a decisive aid in color communication.

Matching and sampling according to specification: For FIBAPLAST masterbatches, FIBASOL liquid dyes or WUBALEN pigment mixtures, Finke provides product samples according to customer's color specification within a week. The processor then receives a product sample for testing on his own machine.

Custom color matching: Plastics manufacturers can also work out individual colorings in direct co-operation with colorists at Finke's laboratory. Injection-molded chips, caps, bottles and blown or cast films can be manufactured for test purposes. This way a ready-to-use colorant can be developed within one day.

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On-site colorist service: Finke also offers an on-site colorist service for challenging and large projects. Finke' colorists and technicians adapt and tune the shade at the customer's facility on the customer's processing machine in order to make the start of series production possible within the shortest time.

Precise analytics

Precise analytics complete the comprehensive service offered by Finke. The analytics equipment is continuously upgraded to the latest state of the art. Finke's products do not require a lot of guessing. Accurate measurements and exact data make it possible to exactly predict which product in which quality is required for the specific use to ensure the best possible processability. Analytics is also a valuable tool for determining the causes of processing problems.

Innovation founded on tradition

The Finke name has stood for innovation, service and customer proximity for more than 65 years. The company was founded as a trading company by Karl Finke sen. in 1949. In 1952 his son Karl Finke, now senior partner, joined the company and started launching important product innovations, among them the WUBALEN pigment powders, still an important part of Finke's range of products. Today Karl Finke GmbH & Co. KG is run by Felix K. Finke, representing the third generation of the family, and has grown to 180 employees. It is still seen in the industry as a pacesetter for innovative ideas and a pioneer for new applications and solutions for coloring plastics. State-of-the-art equipment, a high-quality product range, its sound and comprehensive application-specific advisory service, quality and flexibility are the stable foundation of the company.

Competent employees with first-class training ensure a production standard of the highest level. Regardless of whether brand manufacturer, OEM or designer, Finke's customers value not only the expertise and innovative

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strength but also above all the enormous flexibility with which Finke supports them and allows them to react quickly to the latest trends.

High resolution pictures are available for download on
<http://finke-colors.eu/en/press/media-center/>

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About Finke:

Karl Finke GmbH & Co. KG, with registered office in Wuppertal (Germany), ranks among the largest medium-sized manufacturers of pigment preparations for the plastics'-processing industry in Europe. The high-quality masterbatches, liquid paints, color pastes and pulverised pigment preparations are used in cosmetics' and foodstuffs' packaging, in injection molding applications, in technical components, in film- processing as well as in the automotive and furniture industries.

With 70 years of experience in the sector, the ISO 9001, 14001 and 50001-accredited company prides itself in its ability to accompany its customers and their products from the design phase all the way through to start of production. State-of-the-art technical equipment is the customer's guarantee of a second-to-none, application-specific advisory service in colors, all of which can take place either in the company's in-house laboratory facility or on the customer's own premises.

As an independent company, Karl Finke GmbH & Co. KG operates distribution bases in numerous different countries and exports its products on a worldwide scale.