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Liquid colour technology alongside FMCG

Colours with an extra

Fast-moving consumer goods (FMCG) or consumer packaged goods (CPG) are normally sold quickly and at relatively low cost. Non-durable goods such as soft drinks, dairy products, fruits and vegetables, meat and baked goods are highly perishable and need consequently a package able to preserve them especially during logistics and distribution. At the same time, since those products are fast-moving, it is imperative for them to beat the competition: they need to be highly eye-catching and recognisable on shelves. The unit pack or primary package is critical for both product protection and shelf life, but provides sales incentives to consumers.

The liquid technology of colours and additives has progressed so much that it is possible to combine trendy colours with speciality additives most of the time, states liquid colour and additive specialist Repi.

An example of this is the powerful bright shades with UV protection used for kids' juices or transparent shades combined with UV additives for vitamin and flavoured waters. It also applies to special light shield whites used to protect fresh, ESL and even UHT milk from visible light and UV damage when packaged in a monolayer PET bottle.

Repi UV absorbers create a barrier to the harmful UV-rays and visible light, which can damage the product inside. As the profit margin on FMCG products is relatively small, this means that production fails and scraps represent significant costs for converters, who also have to factor in ever-shorter production cycles, thin wall thicknesses and high machine output.

Liquid additives have an important role in this case too. The Repi SenzAA scavenger prevents acetaldehyde from building-up during the injection moulding of preforms, responsible for the unpleasant off-taste of waters bottled using PET. The reduction performance goes up to nearly 85% which means AA values of less than 1ppm can be obtained.

Blowing additives are on the market to improve and control the absorption of infrared during the blowing stage of preforms; the line works in a smoother way, avoiding stops, reducing scraps and improving the output of blown bottles per hour.

Process aid additives reduce sticking and create a better slip effect between preforms preventing surface scratches and at the same time optimising their storage up to +10% with consequent advantages in terms of storage and transport costs.

The IV enhancer acts on PET intrinsic viscosity and stabilises the mechanical properties of PET containers.

Such additives in liquid form can be blended with colours to make all-in-one products which are dosed at very low percentages making for a cost-efficient solution.

The above-mentioned challenges go hand in hand with the major sustainability and circular economy concepts: how to save the resources of our planet, or rather, how to use them intelligently and responsibly to secure sustainable future growth.

In the packaging field. This includes the need to radically raise recycling rates. Resin, colour and additive manufacturers play a crucial role in this context, evolving their know-how and providing solutions which satisfy brands, market managers and designers, packaging manufacturers and final customers.

Liquid technology is claimed to provide additives designed for post-consumer raw materials, like the Repi anti-yellow which corrects the off-shade of rPET - whether it is greyish, reddish or greenish. The usable percentage of rPET increases up to 100%.

In some cases, optical brighteners and colour toners further improve brightness and aesthetics.

According to Repi, research and development in speciality additives and colours is the key for brands to package perishable products, with short shelf life in perfect looking and cost-effective plastic containers, offering advanced and smart solutions which production processes have not yet achieved.

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