

Ultra-thin barrier protects food against mineral-oil residue

The long aisles in supermarkets are quite inviting. The more colourful and the higher the quality of the food packaging is, the more it stimulates the customers' appetite. However, there is an invisible danger lurking in some boxes. The fact that an ever increasing number of packagings are produced from recycled material means that mineral-oil residue, for example from newspaper printing colours, can find its way into the food. The problem is explained by Matthias Zopf, Account Manager Care Chemicals at BTC Europe: "Even if a box is considered harmless, its contents can be contaminated if the packaging next to it degasses." Even an inner pouch made of polyethylene or polypropylene does not provide effective protection. But there is a remedy in form of an ultra-thin protective film made of polymers from the BTC portfolio. This separates contaminants from food for up to three years – and thus considerably longer than the best-before date.

Ten times thinner than a human hair

While there are currently no limit values for the permissible maximum amount of mineral oil residue, they are, according to Matthias Zopf, being prepared in some countries, including Germany. "Independent of that, I as a consumer do not want to have such substances in my food, regardless of the concentration," says Zopf. The three BASF-products Ecovio[®], Epotal[®] and Ultramid[®] satisfy this desire. The mechanism is always the same: a protective layer (film or coating), which is approximately ten times thinner than a human hair, is applied to the interior of the box and lets oxygen and water vapour molecules pass, but not oil particles. How the barrier works is explained in this short [animated video](#).



Three different products for different production processes:

The differences between the three products are primarily in the way they are processed. This makes it possible for BTC Europe to offer its customers solutions that can be integrated into the existing production with very little effort. The products in detail:

- BASF's Ultramid[®] (B27 or B33L grades), typically co-extruded with LDPE, can be applied as a layer to the inside of cartons and papers to provide migration barrier properties. It is also suitable for use in protective inner pouches made of multilayer films.
- Ecovio[®] PS 1606, applied via extrusion coating, offers excellent migration barrier functionality, combined with liquid, OGR and aroma barrier. The resulting film is carefully designed to allow the packaged food products to breathe, often important for shelf life considerations and food quality.

- As a solution for dispersion coating or printing, BASF offers the newly developed Epotal® SP-101D. This innovative water-based barrier coating not only offers excellent migration barrier performance, but also a superb barrier to OGR and aroma. Furthermore, the resulting film is heat-sealable.

You can find additional information and contact your local BTC contact partner directly using the Solution Finder at www.btc-europe.com.

Would you regularly like to receive information like this from the world of BTC's speciality chemicals for your industry? At www.btc-europe.com/newsletter you can subscribe to our Expertise Plus Newsletter specifically for your industry.