Arkema introduces more fluorinated polymer process aids for special polyolefin processing improvements

Arkema has introduced new products for specialty applications in which the polyolefin temperatures are relatively low and the processor is interested in improving surface smoothness of films, molded parts, or extrusions. An additional polymer process aid (PPA) development focuses on the reduction of die buildup in highly filled polyolefins.

“Our standard Kynar Flex® PPA product line has been well accepted in the extrusion of LLDPE blown films where, in typical applications, it helps to reduce melt fracture, can reduce extruder pressure, and increases production output,” said Jason Pomante, Business Development Engineer for Fluorinated PPAs. “There are several well accepted grades of Kynar Flex® PPA sold to polyethylene manufacturers and compounders that have been tailored for mainstream application. These include pure fluoropolymer as well as fluoropolymer blends with polyethylene glycol (PEG),” Pomante noted.

Kynar Flex® 2500-20 pellets and Kynar Flex® 2501-20 powder are designed to be used in low temperature low shear extrusion of LDPE, LLDPE and PEX. With a melting point of 123°C and short term stability to 300°C and above, this material is particularly effective in applications where the melt temperature of extrusion is below 170°C. This PPA resin has been found to be particularly effective in improving the surface smoothness of wire and cable extrusion and haze reduction in low shear film extrusion.

Kynar Flex® 8600 pellets and Kynar Flex® 8601 powder are designed to quickly promote pressure drop in film extrusion at a very cost effective price compared to other PPA grades. Kynar® 705 polymer is designed to reduce die buildup in highly filled polyolefin resins. Tests of this product compared to several types of fluorinated copolymer PPAs show up to a 40 times reduction of die buildup compared to commonly used commercial products and up to a 60 times reduction compared to a control without any PPA. All of the mentioned materials comply with CFR Title 21 177.1520 either A through H or B through H, depending on the specific grade.

Arkema is a leading global producer of polyvinylidene fluoride resin, under the Kynar® trademark, with manufacturing facilities on three continents.

A global chemical company and France’s leading chemicals producer, Arkema is building the future of the chemical industry every day. Deploying a responsible, innovation-based approach, we produce state-of-the-art specialty chemicals that provide customers with practical solutions to such challenges as climate change, access to drinking water, the future of energy, fossil fuel preservation and the need for lighter materials. With operations in close to 50 countries, some 19,000 employees and research centers in North America, France and Asia, Arkema generates pro forma annual revenue of some €7.6 billion ($9.5 billion), and holds leadership positions in all its markets with a portfolio of internationally recognized brands.

Photo: Comparison of die buildup after 30 minutes without PPA (left) and with 1260 ppm of Kynar® 705 polymer.
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