

K 2019: Evonik develops conductive low-extractable multilayer tubing system without fluoropolymer inner layer

October 14, 2019

Evonik Industries, Essen, the leading global supplier of polyamide 12 for multilayer plastic tubing systems, is expanding its product range to include the MLT 4840 multilayer tubing system, another low-extractable conductive system for fuel lines. Its special feature is that the inner layer does not consist of a fluoropolymer but of a conductive low-extractable VESTAMID® polyamide 612. The system is therefore outstandingly well suited for extrusion. It shows excellent antistatic properties even after long-term contact with alcohol-containing fuels and is also more cost-effective than systems with fluoropolymers. No comparable fuel line system currently on the world market has this particular combination of properties.

Specialized press contact

Dr. Ursula Keil

High Performance Polymers

Phone +49 2365 49-9878

ursula.keil@evonik.com

Low-extractable plastics for fine injectors

Alcohol-containing fuels, such as ethanol-containing biofuels, can dissolve out components from the inner walls of conventional fuel lines. Under certain extreme conditions, these substances could clog the nozzles in sensitive fuel systems that use small-diameter nozzles to create an atomized spray of fuel and air for fuel injection, in order to reduce fuel consumption. To reliably exclude the possibility of clogging, Evonik has expanded its range of multilayer tubing systems to include some with significantly reduced extraction.

Systems with different inner layers

Evonik offers a series of multilayer tubing systems with various structures that are used worldwide but may vary depending on the region and automobile manufacturers' requirements.

For many years now, MLT 7440 has been offering a conductive low-extractable system with an EVOH (ethylene vinyl alcohol) barrier layer and a fluoropolymer (EFEP) inner layer; thanks to its mechanical properties such as low-temperature impact strength, chemical resistance, and permeation behavior, the system is

Evonik Resource Efficiency GmbH

Rellinghauser Straße 1-11

45128 Essen

Phone +49 201 177-01

Fax +49 201 177-3475

www.evonik.com

Supervisory Board

Dr. Harald Schwager, Chairman

Executive Board

Dr. Claus Rettig, Chairman

Andreas Fischer,

Simone Hildmann,

Alexandra Schwarz

Registered Office: Essen

Register Court: Essen Local Court

Commercial Registry B 25783

VAT ID no. DE 81 552 8487

already being widely used globally. MLT 7400 is the non-conductive variant with the same layer structure.

In Europe multilayer tubing systems with an EVOH barrier layer and polyamide inner layers are most commonly used. MLT 4800 is a low-extractable system from Evonik with a low-extractable VESTAMID® polyamide 612 inner layer. This system has now been supplemented by the conductive variant with the same layer structure and an antistatic, low-extractable VESTAMID® polyamide 612 inner layer. “The combination of properties in the new MLT 4840 multilayer tubing system is a milestone in development,” says Dirk Heinrich, head of the Automotive & Mobility market segment of the High Performance Polymers business line. “The system combines the easy processability of polyamides 12 and 612 with exceptionally low extraction values and stable conductivity even in the presence of alcohol-containing fuels, at attractive system costs. At present it is the only one of its kind on the market.”

For the various requirements of automobile manufacturers in different regions Evonik now provides four systems with significantly reduced content of extractable substances, of which two have an antistatic finish. In addition, all of these systems help vehicles fitted with them to satisfy the most stringent global requirements on minimization of hydrocarbon emissions due to their EVOH barrier layer.

VESTAMID® has been used for more than 50 years by renowned automobile manufacturers. In addition to extrusion compounds for monotube applications, Evonik has developed various multilayer tubing systems with different barrier layers. VESTAMID® polyamide 12 and polyamide 612 are the world’s most widely used polyamides for automotive lines.

Further information is available at www.vestamid.com

Learn more about high-performance materials and additives from Evonik at our booth, B28 in Hall 6, at K2019 in Düsseldorf between October 16 and 23.

Photo caption: The new MLT 4840 multilayer tubing system with a VESTAMID® PA 612 inner layer combines good conductivity and low extraction, even in the presence of alcohol-containing fuels, with good processability and favorable system costs.



Company information

Evonik is one of the world leaders in specialty chemicals. The focus on more specialty businesses, customer-oriented innovative prowess and a trustful and performance-oriented corporate culture form the heart of Evonik’s corporate strategy. They are the lever for profitable growth and a sustained increase in the value of the company. Evonik benefits specifically from its customer proximity and leading market positions. Evonik is active in over 100 countries around the world. In fiscal 2018, the enterprise with more than 32,000 employees generated sales of €13.3 billion and an operating profit (adjusted EBITDA) of €2.15 billion from continuing operations.

About Resource Efficiency

The Resource Efficiency segment is led by Evonik Resource Efficiency GmbH and produces high performance materials and specialty additives for environmentally friendly as well as energy-efficient systems to the automotive, paints & coatings, adhesives, construction, and many other industries. This segment employed about 10,000 employees, and generated sales of around €5.5 billion in 2018 from continuing operations.

Disclaimer

In so far as forecasts or expectations are expressed in this press release or where our statements concern the future, these forecasts, expectations or statements may involve known or unknown risks and uncertainties. Actual results or developments may vary, depending on changes in the operating environment. Neither Evonik Industries AG nor its group companies assume an obligation to update the forecasts, expectations or statements contained in this release.