

## KraussMaffei Extrusion fuels growth in the Cable-Compound-Market

- ZE BluePower is producing high-quality HFFR-cable-compounds
- ensures gentle, yet intensive mixing of the flame retardant
- adjustable to different process tasks and formulations

**(Laatzen, 10.07.2025) KraussMaffei Extrusion now offers machine technology with the flexible ZE BluePower, which processes formulations with halogen-free flame retardants in polyolefins – as an alternative to conventional cable formulations based on halogenated flame retardants. The specially configured extruder is used to produce high-quality HFFR (Halogen Free Flame Retardant) compounds with ATH (Aluminum Trihydroxide) content of up to 65%. Additionally, the ZE BluePower can be adapted to various process tasks and formulations, offering customers high flexibility for individual requirements.**

With the innovative ZE BluePower, KraussMaffei Extrusion provides an efficient, complete solution to produce high-quality HFFR-cable-compounds based on halogen-free flame retardants. With the specially configured engine, customers receive a new alternative to halogen-based flame retardants manufacturing processes, thus positioning themselves to successfully participate in the rapidly growing market for HFFR-cable-compounds.

In Europe, halogen-free, flame-retardant cable-compounds are increasingly being used as an alternative to halogen-based flame retardants formulations, and they are also gaining global interest. HFFR-cable-compounds not only meet the requirements for good insulation combined with fire resistance but also comply with the stricter Construction Products

**KraussMaffei Technologies GmbH  
Marketing**  
Krauss-Maffei-Strasse 1  
85599 Parsdorf/Germany  
  
Phone +49 (0) 89 8899 2334  
[www.kraussmaffei.com](http://www.kraussmaffei.com)

Regulation (CPR). As a result, cables with HFFR-compound coatings are particularly in demand for public buildings and the transportation sector.

### **Advantages through flexibility**

With the innovative extruder technology of ZE BluePower, KraussMaffei Extrusion now offers a solution that brings several benefits. The ZE BluePower can be flexibly adapted to various process tasks and formulations and easily reconfigured. It is characterized by a gentle yet effective mixing action and offers reasonable investment costs. For compound manufacturers who want to participate in the growth market of HFFR-cable-compounds, investing in a specially configured ZE BluePower extruder is therefore highly lucrative.

Bilal Ilhan, Process Engineering Development Engineer, proudly reports:

"We have successfully completed the trials to configure an optimal process unit to produce HFFR-cable-compounds and are now offering our customers a complete ZE BluePower series." With its Da/Di ratio of 1.65, it provides an optimal balance of large free volume and high specific torque.

In combination with special screw elements, the ZE BluePower ensures intensive incorporation of the flame retardant while maintaining a low mass temperature. In the future, five sizes with screw diameters from 28 to 80 mm and output capacities from 50 to 1,100 kg/h will be available for HFFR-cable-compounds; larger sizes will also be produced upon request. The process length can vary between 48 and 56L/D, depending on the MFI (Melt Flow Index) of the base polymer and the specific surface area of the flame retardant.

### **Development with ExxonMobil Signature Polymers and flame retardant from Huber Advanced Materials**

For the development, the KraussMaffei Extrusion team used a ZE BluePower with a length of 48L/D and processed a formulation based on ExxonMobil Performance Polymers with an ATH-based flame retardant from Huber Advanced Materials. Both various screw configurations and different ATH contents were tested. The results were clear: the required mechanical

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properties were not only met but even exceeded with ZE BluePower. For the trials, the extruder was equipped with a twin-screw side feeder (ZSA), where the flame retardant was added either solely through the ZSA or additionally through the main hopper, depending on the ATH content.

Bilal Ilhan explains: "Flame retardants can have a high specific surface area. The higher the specific surface, the longer we select the process length of the extruder and dose a certain proportion of the ATH via the main dosing unit in addition to the side dosing." For pelletizing the compounds, underwater pelletizing has proven effective. The underwater pelletizer is equipped with a pressure-reduced perforated plate, ideal for processing high-filled formulations.

## **Efficient complete solution from KraussMaffei Extrusion**

With the innovative ZE BluePower, KraussMaffei Extrusion offers an efficient, complete solution to produce high-quality HFFR-cable-compounds based on halogen-free flame retardants. With the specially configured ZE BluePower, customers receive a new alternative to halogen-based flame retardants manufacturing processes, thus positioning themselves to successfully participate in the rapidly growing market for HFFR-cable-compounds.

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The primary focus is on the redesigned ZE 28.

Photo: KraussMaffei

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Sample image of a granulate.

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Image of a single screw.

Photo: KraussMaffei

Further information and images in print quality are available at:

[www.kraussmaffei.com](http://www.kraussmaffei.com)

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[www.kraussmaffei.com](http://www.kraussmaffei.com)

Press Contact:

Melanie Baum

Technical Communications Manager

Phone: +49 (0) 5102 86088595

E-Mail: [Melanie.Baum@kraussmaffei.com](mailto:Melanie.Baum@kraussmaffei.com)

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## **KraussMaffei - Pioneering Plastics**

KraussMaffei is among the world's leading manufacturers of machinery and systems for the production and processing of plastics and rubber. Our brand stands for cutting-edge technologies – for more than 185 years. Our range of services covers all areas of injection molding machinery, extrusion technology and reaction process machinery. In 2022 we added additive manufacturing to our portfolio. This broad range of technologies gives KraussMaffei a unique selling point in the industry. With the high innovative power of our standardized and individual product, process, digital and service solutions, we can guarantee customers sustained additional value over the entire value-adding chain. Our range of products and services allow us to serve customers in many sectors including the automotive, packaging, medical and construction industries, as well as manufacturers of electrical and electronic products and household appliances. KraussMaffei employs around 4.200 people all over the world. With more than 30 subsidiaries and over 10 production plants, as well as about 570 commercial and service partners, we are represented internationally close to our customers. The company was founded in 1838 in Munich. Today, KraussMaffei is part of Sinochem Holdings Corporation Ltd., one of the world's leading chemical companies.

Further information: [www.kraussmaffei.com](http://www.kraussmaffei.com)

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