



» PRODUCT BULLETIN

Non-PFAS Polymer Process Aids for Extrusion in Polyolefins

Cesa™ and Hiformer™ Non-PFAS Process Aids are formulated without the use of fluorochemicals. They can be used in the extrusion of polyethylene or polypropylene to reduce the friction between the molten polymer and metal, enabling the polymers to be extruded without melt fracture.

These non-PFAS process aids work by migrating to the metal surface and reducing friction in the extruder and at the die. The performance of both Cesa solid and Hiformer liquid additives is effective at low concentrations in eliminating melt fracture (shark skin) and die buildup (die drool). These process aids do not contain siloxanes and are formulated so as not to negatively impact processing or final performance properties.

There is no drop-in, one-size-fits-all replacement for PFAS solutions. With multiple options available, Avient technical experts will focus on the solution that best meets the application's needs. These non-PFAS processing aids can be tailored to any carrier.

WHY NON-PFAS PROCESSING AIDS?

Traditionally, process aids for extrusion contain fluoropolymers which may be classifiable as per- and polyfluorinated substances (PFAS), a group of chemicals widely used in a variety of applications due to their ability to be water and oil repellent, non-stick, and heat resistant.

Use of PFAS is under review and scrutiny by legislative/regulatory bodies and non-governmental organizations (NGOs) due to potential environmental and health concerns. Certain PFAS materials are subject to product bans, leading to market exits by suppliers. Planning now for transitions will help avoid supply chain disruptions in the future.

Processors are looking to replace current process additives containing PFAS with non-PFAS fluorine-free solutions that exhibit performance characteristics similar to traditional fluoropolymer-based solutions.



KEY CHARACTERISTICS

- Reduces melt fracture leading to fast time to clear
- Reduces die buildup
- Improves process efficiency
- Retains ability to seal and print
- Available in both solid and liquid
- Offers low concentration efficiency
- Reduces power requirements
- Does not interact with other additives

APPLICATIONS

- Blown film
- Profile extrusion
- Tubing and pipe extrusion
- Wire and cable applications
- Extruded sheet
- Applications in both virgin resin and PCR



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