

3M™ Dynamar™ Polymer Processing Additive FX 5920B

Features and Benefits

- Broadens extrusion processing capabilities of polyolefin resins
- Designed for detection by x-ray fluorescence analytical test methods
- Ideal for use in polyolefin resins containing antiblocking agents, pigments and other inorganic additives
- Eliminates melt fracture
- Reduces or eliminates die build-up
- Lowers apparent melt viscosity
- For use at very low levels
- Free-flowing fluoropolymer based processing aid
- Can offer performance and cost advantages

Note: Data in this document are not for specification purposes.

Typical Properties

Form	Free-flowing Granular
Color	White to Off-White
Active Ingredients	87%
Barium Sulfate	10%
Other Inorganic Additives	3%
Particle Size	Less than 25 Mesh
Bulk Density	44 lb/ft ³ (0.70 g/cm ³)
Typical Use Levels	500 – 1500 ppm

Product Description

3M™ Dynamar™ Polymer Processing Additive FX 5920B is designed for those who want to determine processing additive levels by x-ray fluorescence. Dynamar FX 5920B utilizes our proven 3M™ Dynamar™ FX 5920A processing additive technology. FX 5920B contains 10% barium sulfate as a tracing additive. By quantifying the barium level via known x-ray fluorescence techniques, one can easily calculate the amount of polymer processing additive that has been incorporated into the plastic.

FX 5920B is a free-flowing fluoropolymer-based processing aid that is designed for use at very low levels to improve processing of thermoplastics. At use levels (typically 500–1500 ppm) necessary to improve processing, it does not alter or detract from the good physical properties associated with high strength plastics.

FX 5920B can offer performance and cost advantages over comparable loadings of other processing additives. It exhibits exceptional commercial utility in low melt index, film grade linear low-density polyethylene (LLPDE) and high-density polyethylene (HDPE). It is especially effective in polyolefin resins containing silica-based antiblocking agents, titanium dioxide-based pigments and other inorganic additives. It can also be used at low levels to reduce extruder die build-up when processing LDPE, EVA and other polyolefin resins.

FX 5920B lowers apparent melt viscosity and permits fabricators to use high strength resins which otherwise could not be processed on available equipment. As a processing aid, FX 5920B eliminates melt fracture and can reduce extruder torque. Through optimization of the extrusion process, the use of FX 5920B may also allow an increase in output and yield films with enhanced and balanced bi-directional physical properties and improved clarity and gloss.

Incorporation Procedure

To be effective, FX 5920B must be melt blended into the host resin at any of the following stages prior to conversion into extruded products.

- Resin Producer
 - Direct addition (See 3M™ Dynamar™ PPA Direct Addition During Resin Manufacture Guidelines)
 - Use a concentrate containing 2–3% FX 5920B and let down at appropriate level
- Concentrate Producer
 - See 3M™ Dynamar™ PPA Concentrate Preparation Guidelines
- End User
 - Source resin containing FX 5920B from a resin producer
 - Source a concentrate containing 2–3% FX 5920B and let down at appropriate level

Storage and Handling

3M™ Dynamar™ FX 5920B should be stored in a clean dry environment at temperatures below 27°C (80°F) to prevent agglomeration and ensure long term storage. Please refer to the Material Safety Data Sheet for additional information about handling.

Food Contact/FDA Regulatory Status

This 3M product may be used at levels up to 2000 parts per million (ppm) as a polymer processing additive for all polymers intended for use in contact with all food types described in Table 1 of 21 C.F.R. 176.170(c) under Conditions of Use A through H described in Table 2 of 21 C.F.R. 176.170(c).

3M makes no recommendation about the suitability of this product in the user's intended application. It is user's responsibility to determine whether its use of 3M products in a particular application is suitable and will comply with applicable laws and regulations.

Safety/Toxicology

To avoid potential hazards (including the evolution of toxic vapors) associated with processing this material, please read and follow the information provided in these documents available on our website:

- Material Safety Data Sheet
- 3M™ Dynamar™ PPAs Concentrate Preparation Guidelines
- 3M™ Dynamar™ PPAs Direct Addition During Resin Manufacture
- 3M™ Dynamar™ PPAs Evaluation Guidelines

You should also read and follow all directions from suppliers of other ingredients that you intend to use in conjunction with Dynamar PPA material.

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