

3M Advanced Materials Division

3M™ Dynamar™ Polymer Processing Additive FX 5912

Features and Benefits

- Improves extrusion processing of polymers for wire, cable and fiber applications
- Effective as a process aid over a broad process temperature range
- Broadens extrusion processing capabilities of certain types of polyolefin resins
- Excellent thermal stability
- Reduces/eliminates die build-up
- Lowers apparent melt viscosity

Product Description

3M™ Dynamar™ Polymer Processing Additive FX 5912 is a free-flowing fluorothermoplastic processing aid designed for use at very low levels to improve the processing of thermoplastics. Typical very low use levels of 200 to 1000 ppm have demonstrated benefits in specialized extrusion.

Typical Physical Properties (Not for specification purposes.)

Property	3M™ Dynamar™ Polymer Processing Additive FX 5912
Form	Free-flowing Granular
Color	Clear to Off-White
Active ingredients	100%
Melting point	110 to 126°C
Melt flow index (265°C, 5 kg)	15.0 to 25.0 g/10 min.
Specific gravity	1.90 to 1.96 g/cm ³
Particle size	98% less than 2400 µm
Typical use levels	200-1000 ppm

Dynamar FX 5912 may offer performance and cost advantages over comparable loadings of other processing additives. It is particularly useful at low levels to reduce die pressure, and reduce extruder die build-up.

Dynamar FX 5912 lowers apparent melt viscosity. As a polymer processing additive (PPA), it reduces or eliminates melt fracture and can reduce extruder torque. Through optimization of the extrusion process, the use of Dynamar FX 5912 may also allow an increase in output in extrusion processing. Because of its proven ability in reducing die build-up and its continuous “cleaning” function, equipment maintenance may be minimized.

Incorporation Procedure

To be effective, Dynamar FX 5912 can 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 FX 5912 and let down at appropriate level
- Concentrate Producer
 - See 3M™ Dynamar™ PPA Concentrate Preparation Guidelines
- End User
 - Source resin containing FX 5912 from a resin producer
 - Source a concentrate containing 2-3% FX 5912 and let down at appropriate level

Storage and Material Handling

3M™ Dynamar™ FX 5912, when stored in a clean dry environment at temperatures below 27°C (80°F), has an extended shelf life of two years. Please refer to the Safety Data Sheet for details on handling.

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 to you through your 3M sales representative:

- Product Label
- Safety Data Sheet
- 3M™ Dynamar™ PPA Concentrate Preparation Guidelines
- 3M™ Dynamar™ PPA Direct Addition During Resin Manufacture
- 3M™ Dynamar™ PPA Evaluation Guidelines

You should also read and follow all directions from suppliers of other ingredients that you intend to use in conjunction with 3M Dynamar PPA material.

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