

3M Advanced Materials Division

3M™ Dynamar™ Polymer Processing Additive FX 5914

Features and Benefits

- Applicability in engineering thermoplastics like nylon, polyester, PVC, polystyrene and acrylic
- Reduces or eliminates die build-up
- Speeds colorant changes
- Excellent thermal stability for high temperature processing
- Lowers apparent melt viscosity

Product Description

3M™ Dynamar™ Polymer Processing Additive FX 5914 is a free-flowing fluorothermoplastic processing aid designed for use at low levels to improve processing of thermoplastics. At the low use levels (typically 250 – 1000 ppm) necessary to improve processing, it does not alter or detract from the physical properties associated with high strength plastics.

Some fluoropolymer processing additives can chemically react with amines and other strongly basic chemicals, reducing their effectiveness. Dynamar FX 5914 is non-reactive and can be used with amine-containing additives such as hindered amine light stabilizers (HALS) or with basic polymers like nylon.

Dynamar FX 5914 is particularly useful in high viscosity, high molecular weight engineering thermoplastics.

Typical Physical Properties (Not for specification purposes.)

Property	3M™ Dynamar™ Polymer Processing Additive FX 5914
Form	Free-flowing Granular
Color	Clear to Off-White
Active ingredients	100%
Melting point	195 to 215°C (383 to 419°F)
Melt flow index (265°C, 5 kg)	5.0 to 14.0 g/10 min.
Specific gravity	1.76 g/cm ³
Typical use levels	250-1000 ppm

It is particularly useful at low levels to reduce die pressure and reduce extruder die build-up.

Another application for Dynamar FX 5914 is the reduction of time required to transition from one pigmented material to another. The polymer processing additive (PPA) prevents stagnation and build-up of pigments inside the extruder and die.

Because of its enhanced efficiency in reducing die build-up and its continued cleaning performance, equipment maintenance can be significantly minimized.

Dynamar FX 5914 lowers apparent melt viscosity and permits fabricators to use high viscosity, high molecular weight resins in cast and blown film, and other extrusion applications which otherwise could not be processed on available equipment.

Incorporation Procedure

To be effective, Dynamar FX 5914 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 FX 5914 and let down at appropriate level
- Concentrate Producer
 - See 3M™ Dynamar™ PPA Concentrate Preparation Guidelines
- End User
 - Source resin containing FX 5914 from a resin producer
 - Source concentrate containing 2-3% FX 5914 and let down at appropriate level

Storage and Material Handling

3M™ Dynamar™ FX 5914, 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.

Warranty, Limited Remedy, and Disclaimer: Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. User is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application. User is solely responsible for evaluating third party intellectual property rights and for ensuring that user's use of 3M product does not violate any third party intellectual property rights. Unless a different warranty is specifically stated in the applicable product literature or packaging insert, 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OF NON-INFRINGEMENT OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. If the 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability: Except where prohibited by law, 3M will not be liable for any loss or damages arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.

Technical Information: Technical information, recommendations, and other statements contained in this document or provided by 3M personnel are based on tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed. Such information is intended for persons with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.



3M Advanced Materials Division

3M Center
St. Paul, MN 55144 USA

Phone 1-800-810-8499
Web www.3M.com/ppa

3M and Dynamar are trademarks of 3M Company.
Used under license by 3M subsidiaries and affiliates.
Please recycle. Printed in USA © 3M 2020.
All rights reserved. Issued: 11/16 12172HB
98-0504-1474-1 Rev. C