

3M™ Dyneon™

Fluoroplastic THV 340Z

Product Description

3M™ Dyneon™ Fluoroplastic THV 340Z is a transparent, water-based fluoropolymer dispersion. The dispersion has a solids content of around 50 %. The almost spherical, hydrophobic polymer particles have an average size of around 120 nm.

Special Features

- Compatible with many substrates due to low melting point
- High flexibility of polymer film without plasticisers
- Good chemical resistance
- High transparency
- UV-resistant
- Low settling tendency

Properties	Test method	Unit	Value
Solids Content	DIN EN ISO 12086	%	50
Emulgator			ionic
Emulsifier Content (based on solids)	Internal Dyneon method	%	5.0
Mean Particle Size	DIN EN ISO 13321	nm	120
pH Value	DIN ISO 976		> 9
Viscosity (D = 30 s – 1)	DIN EN ISO 3219	mPas	7
Melting Point	DIN ISO 3146	°C	145



Typical Properties

3M™ Dyneon™ Fluoroplastic THV 340Z dispersion is supplied with a pH value of 9 - 10. The viscosity is stable over a wide temperature range which makes the product easy to process. The dispersion can be mixed with fillers or pigments for use in coating formulations.

Typical Applications

3M™ Dyneon™ Fluoroplastic THV 340Z is mainly used to formulate coatings for flat substrates or fibres, yarns, or monofilaments. Because of its low melting point compared to other fluoropolymers THV 340Z can be used not only for coating of the known fluoropolymer-compatible substrates such as glass, aramid fabrics or films of PA and PI, but also for the coating of temperature-sensitive substrates such as PET, PE or PP. It is also used for coating of PTFE fabrics made of stretched or unstretched yarns. Likewise coatings of fluoropolymer and other substrates, such as PVDF, FEP, PFA, THV fabrics (or blends of these polymers) or their yarns or monofilaments, are indicated.

Processing Recommendations

Dyneon recommends that the dispersion always be gently homogenised before processing and filtered using a 50 µm filter.

When adding pigments and fillers, make sure that these do not negatively influence the excellent stability of the product. If necessary, stabilisers should be added to the mixture. If fillers or pigments require grinding, this should be carried out before they are added to the dispersion.

To dry the layers Dyneon recommends a multi-step, ideally continuous process with pre-drying at 90 – 120 °C, followed by sintering at 170 – 200 °C. A flawlessly sintered polymer layer is always transparent and smoothly coalesced.

Storage and Handling

The aqueous dispersion must be stored at room temperature (15 – 30 °C). Although 3M™ Dyneon™ Fluoroplastic THV 340Z has a low settling tendency, it should be homogenised once or twice a month by gentle rolling or stirring. Should sediment still build up, it can be redispersed by homogenising the dispersion as described above. In case the material is stored below 15 °C, the stabilizer contained in the dispersion can build crystallites. This behaviour is reversible by increasing the temperature to > 15 °C.

For more information please consult our technical information regarding [“Shelf Life and Storage of 3M™ Dyneon™ Fluoropolymer Dispersion Products”](#).

Safety Instructions

Follow the normal precautions observed with all fluoropolymer materials.

Please consult the Material Safety Data Sheet and Product Label for information regarding the safe handling of the material. By following all precautions and safety measures, processing these products poses no known health risks. General handling/processing precautions include: 1) Process only in well-ventilated areas. 2) Do not smoke in areas contaminated with powder/residue from these products. 3) Avoid eye contact. 4) If skin comes into contact with these products during handling, wash with soap and water afterwards. 5) Avoid contact with hot fluoropolymer.

Potential hazards, including release of toxic vapours, can arise if processing occurs under excessively high temperature conditions. Vapour extractor units should be installed above processing equipment. When cleaning processing equipment, do not burn off any of this product with a naked flame or in a furnace.

Delivery Form

3M™ Dyneon™ Fluoroplastic THV 340Z is delivered as a water-based solution (dispersion).

Packaging sizes are:

- 30 l PE-drum with 35 kg content
- 1000 l IBC container with 1200 kg content

3M™ Dyneon™ Fluoroplastic THV 340Z

Important Notice

All information set forth herein is based on our present state of knowledge and is intended to provide general notes regarding products and their uses. It should not therefore be construed as a guarantee of specific properties of the products described or their suitability for a particular application. Because conditions of product use are outside Dyneon's control and vary widely, user must evaluate and determine whether a Dyneon product will be suitable for user's intended application before using it.

The quality of our products is warranted under our General Terms and Conditions of Sale as now are or hereafter may be in force.

Technical information, test data, and advice provided by Dyneon personnel are based on information and tests we believe are reliable and are intended for persons with knowledge and technical skills sufficient to analyze test types and conditions, and to handle and use raw polymers and related compounding ingredients.

No license under any Dyneon or third party intellectual rights is granted or implied by virtue of this information.

General recommendations on health and safety in processing, on work hygiene and on measures to be taken in the event of accident are detailed in our material safety data sheets.

You will find further notes on the safe handling of fluoropolymers in the brochure "[Guide for the safe handling of Fluoropolymers Resins](#)" (download link) by PlasticsEurope, Box 3, B-1160 Brussels, Tel. +32 (2) 676 17 32.

You can also download it with your smartphone using the QR code below.



Customer Service

Europe

Phone: 00 800 396 366 27
Fax: 00 800 396 366 39

Italy

Phone: 800 7 910 18
Fax: 800 7 810 19

USA

Phone : +1 800 810 8499
Fax : +1 800 635 8061

Technical Service Fluoroplastics

Dyneon GmbH
3M Advanced Materials Division
Industrieparkstraße 1
84508 Burgkirchen
Germany
Phone: +49 8679 7 4709
Fax : +49 8679 7 5037

Technical Service Fluoroelastomers & Polymer Processing Additives

3M Belgium N.V.
3M Advanced Materials Division
Canadastraat 11
Haven 1005
2070 Zwijndrecht
Belgium
Phone: +32 3 250 7868
Fax: +32 3 250 7905

Technical Service PTFE Compounds

Dyneon B.V.
3M Advanced Materials Division
Tunnelweg 95
6468 EJ Kerkrade
The Netherlands
Phone: +31 45 567 9600
Fax: +31 45 567 9619

We will gladly supply further contact details for our full network of global sales offices. Alternatively, find them [here](#).



Web Site: www.dyneon.eu

Printed in Germany
© Dyneon 2016
Status: April 2016

3M, Dyneon and Dynamar are Trademarks of 3M Company.
All Rights reserved. The present edition replaces all previous versions. Its content is being continuously adjusted to reflect the current level of knowledge. Please make sure and inquire if in doubt whether you have the latest edition.