

3M™ Dyneon™ PTFE Dispersion TF 5033Z

Typical Properties

3M™ Dyneon™ PTFE Dispersion TF 5033Z is supplied with a pH value of 9 – 11. Fillers and colour pigments can be added to the dispersion.

Typical Applications

3M™ Dyneon™ PTFE Dispersion TF 5033Z is mainly used for manufacturing compounds. When mixed into the aqueous system, these sorts of compounds achieve the ideal propagation and attachment of the PTFE portion of the fillers. Typical applications include the manufacture of slide bearings and dry bearings for machine and automobile construction.

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 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. When adding fillers, make sure the pH value remains stable.

To separate the liquid content of the compound mixture it is advisable to reduce the pH value of the mixture to the acidic end of the spectrum after adding fillers and to activate coagulation by adding suitable precipitating agents or by inputting strong shear forces. The undesired aqueous content can then be decanted. The light residual moisture compound obtained can be used for further processing.

To dry the applied layers Dyneon recommends a three-step, ideally continuous process with pre-drying at 90 – 120 °C, intermediate drying at 230 – 320 °C and then final sintering at 360 – 400 °C. The temperatures should be selected taking into account the substrate thickness, coating thickness and throughput speed.

Storage and Handling

The aqueous dispersion must be stored under frost-proof conditions (5 – 30 °C). Although 3M™ Dyneon™ PTFE Dispersion TF 5033Z 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.

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™ PTFE Dispersion TF 5033Z is delivered as a water-based solution (dispersion).

Packaging sizes are:

- 30 l PE-drum with 33 kg content
- 1000 l IBC container with 1000 kg content
- 1000 l IBC container with 1100 kg content

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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. Testing in accordance with DIN, ISO and ASTM.

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 BVBA / SPRL
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](#).



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