

3M™ Dyneon™ PTFE Micropowder TF 9205

Product Description

3M™ Dyneon™ PTFE Micropowder TF 9205 is a white, free-flowing agglomerate of fine, low molecular PTFE micropowder. Due to the manufacturing process, the surface of the polymer features more end groups than pure PTFE.

Special Features

- Hard particles
- Almost universal chemical resistance
- Good non-stick properties
- Reduced friction resistance
- Large operating temperature range
- Increased degree of abrasion resistance
- Low molecular PTFE
- Limited foodstuff contact, approved by the German Federal Institute for Consumer Health Protection and Veterinary Medicine (BgVV)

| Properties | Test method | Unit | Value |
|---|------------------|----------|-------|
| Mean Particle Diameter | ISO 13320 | µm | 8 |
| Bulk Density | DIN EN ISO 60 | g/l | 400 |
| Special Surface BET | DIN ISO 9277 | m²/g | 2 |
| Melt Flow Index (372 °C / 2.16 kg / 1.0 mm) | DIN EN ISO 1133 | g/10 min | 12 |
| Melting Point | DIN EN ISO 12086 | °C | 325 |
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Typical Properties

When added to plastics, 3M™ Dyneon™ PTFE Micropowder TF 9205 can cause a significant reduction in friction resistance and can also have a positive influence on the non-stick effect of the surface. Because of its small particle size coupled with good free-flowing properties, TF 9205 exhibits very good metering behaviour and can be easily incorporated into other materials – even in dry blends.

Typical Applications

3M™ Dyneon™ PTFE Micropowder TF 9205 can be added to oils, fats, polymers, paints, elastomers and coatings. Typical additional quantity can vary between < 1 % and 20 % and depends on the selected matrix and the desired properties. Plastics that can benefit from improved lubricity and reduced friction and wear include polyacetals, polyamides, polycarbonates, polyesters, polyimides, polysulphides and polysulphones. Elastomers that can benefit include fluoroelastomers, neoprenes, nitriles and silicones.

Processing Recommendations

3M™ Dyneon™ PTFE Micropowder TF 9205 is an easy-to-dose, small, hard particle which is easily distributed within a matrix. Homogenous incorporation is the single most important process and application consideration. When adding to thermoplastics, it should therefore be added directly to the melt.

As PTFE is an extremely inert substance, precautionary measures must be taken to ensure that the polymer remains within the matrix in the desired quantity. In liquids, this can be achieved by adding surfactants or by adjusting the viscosity. In solids, enriching the PTFE on the surface is often desired so as to adjust the ideal reduction of the friction resistance or to improve the non-stick effect.

Storage and Handling

3M™ Dyneon™ PTFE Micropowder TF 9205 can be stored for a relatively long period of time. It should be kept in a clean, dry place at temperatures below 30 °C.

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 Micropowder TF 9205 is delivered in agglomerate form.

Packaging sizes are:

- 25 kg cardboard box, containing one PE-bag with 25 kg content
- 300 kg cardboard box, containing 12 PE-bags each with 25 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.

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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.



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



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