

# 3M™ Dyneon™ Fluoroplastic Powder PFA 6503PBZ

## Features and Benefits

- Excellent thermal stability
- Excellent electrostatics
- Excellent non-stick performance
- Outstanding flow and fluidization
- Excellent stress crack resistance
- Smooth surfaces
- Process targets: powder coating
- Non-wetting
- Heat resistant to 260°C (500°F)
- Low friction
- Good transparency
- Chemical resistant

**Note:** Data in this document are not for specification purposes.

## Typical Properties

Property	Test Method	
Melting Point	ASTM D4591	308°C (586°F)
Melt Flow Index (372°C/5 kg)	ASTM D1238	3 g/10 min
Specific Gravity	ASTM D792	2.15 g/cc
Bulk Density	DIN 53466	800
Tensile Strength @ 23°C	ASTM D638	30 MPa (4350 psi)
Ultimate Elongation @ 23°C	ASTM D638	380%
Hardness Shore D	ASTM D2240	60
LOI	ASTM D2863	>95
Flexural Modulus	ASTM D790	550 MPa (80,000 psi)
Median Particle Size		30µ

## Product Description

3M™ Dyneon™ Fluoroplastic Powder PFA 6503PBZ is a fluorothermoplastic powder with excellent thermal stability characteristics, designed for use in thin film powder coatings. Typical applications include non-stick surfaces, chemical vessel and tank liners, electrical insulation and low friction applications.

## Product Form and Packaging

Dyneon PFA 6503PBZ is supplied in powder form. Product is supplied in 50kg (110 lb.) quantities.

## Storage and Material Handling

PFA 6503PBZ has an extended shelf life provided it is stored in a clean, dry place in its original, unopened container. PFA 6503PBZ is hydrophobic, and generally does not require drying before processing unless high humidity conditions create surface moisture adsorption. Opened containers should be tightly resealed to prevent dust contamination from static charge accumulation and moisture ingress. Containers should be equilibrated to room temperature before opening. Best performance is achieved by sieving with a 60 mesh sieve prior to use.

## Safety/Toxicology

This is a fluoroplastic material, so normal precautions observed with fluoroplastics should be followed. Before processing this product, be sure to read and follow all precautions and directions for use contained in the product label and the Material Safety Data Sheet. General handling/processing precautions include: (1) Process only in well-ventilated areas; (2) Do not smoke in areas contaminated with powder/residue from this product; (3) Avoid eye contact; (4) After handling this product wash any contacted skin with soap and water. Potential hazards, including evolution of toxic vapors, can exist if processing occurs under excessively high temperature conditions. Appropriate local exhaust ventilation such as vapor extractor units should be installed above processing equipment. When cleaning processing equipment, do not burn off this product with an open flame or in a furnace.

## Food Contact/FDA Regulatory Status

This 3M product complies with 21 CFR 177.1550 (perfluorocarbon resins under paragraph (a)(2)) and may be used as coatings or component of a coating for articles intended for repeated food contact, subject to the provisions, including specifications, conditions of use, and limitations, if any, in this regulation.

3M makes no recommendation about the suitability of this 3M product in the user's intended application. It is the user's responsibility to determine whether its use of a 3M product in a particular application is suitable and will comply with applicable laws and regulations. As appropriate, the user is also responsible for testing its finished product(s) made with 3M products to ensure compliance with any applicable specifications, conditions of use, and limitations (including extractives limitations) under applicable laws and regulations such as 21. C.F.R. 177.1550.

**Product Stewardship – Replacement Emulsifier:** Dyneon™ and Dynamar™ fluoroplastic products identified with a “Z” at the end of the product name indicate products that are made using a replacement emulsifier. This emulsifier, which Dyneon began using in the manufacturing processes for these products in 2008, is a polymerization aid used to manufacture certain fluoropolymers and is not an intended ingredient in the polymers. The new emulsifier eliminates the use of the former polymerization aid, APFO (ammonium perfluorooctanoate, the ammonium salt of perfluorooctanoic acid (PFOA)), in the manufacture of these fluoropolymers. The use of the replacement emulsifier in the manufacture of these products is consistent with our product stewardship principles and our commitment to US EPA's Voluntary PFOA Stewardship Program under which fluoropolymer manufacturers agreed to work towards eliminating PFOA in emissions and product content by the year 2015. **We are pleased to report that Dyneon completely eliminated the use of APFO in its manufacturing processes in December 2008.**

**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. 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 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.

