

3M™ Dyneon™ PTFE TF 5050Z

Features and Benefits

- Bimodal particle size distribution
- Low settling tendency
- Excellent film-forming properties
- Low porosity
- High gloss
- Greater hardness

Typical Properties

Property	Test Method	
Solid Content	DIN EN ISO 12086	58% (m/m)
Emulsifier		non-ionic
Emulsifier Content (based on solid content)	DIN EN ISO 12086	5% (m/m)
Average Particle Size	DIN ISO 13321	205 nm
pH	DIN ISO 976	>9.5
Viscosity D = 30 s ⁻¹	DIN 54 453	12 mPa
Specific Gravity	DIN EN ISO 12086	1.5 g/cm ³

Supply Form

Standard Packaging	Approximate	Weight of Dispersion (wet) Approximate
30 Liter Plastic Drum	7.9 U.S. Gallons	40 kg (88 lbs)
1000 Liter IBC Container in (US Known as Gaylord)	264 U.S. Gallons	1500 kg (3306 lbs)

Processing

Because of its special particle size distribution, 3M™ Dyneon™ PTFE TF 5050Z is particularly good for producing aqueous non-stick coating systems, which can be used to coat suitably prepared metal, glass and ceramic surfaces, (e.g., for frying pans, saucepans, etc).

The dispersion can be processed undiluted or diluted with distilled or deionized water.

Storage and Material Handling

The aqueous dispersion must be stored under frost-free conditions 5° - 30°C (41° - 86°F) to avoid the irreversible precipitation of PTFE. Although the dispersion has a low settling tendency, it should be homogenized by rolling or gentle stirring once per month and immediately before use. This procedure can also be used to redisperse formed sediment.

Safety/Toxicology

This is a PTFE material, so normal precautions observed with PTFE should be followed. Before processing these products, consult the Material Safety Data Sheet and follow all label directions and handling precautions. 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) After handling these products wash any contacted skin with soap and water; (5) Avoid contact with hot fluoropolymer. Potential hazards, including evolution of toxic vapors, can exist if processing occurs under excessively high temperature conditions. Vapor extractor units should be installed above processing equipment. When cleaning processing equipment, do not burn off any of this product with an open flame or in a furnace.

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

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.**

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