

3M™ Dyneon™ Fluoroplastic Dispersion PFA 6900GZ

Features and Benefits

- Improved film formation
- Excellent adhesion, hardness and rigidity
- Lower gas permeation
- Lower abrasion
- Good weldability
- Nonflammable
- Excellent chemical resistance
- Wide service temperature range from -200°C to +260°C
- Non-stick properties
- Outstanding soil-and-dirt repellency
- Extremely high weathering resistance

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

Typical Properties

Property	Test Method	
Solids Content	ASTM D4441	50% Weight
Density of Dispersion	ASTM D1298	1.43 g/cc
Specific Gravity of Dry Polymer	ASTM D792	2.15 g/cc
Surface Active Ingredients		non-ionic
pH	ASTM E70	<7
Melting Point	ASTM D4591	310°C (590°F)
Melt Index 372°C/5 kg	ASTM D1238	15 g/10 min
Particle Size	Laser diffraction	235 nm

Product Description

3M™ Dyneon™ PFA 6900GZ is a 50% solids fluorothermoplastic aqueous dispersion. It is a melt-processable copolymer of tetrafluoroethylene and perfluorinated comonomers, with a melt viscosity several orders of magnitude lower than PTFE.

It can be utilized in coating system formulations and in combination with conventional PTFE dispersions, binding resins, and pigments. Dyneon PFA 6900GZ is ideal for use as a protective fabric coating and, particularly in combination with PTFE dispersions, for coating and impregnating glass fiber fabrics and metal and ceramic substrates.

Processing

PFA 6900GZ is applied by dipping, impregnating or spraying. Melting of the polymer particles and film formation normally occurs between 320°C and 380°C (608°F and 716°F). To avoid blistering, we recommend drying the applied coating at a maximum of 90°C (194°F).

This dispersion can be processed in concentrated or diluted form, utilizing either distilled or demineralized water.

Product Form

PFA 6900GZ is furnished in 40 kg (88 lb) drums.

Storage and Material Handling

This aqueous dispersion must be protected from freezing. It should be stored at temperatures between 5°C and 15°C (41°F and 59°F). Although it has a minimal tendency to settle, it is recommended that PFA 6900GZ dispersion be homogenized by gently drum rolling at low rpm (2-4) for 10-15 minutes once every 2 months. Before use, the dispersion must be rolled and filtered with a 100-micrometer filter.

Safety/Toxicology

This product 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 any of this product with an open flame or in a furnace.



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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