3M™ Dyneon™ Fluoroplastic Granules ET 6235Z

Features and Benefits

- Wide service temperature –200° to +150°C
- Low flammability
- Excellent electrical and mechanical properties
- Low permeability
- Good resistance to radiation
- High light transmission in the visible and UV ranges
- Very good resistance to solvents and chemicals
- Extremely high resistance to outdoor weathering
- Non - stick characteristics
- Excellent tear resistance
- Nonflammable

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

Typical Properties

Property	Test Method	
Melt Flow Index (297°C/5 kg)	ASTM D1238	10 g/10 min
Specific Gravity	ASTM D792	1.73 g/cm^3
Tensile Strength 23°C	ASTM D638	46 MPa (6,670 psi)
Elongation @ Break 23°C	ASTM D638	425%
Yield Stress 23°C	ASTM D638	25 MPa (3,360 psi)
Flexural Modulus	ASTM D790	1,100 MPa (159,500 psi)
Light Transmission (visible range as a function of film thickness)		95%
Dielectric Constant	ASTM D150	2.58 @ 1 MHz
Dielectric Strength, 0.1 mm	ASTM D149	150 kV/mm
Melting Point	ASTM D4591	267°C (513°F)
Maximum Service Temperature	DIN 57207 part 6	150°C (302°F)
Limiting Oxygen Index (LOI)	ASTM D2863	>30
Vertical Burn[1] (110 mm thick)	UL 94	V-0 low flammability

[1] measured on compression molded plaques, 2 mm thickness

Product Description

3M™ Dyneon™ Fluoroplastic Granules ET 6235Z is a melt processable fluoroplastic consisting mainly of alternating tetrafluoroethylene and ethylene monomer units (ETFE). This partially crystalline fluorothermoplastic offers a valuable combination of properties.

Applications

Its excellent properties make Dyneon ET 6235Z ideal for use in a wide variety of industries, including applications in the electronics, chemical processing, laboratory testing equipment and outdoor architectural structure industries. It can be easily fabricated into films, extruded thin-walled tubing and injection molded parts.

Processing

ET 6235Z can be processed by the methods normally employed for thermoplastics, such as injection molding, extrusion and blow molding. It is recommended that any machine parts that come in contact with the melt should be constructed with a corrosion-resistant finish, such as Xaloy™, Hastelloy™ or similar material. Processing temperature range, 320°C (610°F) - 340°C (645°F).

Storage and Material Handling

ET 6235Z has an unlimited shelf life provided it is stored in a clean, dry place. ET 6235Z is hydrophobic, and generally does not require drying before processing unless high humidity conditions create surface moisture adsorption.

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 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.

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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