

3M™ Dyneon™ Fluoroplastic ET 6210AZ

Product Description

3M™ Dyneon™ Fluoroplastic ET 6210AZ is a partially fluorinated copolymer comprising tetrafluoroethylene and ethylene and is belonging to the product class ETFE. This grade comes as agglomerate (in powder form) and is mainly used as base material for compounding.

Special Features

- Extremely high weathering and UV stability
- Wide service temperature range (-200 to +150 °C)
- Excellent tear and tear propagation resistance
- Very good non-stick characteristics
- Good resistance to high energy radiation
- Low flammability
- Excellent mechanical properties
- Very good resistance to solvents and chemicals
- Low permeability

Properties	Test method	Unit	Value
Specific Gravity	DIN EN ISO 12086	g/cm³	1.72
Melt Flow Index (297 °C / 5kg)	DIN EN ISO 1133	g/10min	9
Melting Point	DIN EN ISO 12086	°C	266
Tensile Strength at Break (23 °C)	DIN EN ISO 527-1	MPa	50
Elongation at Break (23 °C)	DIN EN ISO 527-1	%	450
Tensile Modulus	DIN EN ISO 527-1	MPa	1,200
Dielectric Strength (250µm film)	ASTM D 149	kV/mm	59
Dielectric Constant (23 °C) at 1 MHz	ASTM D 150	-	2.58
Limiting Oxygen Index	ASTM D 2863	%	35

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Typical Properties

3M™ Dyneon™ Fluoroplastic ET 6210AZ is a medium molecular weight grade and features an excellent balance of properties.

Typical Applications

3M™ Dyneon™ Fluoroplastic ET 6210AZ is in agglomerate (powder) form and ready to use for compounding.

Processing Recommendations

3M™ Dyneon™ Fluoroplastic ET 6210AZ is typically processed by extrusion. As usual for the processing of all fluorinated polymers, it is highly recommended to use corrosion resistant materials for all machine parts that come into contact with melt or fumes. Such materials are e.g. alloys like Inconel 625, Haynes 242 or Hastelloy C4.

Typical processing equipment temperatures for 3M™ Dyneon™ Fluoroplastic ET 6210AZ range from 250 to 350 °C. For safety precautions please see also the topic "Safety Instructions" in this data sheet.

Below is an example for possible process conditions when compounding with a pigment:

Twin Screw Extruder: 25 mm

Screw L/D: 33

Temperature Settings

Ext. Zone 1 (throat cooling) 40 °C	Ext. Zone 5 305 °C	Die Head 310 °C
Ext. Zone 2 250 °C	Ext. Zone 6 305 °C	Water Cooling 15 °C
Ext. Zone 3 290 °C	Ext. Zone 7 310 °C	
Ext. Zone 4 305 °C	Ext. Zone 8 310 °C	

Hastelloy®, Haynes® 242 are registered Trademarks of Haynes International.

Inconel® is a registered Trademark of Special Metals Corporation.

Storage and Handling

When stored in a clean and dry place, 3M™ Dyneon™ Fluoroplastic ET 6210AZ will have a relatively long shelf life. Partially used containers should be reclosed carefully to avoid contamination. Drying the material before use is typically not necessary.

Safety Instructions

Follow the normal precautions observed with all fluorothermoplastic 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™ Fluoroplastic ET 6210AZ is delivered in agglomerate form. Packaging size is:

- 500 kg Gaylord box, containing 20 PE bags with 25 kg content each

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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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Web Site: www.dyneon.eu

Printed in Germany
© Dyneon 2013
Status: Jul. 2013

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