

Progetto di ricerca di interesse nazionale 2005, Cofinanziato dal MIUR

Titolo generale della ricerca:



PERCORSI E GESTIONE DELLE INFORMAZIONI TECNICHE PER LA PROMOZIONE E IL CONTROLLO DELL'INNOVAZIONE NEI MATERIALI E NEL PROGETTO DI ARCHITETTURA

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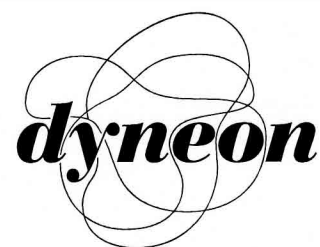
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Materiale di base

SELEZIONE DI SCHEDE TECNICHE DAI PRINCIPALI PRODUTTORI

I dati pubblicati nelle schede sono stati forniti dalle aziende e sono indicativi. Per una corretta e più aggiornata informazione si consiglia il contatto diretto con i loro uffici commerciali.



A 3M Company

Dyneon™

Fluorothermoplastics

ET 6235

Product Features

ET 6235 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:

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

Typical Properties (Data not for specification purposes)

Product properties of ET 6235 (mean values)

Property	Unit	Test Method	ET 6235
Melt Flow Index (297°C/5 kg)	g/10 min	ASTM D 1238	10
Specific Gravity	g/cm ³	ASTM D 792	1.73

Mechanical properties

Property	Unit	Test Method	ET 6235
Tensile Strength 23°C	MPa (psi)	ASTM D 638	46 (6,670)
Elongation @ Break 23°C	%	ASTM D 638	425
Yield Stress 23°C	MPa (psi)	ASTM D 638	22 (3,190)
Flexural Modulus	MPa (psi)	ASTM D 790	1,100 (159,500)

Optical properties

Refractive Index (100 micron film)	n _D		1.4
Light Transmission (380-780 nm, 100 µm film)			≥ 90%

Electrical properties

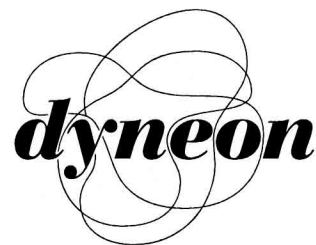
Property	Unit	Test Method	ET 6235
Dielectric Constant	@ 1 MHz	ASTM D 150	2.58
Dissipation Factor	@ 1 MHz	ASTM D 150	
Dielectric Strength, 0.1 mm	kV/mm	ASTM D 149	140

Thermal properties

Property	Unit	Test Method	ET 6235
Melting Point	°C (°F)	ASTM D 4591	267 (513)
Maximum Service Temperature	°C (°F)	DIN 57207 part 6	150 (302)
Limiting Oxygen Index (LOI)	%	ASTM D 2863	>30
Vertical Burn ^(1, 2)		UL 94	V-0 low flammability
Flame Rating (110 µm film)		DIN 4102 part 1	Building Material Class B1

⁽¹⁾ measured on compression molded plaques, 1.5 mm thickness

⁽²⁾ UL Dyneon listing = E188957(M)



A 3M Company

Applications

Its excellent properties make Dyneon™ ET 6235 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

Dyneon ET 6235 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, 300-340°C (570-645°F).

Product Form and Packaging

Dyneon ET 6235 is supplied in pellet form in moisture and dust-proof 25 kg (55 lb) polyethylene bags.

Storage and Material Handling

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

Our Worldwide Commitment to Quality

Indicative of our commitment, most Dyneon design, development, production and service facilities have achieved a global ISO 9001 quality management certification. One of our Decatur, Alabama sites and the remote functions in Oakdale, Minnesota have achieved a QS-9000 certification for our quality management system. That Decatur, Alabama site and all Germany locations, as well as the production facilities at Antwerp, Belgium have also received ISO 14001 certification for their environmental management system. And, our Aston, Pennsylvania PTFE custom compounding facility has A2LA accreditation for its quality control laboratory.

Safety/Toxicology

These are fluoroplastic materials, so normal precautions observed with fluoroplastics 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. 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 these products with an open flame or in a furnace.

For further assistance please contact your Dyneon sales representative.

Technical Information and Test Data

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. No license under any Dyneon or third party intellectual rights is granted or implied by virtue of this information.

Important Notice:

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 following is made in lieu of all express and implied warranties (including warranties of merchantability and fitness for a particular purpose): If a Dyneon product is proved to be defective, Dyneon's only obligation, and user's only remedy, will be, at Dyneon's option, to replace the quantity of product shown to be defective when user received it or to refund user's purchase price. In no event will Dyneon be liable for any direct, indirect, special, incidental, or consequential loss or damage, regardless of legal theory, such as breach of warranty or contract, negligence, or strict liability.**

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