

Fluon+ mPPS - 1000 Series Product Information

Description

Fluon+ mPPS are a series of semi-commercialized PPS products which have been modified using AGC's proprietary fluoropolymer and compounding technology. The fluoropolymer modification improves the flexibility and elongation of the PPS resin.

Fluon+ mPPS can be processed via conventional PPS molding methods, such as extrusion or injection molding. Potential applications may be hose or tube, wire and cable, gears, sealing, or other applications.

Material Features

- High temperature resistance
- Flexibility
- Dimensional stability
- Chemical resistance

Applications

- **Extruded moldings**
 - Film for electrical insulation
 - Wire and cable
 - Tube
- **Injection moldings**
 - Gear member
 - Bearing retainer
 - Casing
 - Case body
- **Gaskets Cutting and processing**
 - Plate / Sheet
 - Round / Cylindrical bar

Processing

Fluon+ mPPS can be processed via conventional PPS molding techniques

- Extrusion molding
- Injection molding
- Pressure molding

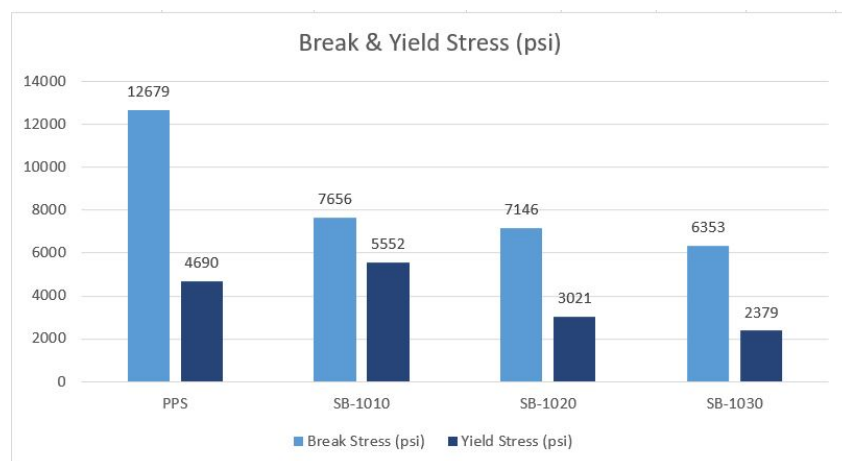
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Fluon+ mPPS Typical Properties

Property	Test Method	Units	PPS	Modified PPS Increasing Modification -->		
				SB-1010	SB-1020	SB-1030
Tensile Strength (23 °C)	ASTM D638	psi	12679	7656	7146	6353
Tensile Elongation (23 °C)	ASTM D638	%	6	27	33	40
Flexural Strength (23 °C, 5% strain)	ASTM D790	MPa	148	118	90	69
Flexural Modulus (23 °C)	ASTM D790	GPa	3.7	3.1	2.5	1.9
Impact Strength (23 °C)	ASTM D256	J/m	32	36	39	34
Peak Stress	ASTM D638	psi	12928	10253	8077	6618
Yield Stress	ASTM D638	psi	4690	5552	3021	2379

Break and Yield Stress

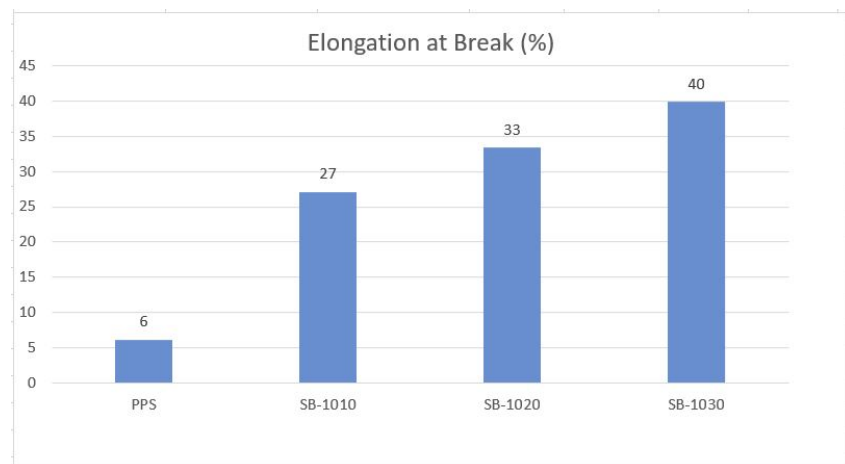
Modified PPS retains a significant amount of strength relative to unmodified PPS



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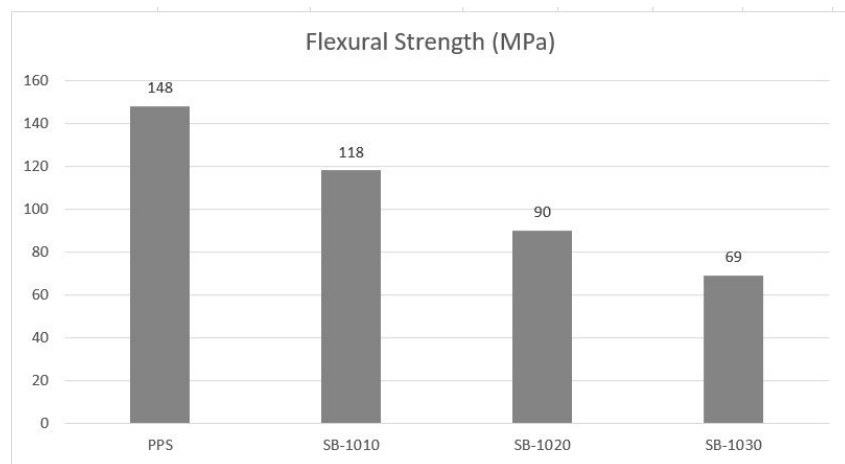
Elongation at Break

Elongation at break increases significantly for modified PPS



Flexural Property Data

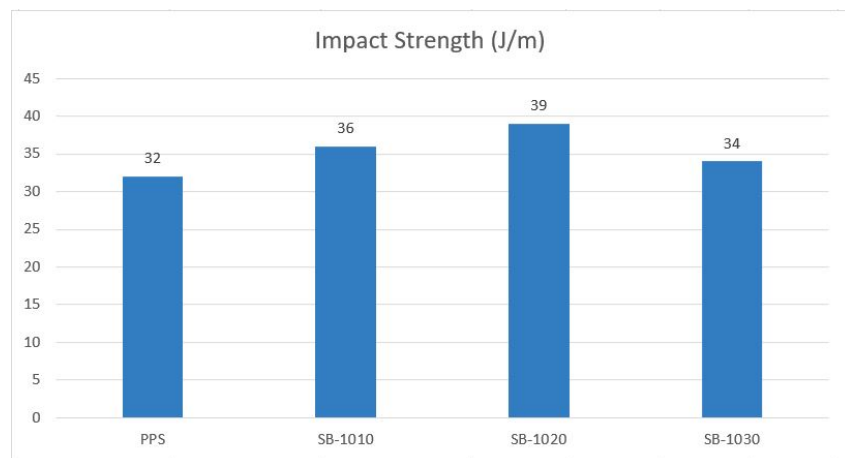
Modification of PPS greatly improves the flexibility of PPS



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Impact Strength

Impact strength is retained for modified PPS



Handling and Storage

Heating Fluon® products in excess of 750°F (399°C) can produce toxic fumes. It is, therefore, necessary to provide local exhaust ventilation in areas where Fluon® products are exposed to high temperatures. Avoid breathing fumes or contaminating smoking tobacco with fumes, powder, or dust.

Thermal decomposition of this product will generate hydrogen fluoride, which is corrosive. Corrosion resistance materials are required for prolonged contact with molten resin.

Fluon+ mPLASTICS products should be stored in their original containers. This will be either in re-sealable plastic pails, or in drums with the liner bags and chime rings securely re-fastened.

Products should be stored indoors at nominal conditions of 23 C and 50% relative humidity. Products should be dried prior to use.



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Safe Handling Information

A summary of the hazards, as defined by OSHA Hazard Communication Standard, 29 CFR 1910.1200 for this product are:

Physical hazards: None

Health hazards: None

FOR ADDITIONAL INFORMATION AND HANDLING INSTRUCTIONS READ AGC CHEMICALS AMERICAS, INC. MATERIAL SAFETY DATA SHEET.

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