TECHNICAL DATA SHEET

fluteck® P8000 GM

PTFE Glass Mos Compound

Product Description.

Fluteck™P8000 GM PTFE Glass Mos Compound is a filled compound based on Virgin PTFE containing 15% glass fiber and 5% Molybdenum Disulfide for Ram Extrusion, Compression and Isostatic moulding.

Product Properties:

- Improved thermal dimensional stability
- Improved creep resistance
- Improved compression strength
- Exceptional temperature resistance
- Excellent chemical stability
- Excellent electrical insulating properties
- Reduced friction & wear; Low friction behaviour
- Improved surface hardness

	Property	Method	Units	Specification
Physical	Color	-	-	Blue - grey
	Specific gravity	ASTM D792	g/cm ^{3}	2,250 – 2,300
	Water absorption	ASTM D570	%	0,05
	Flamability	UL 94		V-0
Mechanical	Tensile strength	ASTM D4745	MPa	≥ 18
	Elongation	ASTM D4745	%	≥ 200
	Hardness	ASTM D2240	Shore D	≥ 58
	Ball Hardness	ASTM D785	MPa	≥ 25
	Deformation under load (140 Kg/cm^2 for 24 hrs. At 23° C)	ASTM D621	%	11 – 13
	Permanent deformation (after 24 hrs. Relaxation at 23° C)	ASTM D621	%	5,5 – 7,5
	Coefficient of static friction	ASTM D1894		0,12 – 0,25
	Coefficient of dynamic friction	ASTM D1894		0,10 – 0,12
	Wear coefficient	-	$\frac{cm^3\ min}{Kg\ m\ h}\ 10^{-8}$	15 - 25
Thermal	Thermal conductivity	ASTM C177	W/ m·K	0,34
	Coefficient of linear thermal expansion From 25 to 100 °C	ASTM D696	10^{-5}/ °C	9 - 13
Electrical	Volume resistivity	ASTM D257	Ohm·cm	10 ^{15}
	Surface resistivity	ASTM D257	Ohm	10 ^{14}

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Typical properties.

fluteck™P8000 GM is a PTFE Glass Mos Compound preferred for parts and components requiring very good mechanical properties.
fluteck™P8000 GM offers an excellent combination of properties Typical of the PTFE fluoropolymer resins:

- Service Temperature: fluteck™P8000 GM offers excellent resistance to continuous service temperatures – working conditions from -100° C (-148°F) up to 250°C (482°F) and, for limited periods, even to higher temperatures; product's low temperature resistance allows satisfactory performance down to -200°C (-328°F).
- Chemical resistance: fluteck™P8000 GM offers high inertness towards nearly all known chemicals. Only attacked elemental alkali metals, chlorine trifluoride and elemental fluorine at high temperature and pressures might affect properties. Glass fibres is chemically inert with the exception of its reactivity with hydrofluoric acid and strong bases.
- Solvents resistance: fluteck™P8000 GM offers insoluble properties in all solvents up to temperatures as high as 300° C (572° F). Certain highly fluorinated oils only swell and dissolve PTFE at temperatures close to the crystalline melting point.
- Secondary Filler: fluteck™P8000 GM contains, in addition to glass fiber, a small amount of MoS2 which further increases hardness and wear resistance of PTFE and decreases friction.

fluteck™P8000 GM PTFE Glass Mos Compound enhances some characteristics of virgin PTFE such as wear, compression strength, deformation under load, cold creep, thermal conductivity and dimensional stability.

Typical Application.

fluteck™P8000 GM PTFE Glass Mos Compound offers excellent properties in the chemical processing, in automotive industries, in sealing application and in mechanical applications in general for bushing, sliding pads, and for slide ways for machine tools.
High wear, abrasion resistance and good wear compression properties are suitable for the majority of dry bearing applications against hard counter-surfaces.
fluteck™P8000 GM PTFE Glass Mos Compound is commonly used filler for dynamic seal applications where both rotating and alternating movements are involved, pneumatic, hydraulic and mechanical parts, valve seats, gaskets, pneumatic, compressors, appliances, insulators hydraulic and mechanical parts

Storage and Handling.

fluteck™P8000 GM PTFE Glass Mos Compound can be stored for a long period of life and is exceptionally resistant to aging and weather conditions up to 10 years. Specific aging tests carried out on sample exposed to aging and atmospheric conditions, showed no changes in weight and volume.
In case of semi-finished products, before processing or before the machining, it is advisable to store the material for 24 hours in the production area, preferable in a clean and dry place at a temperature of less than 25°C (77°F), preferably between 21-25°C (70-77°F) .This is very important when room temperature is low; in such cases the material should be conditioned up to 72 hours in the production area in the recommended temperature range.

Safety instruction.

Follow the normal precautions observed with all fluoropolymers.
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, machining, and using these products poses no known health risks. General handling and processing precautions include: 1) Process only in well-ventilated areas. 2) Do not smoke in working areas. 3) Avoid eye contact. 4) Avoid mouth contact. 5) If skin comes into contact with these products during handling, wash with soap and water afterwards. 6) Avoid contact with hot fluoropolymers.

The user must verify that the finished parts, made out of the semi-finished product, are technically suitable for the requested application. The user must also verify that the finished item may not cause any modification to the organoleptic properties of the foodstuff and that the item's technological fitness it is assigned to may be guaranteed.
For each foreign country market, where the articles are introduced into, it is user's responsibility to verify whether both material than articles comply with the applicable laws and regulations.

Delivery format.

fluteck™P8000 GM PTFE Glass Mos Compound is supplied in the following shapes formats:
Semi-finished products: rods, tubes, sheets, tapes, strips. Shapes and sizes as per our General Size List and/as per customer request. Machined parts: Shapes and sizes as per customer request.

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