3% MOS2 (97% VIRGIN PTFE+3% MOLYBDENUM BISULFIDE)

COLOR MATERIAL

PTFE Mos Compound preferred for parts and components requiring very good mechanical properties.

This material offers an excellent combination of properties Typical of the PTFE fluoropolymer resins:

- Service Temperature: 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: 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.
- Solvents resistance: 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.

Mos Compound enhances some characteristics of virgin PTFE such as wear, compression strength, friction behavior, cold creep and dimensional stability.

Properties

- Improved thermal dimensional stability
- Excellent chemical stability
- Improved deformation under load
- Excellent electrical insulating properties
- Improved compression strength
- mproved surface hardness
- Low friction behaviour
- Improved wear resistance
- Exceptional temperature resistance
- Improved sliding properties

Main applications

PTFE Mos Compound offers useful properties in various applications such as chemical resistance, thermal stability, cryogenic properties, low coefficient of friction, low surface energy, low dielectric constant, high volume and surface resistivity, and flame resistance.

These properties allow the application in several fields such as Chemical, Electrical and Electronic, Petrochemical, Automotive, Mechanical, Medical, Aeronautics and Semiconductor industry.

In the addition of a small amount of molybdenum disulfide acts as both a reinforcement to improve wear resistance as well as a friction reducer in dry applications. For this reasons it's commonly used in dry and intermittent dynamic applications.

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COLOR MATERIAL

Property		Method	Units	Specification
Physical	Color	-	-	Blue - azure
	Specific gravity	ASTM D792	g/cm ^{3}	2,20 – 2,25
	Water absorption	ASTM D570	%	0,03
	Flamability	UL 94		V-0
Mechanical	Tensile strength	ASTM D4745	MPa	≥ 25
	Elongation	ASTM D4745	%	≥ 250
	Hardness	ASTM D2240	Shore D	≥ 55
	Ball Hardness	ASTM D785	MPa	≥ 25
	Deformation under load (140 Kg/cm2 for 24 hrs. At 23° C)	ASTM D621	%	9 - 12
	Permanent deformation (after 24 hrs. Relaxation at 23° C)	ASTM D621	%	5 - 6
	Coefficient of static friction	ASTM D1894		0,08 – 0,10
	Coefficient of dynamic friction	ASTM D1894		0,06 – 0,08
	Wear coefficient	-	$\frac{cm^3 \text{ min } 10^{-8}}{Kg \text{ m h}}$	2000-2200
Thermal	Thermal conductivity	ASTM C177	W/ m*K	0,25
	Coefficient of linear thermal expansion From 25 to 100 °C	ASTM D696	10^{-5}/ °C	11 - 14
Electrical	Volume resistivity	ASTM D257	Ohm*cm	10 ^{17}
	Surface resistivity	ASTM D257	Ohm	10 ^{16}