



Case history

RING SEAL TRASMISSION PTFE

The important technical upgrade of our Ring seal transmission PTFE is concluded with the end of 2023: seals made of PTFE for transmission operation in the earth-moving machinery market.

STEP 1) MATERIAL REVIEW:

In order to cope with the more extreme operating conditions of earth-moving machines, mainly related to harsh environmental circumstances, fatigue work, and the important development of new hydraulic oils which are getting better and better in performance, but also more chemically aggressive; after a long period of analysis and testing with the support of our partner suppliers, we managed to find a PTFE formulation even improved in performance and strength.

Our new PTFE filled with glass fiber allows a temperature range of -200°C to +260°C, while retaining a very low coefficient of friction, improved oil resistance and excellent mechanical characteristics of compression, deformation and under-load deformation resistance in any condition earthmoving machines can operate.

STEP 2) WE MAKE ASSEMBLY EASIER.

ARRANGEMENTS TO FACILITATE ASSEMBLY:

The new plastic material with 15% glass fillers allows for improvements in the performance and characteristics of the polymer, including tensile strength and elongation at break, enabling the new product to have significantly enhanced mountability that we hope will be appreciated by our mechanics. In addition, applicatively, the new properties of deformation under constant permanent load at a high temperature improve its durability, even under extreme working conditions.

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WORLD GASKET ELLEGI MIDDLE EAST FZE

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LG.MP8500GL

Data sheet

Product description

LG.MP8500GL PTFE Glass Compound is a filled compound based on Virgin PTFE containing 15% glass fiber for RAM extrusion, compression and isostatic moulding.

Product properties

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

	PROPERTY	TEST METHOD	UNIT OF MEASURE	VALUES
PHYSICAL	Colour	-	-	White cream
	Specific gravity	ASTM D792	g/cm ³	2,200 - 2,250
	Water absorption	ASTM D570	%	0,03
	Flamability	UL 94		V-0
MECHANICAL	Tensile strength	ASTM D4745	MPa	≥ 18
	Elongation	ASTM D4745	%	≥ 200
	Hardness	ASTM D2240	Shore D	62 ± 4
	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		0,18 - 0,20
	Coefficient of dynamic friction	ASTM D1894		0,11 - 0,13
	Wear coefficient	-	cm ³ min 10 ⁻⁸ Kg m h	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	10 - 13
ELECTRICAL	Volume resistivity	ASTM D257	Ohm - cm	10 ¹⁵
	Surface resistivity	ASTM D257	Ohm	10 ¹⁴

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