

PROPERTIES OF PTFE SHEETS USED AS SLIDING TOP IN LAMINATED ELASTOMERIC BEARINGS

Property	Method	Unit	unfilled	FILLED			
				LV 2030	LVG 2030	LCG 3030	LCG 3040
<u>Type of filler - % approx.</u>	-	-	-	<u>25 glass</u>	<u>20 glass + 5 graph</u>	<u>25 carbon</u>	<u>35 carbon</u>
Specific gravity	ASTM D792	-	2,17	2,23	2,18	2,10	2,10
Tensile strength	ASTM D1457	N/mm ²	30	16	15	15	15
Elongation at break	ASTM D1457	%	300	260	200	180	80
Compressive strength 1% deformation	ASTM D695	N/mm ²	4,5	7,0	7,0	10,0	11,0
Deformation under load 14N/mm ² for 24h - Total P	ASTM D621(2)	%	14,5	9,5	6,8	6,5	3,7
Deformation under load 14N/mm ² for 24h - Total T	ASTM D621(2)	%	16,5	13,5	7,0	5,5	3,4
Deformation under load 14N/mm ² for 24h - Permanent P	ASTM D621(2)	%	8,0	5,0	5,0	3,0	1,0
Deformation under load 14N/mm ² for 24h - Permanent T	ASTM D621(2)	%	8,5	7,8	4,0	2,8	1,1
Hardness (shore D - 15 sec)	ASTM D2240	-	55	63	60	63	65
Friction coefficient dynamic	ASTM D3028 (1)	-	0,05	0,07	0,06	0,06	0,06
Wear factor (K)	-	mm ³ sec/N mh	1	0,00071	0,00106	0,00082	0,00070
PV limit at 0,08 m/sec	-	Nm/mm ² s ec	0,040	0,33	0,460	0,365	0,330
PV limit at 0,50 m/sec	-	Nm/mm ² s ec	0,070	0,475	0,545	0,460	0,400
PV limit at 5,00 m/sec	-	Nm/mm ² s ec	0,095	0,590	0,800	0,545	0,500
Coefficient of linear thermal expansion from 25 to 100°C	ASTM E831	°C ⁻¹	16x10 ⁻⁵	10x10 ⁻⁵	11x10 ⁻⁵	9,5x10 ⁻⁵	9x10 ⁻⁵
Thermal conductivity	ASTM D2214	W/mK	0,23	0,43	0,62	0,64	0,68
Dielectric strength (short-time air thickness 0,5 mm)	ASTM D149	kV/mm	55	13	2,5	-	-
Dielectric constant (50-10 ⁹ Hz)	ASTM D150	-	2,1	2,5	3,3	-	-
Dissipation factor	ASTM D150	-	<0,0002	0,003	0,0025	-	-
Volume resistivity	ASTM D257	Ohm/cm	10 ¹⁷	10 ¹⁶	10 ¹⁵	10 ³	10 ³
Surface resistivity(3)	ASTM D257	Ohm	10 ¹⁷	10 ¹⁶	10 ¹⁴	10 ³	10 ³

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Note:

P - Designates properties parallel to molding direction

T - Means perpendicular to molding direction

(1) Speed 0,08 m/sec; load 0,1 N/mm², sliding surface steel roughness Ra = 0,5 micron (micrometer)

(2) Superceded standard

(3) 100% relative humidity

All the determinations have been made at 23°C.