



NATIONWIDE PLASTICS, INC.

The Authority on Plastics Manufacturing and Distribution



Filled PTFE datasheet (page1)

Properties	Method	Unit	Unfilled	typical values - FILLED			
				LV 2030	LVG 2030	LCG 3030	LCG 3040
Type of filler - % approx.	:	:	:	25 glass	20 glass + 5 graph	25 carbon	35 carbon
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/Nmh	1	0,00071	0,00106	0,00082	0,00070
PV limit at 0,05 m/sec	-	Nm/mm ² sec	0,040	0,365	0,400	0,365	0,330
PV limit at 0,50 m/sec	-	Nm/mm ² sec	0,070	0,475	0,545	0,460	0,400
PV limit at 5,00 m/sec	-	Nm/mm ² sec	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 ³ 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

Note:

P - Designates properties parallel to moulding direction
 T - Means perpendicular to moulding direction
 (1) Speed 0,08 m/sec; load 0,1 N/mm², sliding surface steel roughness Ra = 0,5 micron
 (2) Superseded standard
 (3) 100% relative humidity
 All the determinations have been made at 23°C

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Filled PTFE datasheet (page2)

Properties	Method	Unit	Unfilled	typical values - FILLED			
				LBR 4000	LBR 4003	LV2031	LX7050
Type of filler - % approx.	:	:	:	60 bronze	40 bronze + 3 MoS ₂	30 glass spec.	50 s steel
Specific gravity	ASTM D792	-	2,17	3,88	3,15	2,25	3,30
Tensile strength	ASTM D1457	N/mm ²	30	14	17	17	18
Elongation at break	ASTM D1457	%	300	100	100	300	280
Compressive strength 1% deformation	ASTM D695	N/mm ²	4,5	10,5	10,0	7,0	-
Deformation under load 14N/mm ² for 24h - Total P	ASTM D621(2)	%	14,5	6,0	8,0	9,0	4,9
Deformation under load 14N/mm ² for 24h - Total T	ASTM D621(2)	%	16,5	5,6	7,0	12,0	6,0
Deformation under load 14N/mm ² for 24h - Permanent P	ASTM D621(2)	%	8,0	2,5	4,0	4,5	2,4
Deformation under load 14N/mm ² for 24h - Permanent T	ASTM D621(2)	%	8,5	2,3	3,0	7,0	2,0
Hardness (shore D - 15 sec)	ASTM D2240	-	55	65	66	65	64-72
Friction coefficient dynamic	ASTM D3028 (1)	-	0,05	0,06	0,13	0,07	-
Wear factor (K)	-	mm ³ sec/Nmh	1	0,00041	-	0,0007	-
PV limit at 0,05 m/sec	-	Nm/mm ² sec	0,040	0,545	0,350	0,360	-
PV limit at 0,50 m/sec	-	Nm/mm ² sec	0,070	0,680	-	0,450	0,250
PV limit at 5,00 m/sec	-	Nm/mm ² sec	0,095	1,020	-	0,540	-
Coefficient of linear thermal expansion from 25 to 100°C	ASTM E831	°C ⁻¹	16x10 ⁻⁵	9,5x10 ⁻⁵	9,8x10 ⁻⁵	8x10 ⁻⁵	9x10 ⁻⁵
Thermal conductivity	ASTM D2214	W/mK	0,23	0,74	0,68	0,34	0,65
Dielectric strength (short-time air thickness 0,5 mm)	ASTM D149	kV/mm	55	-	-	12	-
Dielectric constant (50-10 ⁹ Hz)	ASTM D150	-	2,1	-	-	2,5	-
Dissipation factor	ASTM D150	-	<0,0002	-	-	0,0012	-
Volume resistivity	ASTM D257	Ohm/cm	10 ¹⁷	-	-	10 ¹⁶	-
Surface resistivity(3)	ASTM D257	Ohm	10 ¹⁷	-	-	10 ¹⁵	-

Note:

P - Designates properties parallel to moulding direction

T - Means perpendicular to moulding direction

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

(2) Superseded standard

(3) 100% relative humidity

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