



NATIONWIDE PLASTICS, INC.

The Authority on Plastics Manufacturing and Distribution



Virgin PTFE datasheet

Properties	Method	Unit	Typical Values (from-to)
Specific gravity	ASTM D792	-	2,14 - 2,20
Tensile strength	ASTM D1457	N/mm2	20 - 35
Elongation at break	ASTM D1457	%	210 - 400
Compressive strength 1% deformation	ASTM D695	N/mm2	4,00 - 4,50
Deformation under load 14 N/mm2 for 24hrs	ASTM D621(1)	%	10 - 15
Flexural strength 0,7 N/mm2	ASTM D790	N/mm2	no break
Impact strength (Izod) 57°C	ASTM D256	J/cm	1,10
Impact strength (Izod) 23°C	ASTM D256	J/cm	1,60
Impact strength (Izod) 77°C	ASTM D256	J/cm	3,30
Hardness	ASTM D2240	(shoreD)	50 - 60
Friction coefficient - static	ASTM D3028 (2)	-	0,09
Friction coefficient - dynamic	ASTM D3028 (2)	-	0,05
PTFE - steel oil lubricated	-	-	0,02 - 0,06
Working temperature range	-	°C	-200 - +260
Increase in volume from room temperature to molten state (340°C)	-	%	27 - 28
Coefficient of thermal expansion from 25 to 100°C	ASTM E831	°C ⁻¹	16 x 10 ⁻⁵
Thermal conductivity	ASTM D2214	W/mK	0,20
Specific heat 0°C	-	KJ/kg.K	0,96
Specific heat 50°C	-	KJ/kg.K	1,05
Temperature of distortion 0,46 N/mm2	ASTM D648	°C	130 - 140
Temperature of distortion 1,85 N/mm2	ASTM D648	°C	50 - 60
Dielectric strength (short-time air thickness 0,5 mm)	ASTM D149	kV/mm	55
Dielectric constant	ASTM D150	-	2,10
Dissipation factor	ASTM D150	-	<0,0002
Volume resistivity	ASTM D257	Ohm/cm	10 ⁻¹⁷
Surface resistivity	ASTM D257	Ohm	10 ⁻¹⁵
Aro-resistance	ASTM D495	sec	OK (4)
Water absorption	ASTM D570	%	<0,01
Flammability ATB	ASTM D635	sec	<5,00
Flammability AEB	ASTM D635	mm	<5,00

Note:

All the values refer to the temperature of 23°C unless otherwise specified

(1) Superseded standard

(2) Speed 5 m/min; load 1kg/cm2, sliding surface steel roughness

Ra = 0,4 " 0,6 micron

(3) 100% relative humidity

(4) Without defects

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