

Material Data Sheet

DF-PN1000

General

DF-PN1000 is a virgin PTFE (Polytetrafluorethylene) commonly referred to as Teflon or F4 in white color. The material has outstanding chemical properties and the lowest coefficient of friction of any solid material. The wide range of temperature (-180°C to +260°C) and the mechanical properties make PN1000 a universally usable material for a wide range of applications.

Physical properties

Density(Specific Gravity)	ASTM D-792	g/cm3 (gm / cc)	2.10 - 2.20
Water Absorption(Max.)	ASTM D-570	%	<0.01
Flammability		-	V-0

Mechanical properties

Tensile Strength	ASTM D-4894	mpa	30
Elongation of Break	ASTM D-638	%	250 - 400
Compressive strength	ASTM D-695	psi	3500
Flexural Strength	D790	psi	no break
Flexural Modulus	D790	psi	72,000
Impact Strength	D256	J/cm	1.4-1.5
Hardness	ASTM D-2240	Shore D	58 – 62
Deformation under load (24 h 13.7 N/mm ² 23°C)	ASTM D621	%	≤17
Coefficient of Friction			
@Dynamic P-7 kg/cm ² V-0.5	ASTM-D-1894		0.04-0.06
@Static P-35 kg/cm ²			0.05-0.08
Ball hardness		mpa	30

Thermal properties

Service temperature (long term)	ASTM D-648	°C	-180 to + 260
Linear thermal expansion coefficient			
@30 - 150°C	ASTM D-696	%	1.5
@30 - 200°C			2.4
@30 - 250°C			3.4

Electrical properties

Dielectric strength	ASTM D-149	Kv/mm	≥30
Surface Resistivity	ASTM D-258	ohm	>10 ¹⁵
Volume Resistivity	ASTM D-257	ohm cm	>10 ¹⁸

Chemical properties

Chemical Resistance (Max.)			
@Permeability	ASTM D-543	%	0.01
@Dissolution			0.01

NOTE:
 *The data stated above are typical values intended for reference and comparison purposes only.
 *The data should not be used as a basis for design specifications or quality control.
 *The information is provided as a guide to the best of our knowledge and given without obligation or liability.
 *Testing under individual application circumstances is recommended.