

Product information

Wefapress PS 1004[®]

PS 1004[®] is an ultrahigh molecular weight low pressure polyethylene with a molecular weight of approx. 9.2 million g/mol. By using specially selected carbon black and graphite materials as well as the influence of micro-crystal balls it is possible to enhance and customise the properties of the PS 1000[®] material. The characteristics of PS 1004[®] are as follows:

- high mechanical loadbearing capacity
- extremely low wear and good sliding properties
- high bending- and impact strength



Standard colours: black
Special colours: curry yellow (RAL 1027)/ traffic red (RAL 3020)

Form of delivery: sheets, rods ^(pressed)
(catalogue semi finished products)

Finished parts: on request

Fields of application:

- paper industry
- mechanical engineering
- transport- and conveyor systems
- agriculture
- filter industry

Technical Data Sheet

Material designation	PS 1004[®]		
Raw material	UHMW-PE		
Material colour(s)	black		
Properties	Unit	Test method	Value
Molecular weight (average molar mass)	g/mol		~ 9.2 mill.
Mechanical properties			
Density	g/cm ³	DIN 53479	0.97
Tensile strength	N/mm ²	DIN 53455	23
Shore D hardness, 15s - Value	D scale	DIN 53505	64 - 68
Ball indentation hardness, 30s - Value	N/mm ²	DIN ISO 2039 part 1	47
Ultimate tensile strength	N/mm ²	DIN 53455	35
Elongation at break	%	DIN ISO / R 527	340
Modulus of elasticity	N/mm ²	DIN 53457	700
Notched impact strength (Charpy)	kJ/m ²	DIN 53453	> 80 - 120
Abrasion	%	Sand slurry method	~ 80
Coefficient of friction	μ		0.25
Thermal properties			
Dimensional stability under heat	°C	DIN 53461	47
Vicat softening temperature	°C	DIN 53460	79
Crystallite melting range	°C	DTA	130 - 135
Thermal conductivity at 23°C	W/ (K * m)	DIN 52612	0.42
Specific heat at 23°C	KJ/ (K * Kg)		1.8
Coefficient of linear expansion at 23°C	10 ⁻⁵ * (1/K)	DIN 53752	1.5 * 10 ⁻⁴
Fire behaviour		UL 94	HB
Application temperature (min.)	°C		- 200
Application temperature (constant)	°C		+ 80
Moisture absorption	%		< 0.01
Electrical properties			
Specific volume resistance	Ω * cm	DIN 53482	
Surface resistance	Ω	DIN 53482	
Dielectric strength	kV/mm	DIN 53481	45
Dielectric constant at 50 Hz		DIN 53485	

Notes for the user:

Data sheet specifications are made to our today's knowledge. This information does not mean that certain properties are agreed upon or assured. Whether or not a material is suitable for a given application is the user's decision. All specifications are subject to change.

Vreden, 04.06.07/dv