

Product information

Wefapress ST 1000[®] (DIN 16972 TG 2)

ST 1000[®] is an ultrahigh molecular weight low pressure polyethylene with a molecular weight of approx. 4.4 – 9.2 million g/mol. It is possible to enhance and customise the properties of ST 1000[®] by using specially selected additives (mainly lubricants and biodegradable oils). Please ask for our data sheets concerning these modifications. The characteristics of ST 1000[®] are as follows:

- excellent wear resistance and good sliding properties
- high bending- and impact strength
- good chemical resistance and no moisture absorption



Standard colours:

Special colours:

Form of delivery:

Finished parts:

Fields of application:

natural colour (white), black and green

RAL-K7, catalogue semi finished products: page 18

sheets, rods and profiles

(catalogue semi finished parts / conveyor systems)

on request

- automobile industry
- mechanical engineering
- transport and conveyor systems
- chemical industry
- paper industry
- nuclear technology
- cement- and limestone works
- harbour facilities

Technical Data Sheet

Material designation	ST 1000[®]		
Raw material	PE-UHMW		
Material colour(s)	natural / coloured		
Properties	Unit	Test method	Value
Molecular weight (average molar mass)	g/mol		approx. 4.4 - 9.2 mill
Mechanical properties			
Density	g/cm ³	DIN 53479	0.93
Tensile strength	N/mm ²	DIN 53455	27
Shore D hardness, 15s	D scale	DIN 53505	64 – 67
Ball indentation hardness, 30s	N/mm ²	DIN ISO 2039 part 1	38
Ultimate tensile strength	N/mm ²	DIN 53455	40.5
Elongation at break	%	DIN ISO / R 527	400
Modulus of elasticity	N/mm ²	DIN 53457	700
Notched impact strength (Charpy)	kJ/m ²	DIN 53453	> 80 –140
Abrasion	%	Sand slurry method	100
Coefficient of friction			0.10 ~0.2
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/m * K	DIN 52612	0.42
Specific heat at 23°C	kg/kJ * K		1.8
Coefficient of linear expansion at 23°C	K ⁻¹	DIN 53752	2 x 10 ⁻⁴
Application temperature (min.)	°C		-200
Application temperature (constant)	°C		80
Application temperature (max.)	°C		90
Electrical properties			
Volume resistivity	Ω cm	DIN 53482	>10 ¹⁵
Surface resistance	Ω	DIN 53482	>10 ¹⁴
Dielectric strength	kV/mm	DIN 53481	45
Relative permittivity	at 50 Hz	DIN 53485	1.9

According to BMW Group's laboratory report No. 03621055, we confirm that this material is free of paint-wetting impairment substances. (PWIS-free).

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, August 03