



Wefapress® St 6000® ELS (DIN16972 TG1)

Standard colour(s): black

Special colour(s): –

Fields of application:

- chemical industry
- power stations
- mechanical engineering
- aerospace industry

Properties:

- electrically conductive
- high bending- and impact strength
- low abrasion
- good cold resistance
- good chemical resistance

Material designation		St 6000® ELS	
Raw material	PE-UHMW		
Material colour(s)	black		
Properties	Unit	Test method	Value
Molecular weight (average molar mass)	g/mol		~ 9,2 Mio.
Mechanical properties			
Density	g/cm ³	DIN 53479	0,982
Tensile strength	N/mm ²	DIN 53455	25
Shore D hardness, 15s - Value	Skala D	DIN 53505	64 – 70
Ball indentation hardness, 30s - Value	N/mm ²	DIN ISO 2039 Part 1	38
Ultimate tensile strength	N/mm ²	DIN 53455	36
Elongation at break	%	DIN ISO / R 527	350
Modulus of elasticity	N/mm ²	DIN 53457	700
Notched impact strength (Charpy)	kJ/m ²	DIN 53453	> 70 – 130
Abrasion	%	Sand slurry method	~ 110
Coefficient of friction	μ		~ 0,25
Thermal properties			
Dimensional stability under heat	°C	DIN 53461	47
Vicat softening temperature	°C	DIN 53460	79
Crystalline 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	20
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 IEC 60093	< 10 ⁶
Surface resistance	Ω	DIN IEC 60093	< 10 ⁶
Dielectric strength	kV/mm	DIN 53481	
Dielectric constant at 50 Hz		DIN 53485	
On request, available with:			
• approved for foodstuffs according to FDA Guidelines 21CFR177.1520 and 21 CFR178.3297			
• complies with regulations (EC) No. 10/2011, 1282/2011 and No. 1935/2004			