Wefapress® St 7000® FRAS (DIN 16972 TG1)

Standard colour(s): black
Special colour(s): –
Fields of application:
- mining
- building industry
- mechanical engineering

Properties:
- **flame retardant**
- non-halogen
- uv-stabilized
- antistatic
- low abrasion

Material designation	**St 7000® FRAS**		
Raw material	PE-UHMW		
Material colour(s)	black		
Properties	**Unit**	**Test method**	**Value**
Molecular weight (average molar mass)	g/mol		~ 5 Mio.
Mechanical properties			
Density	g/cm³	DIN 53479	1,04
Tensile strength	N/mm²	DIN 53455	
Shore D hardness, 15s - Value	Skala D	DIN 53505	60 – 68
Ball indentation hardness, 30s - Value	N/mm²	DIN ISO 2039 Part 1	~ 42
Ultimate tensile strength	N/mm²	DIN 53455	
Elongation at break	%	DIN ISO / R 527	≥ 150
Modulus of elasticity	N/mm²	DIN 53457	< 890
Notched impact strength (Sharpy)	kJ/m²	DIN 53453	80
Abrasion	%	Sand slurry method	~ 130
Coefficient of friction	µ		~ 0,25
Thermal properties			
Dimensional stability under heat	°C	DIN 53461	
Vicat softening temperature	°C	DIN 53460	80
Crystalline melting range	°C	DTA	135 – 138
Thermal conductivity at 23 °C	W/ (K * m)	DIN 52612	~ 0,4
Specific heat at 23 °C	kJ/ (K * Kg)		~ 0,4
Coefficient of linear expansion at 23 °C	10^{-5} * (1/K)	DIN 53752	~ 20
Fire behaviour		UL 94	V - 0
Application temperature (min.)	°C		- 200
Application temperature (constant)	°C		+ 80
Moisture absorption	%		< 0,01
Electrical properties			
Specific volume resistance	Ω * cm	DIN 53482	$< 10^{9}$
Surface resistance	Ω	DIN 53482	$< 10^{7}$
Dielectric strength	kV/mm	DIN 53481	
Dielectric constant at 50 Hz		DIN 53485	