

# Technical data sheet

## St 6000® AST

<b>General properties</b>			
Material designation	St 6000® AST		
Material colour(s)	black (6000)		
Raw material	PE-UHMW   Ultra-high-molecular polyethylene		
Molecular weight (Average molar mass)	~ 5 - 9,2 Mio.		
<b>Mechanical properties</b>			
	<b>Unit</b>	<b>Test method</b>	<b>Value</b>
Density	g/cm <sup>3</sup>	DIN EN ISO 1183	0,982
Tensile strength	MPa	DIN EN ISO 527	25
Shore D hardness, 15s - Value	Skala D	DIN EN ISO 868	64 - 70
Ball indentation hardness, 30s - Value	MPa	DIN ISO 2039 Teil 1	38
Ultimate tensile strength	MPa	DIN EN ISO 527	36
Elongation at break	%	DIN EN ISO 527	350
Modulus of elasticity	MPa	DIN EN ISO 527	700
Notched impact strength (Charpy)	kJ/m <sup>2</sup>	DIN EN ISO 179	> 70 - 130
Wear resistance	%	Sand Slurry method	~ 80
Coefficient of friction (to steel)	μ		0,25
<b>Thermal properties</b>			
	<b>Unit</b>	<b>Test method</b>	<b>Value</b>
Dimensional stability under heat	°C	DIN 53461	47
Vicat softening temperature	°C	DIN EN ISO 306	79
Crystalline melting range	°C	DIN EN ISO 11357	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 <sup>-5</sup> * (1/K)	DIN ISO 11359	20
Fire behaviour		UL 94	HB
Application temperature (min.)	°C		- 200
Application temperature (constant)	°C		+ 80
Moisture absorption	%		< 0,01
<b>Electrical properties</b>			
	<b>Unit</b>	<b>Test method</b>	<b>Value</b>
Specific volume resistance	Ω * cm	IEC 60093	< 10 <sup>8</sup>
Specific surface resistance	Ω	IEC 60093	< 10 <sup>9</sup>
Dielectric strength	KV/mm	IEC 60243	1,9
<b>Conformity with food secure regulations</b>			
FDA	-		
EU	-		

Our employees are available to answer all of your questions.

You can find additional information on our material qualities on the internet at [www.wefapress.com/en/materials](http://www.wefapress.com/en/materials).

All stated information reflects our current knowledge. No agreement or guarantee regarding specific characteristics can be derived from the information contained in the datasheets. Each user is responsible for deciding on the suitability of a material for a specific purpose. The data supplied are subject to change.

The materials labelled as a "Food Secure Product" (FSP) comply with the provisions of Regulations (EU) No. 10/2011 and No. 1935/2004.