

## Product information

### Wefapress ST 6000<sup>®</sup> AST (DIN 16972 TG1)

ST 6000<sup>®</sup> AST is an ultrahigh molecular weight low pressure polyethylene with a molecular weight of approx. 5 million g/mol. By the use of specially selected additives it is possible to add antistatic properties to the ST 1000<sup>®</sup> material. The characteristics of ST 6000<sup>®</sup> AST are as follows:

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



Standard colours:	black
Special colours:	--
Form of delivery:	sheets, rods (pressed) (catalogue semi finished products/ conveyor technique)
Finished parts:	on request
Fields of application:	<ul style="list-style-type: none"><li>• chemical industry</li><li>• mechanical engineering</li><li>• transport and conveyor systems</li><li>• aircraft industry</li></ul>

## Technical Data Sheet

Material designation	<b>St 6000<sup>®</sup> AST</b>		
Raw material	PE-UHMW		
Material colour(s)	black		
<b>Properties</b>	Unit	Test method	Value
Molecular weight (average molar mass)	g/mol		~ 5 * 10 <sup>6</sup>
<b>Mechanical properties</b>			
Density	g/cm <sup>3</sup>	DIN 53479	0.93
Tensile strength	N/mm <sup>2</sup>	DIN 53455	25
ShoreD hardness, 15s	D scale	DIN 53505	64 – 70
Ball indentation hardness, 30s	N/mm <sup>2</sup>	DIN ISO 2039 part 1	38
Ultimate tensile strength	N/mm <sup>2</sup>	DIN 53455	36
Elongation at break	%	DIN ISO / R 527	350
Modulus of elasticity	N/mm <sup>2</sup>	DIN 53457	700
Notched impact strength (Charpy)	kJ/m <sup>2</sup>	DIN 53453	> 70 –130
Abrasion	%	Sand slurry method	~110
Coefficient of friction			0.10 ~0.2
<b>Thermal properties</b>			
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 <sup>-1</sup>	DIN 53752	2 x 10 <sup>-4</sup>
Application temperature (min.)	°C		-200
Application temperature (constant)	°C		80
Application temperature (max.)	°C		90
<b>Electrical properties</b>			
Volume resistivity	Ω cm	DIN 53482	<10 <sup>6</sup>
Surface resistance	Ω	DIN 53482	<10 <sup>9</sup>

According to the laboratory report 03 YEX550794 granted by TÜV NORD CERT, we confirm that this material is ATEX-approved for use in Group I and II machines, Category 2 machines and Gas Groups IIA and IIB.

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, October 2005