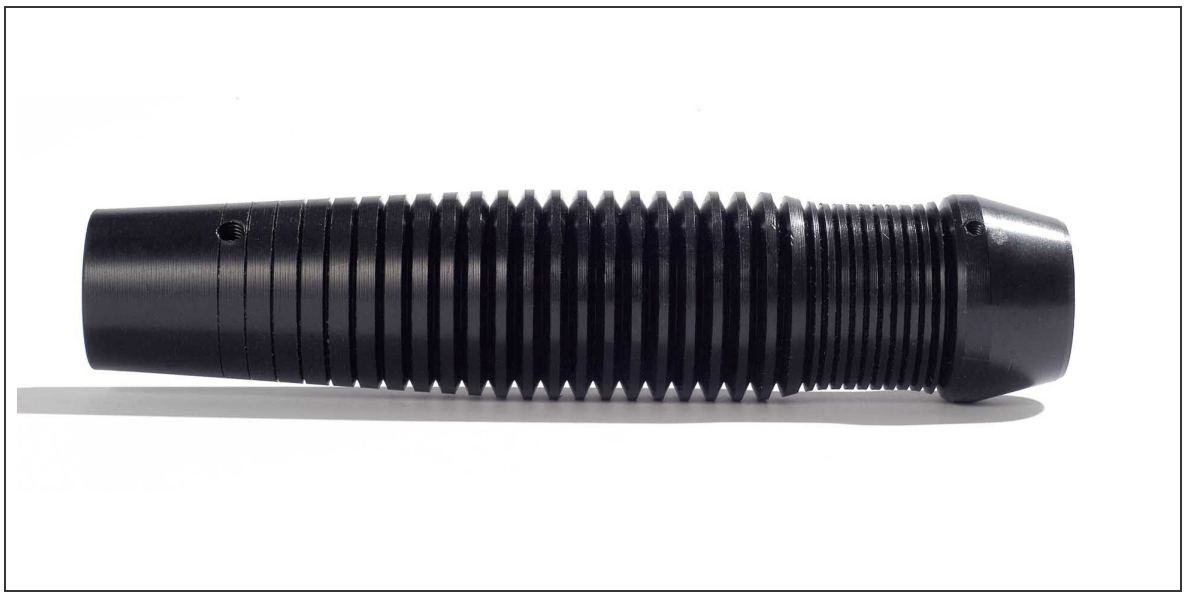
Product information

Wefapress ST 500® AST

(DIN 16972 TG 3)

St 500® AST is an ultrahigh molecular weight low pressure polyethylene with a molecular weight of approx. 500,000 g/mol. This type finds predominantly its application where the mechanical requirements to the material are lower. By using specially selected additives it is possible to add antistatic properties to the ST 500® material. The characteristics of ST 500® AST are as follows:

- antistatic
- high bending- and impact strength
- highest 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 systems)
Finished parts:	on request

Fields of application:

- chemical industry
- mechanical engineering
- transport and conveyor systems
- brewery technology etc …
- aircraft industry

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Technical Data Sheet

Material designation	St 500® AST		
Raw material	PE-HMW		
Material colour(s)	black		
Properties	Unit	Test method	Value
Molecular weight (average molar mass)	g/mol		$0.5 * 10^6$
Mechanical properties			
Density	g/cm^3	DIN 53479	0.97
Tensile strength	N/mm^2	DIN 53455	≥27
Ball indentation hardness, 30s	N/mm^2	DIN ISO 2039 part 1	46
Ultimate tensile strength	N/mm^2	DIN 53455	≤ 25
Elongation at break	%	DIN ISO / R 527	> 100
Modulus of elasticity	N/mm^2	DIN 53457	1060
Notched impact strength (Charpy)	kJ/m^2	DIN 53453	without break
Abrasion	%	Sand slurry method	250
Thermal properties			
Dimensional stability under heat	°C	DIN 53461	47
Vicat softening temperature	°C	DIN 53460	80
Crystallite melting range	°C	DTA	130 - 135
Thermal conductivity at 23°C	W/m * K	DIN 52612	0.41
Coefficient of linear expansion at 23°C	K^{-1}	DIN 53752	$2*10^{-4}$
Electrical properties			
Volume resistivity	Ω cm	DIN 53482	$<10^{14}$
Surface resistance	Ω	DIN 53482	$<10^{11}$

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 subjekt to change.

Vreden, October 2005

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