

## Multiplast HMPE500

Multiplast HMPE500 is a high-modulus polyethylene which is also known as:

- HMPE (High-molecular-weight polyethylene)
- HMW-PE or PE-HMW (High-molecular-weight polyethylene)

Multiplast HMPE500 has a:

- Low coefficient of friction
- High bending resistance
- High impact resistance
- Good wear resistance
- High chemical resistance
- High pressure resistance
- FDA-approved

Properties	Units	
Tensile strength	MPa	27
Ultimate tensile strength	MPa	25
Elongation at break	%	100
Modulus of elasticity	MPa	1060
Notched impact strength (Charpy)	kJ/m <sup>2</sup>	o.Br.
Ball indentation hardness 30 sec. value	MPa	46
Shore hardness D	-	~70
Abrasion (Sand-Slurry-Test)	%	>250
Coefficient of friction	μ	0,1 – 0,2
Dimensional stability under heat	°C	47
Vicat softening temperature	°C	80
Crystalline melting range	°C	130 – 135
Thermal conductivity	W / (m * K)	0,41
Specific heat at 23°C	kJ / (K * Kg)	1,8
Coefficient of linear expansion at 23°C	10 <sup>-5</sup> K <sup>-1</sup>	~20
Fire behavior	UL 94	HB
Application temperature (min.)	°C	-100
Application temperature (constant)	°C	+80
Moisture absorption	%	< 0,01

Properties	Units	
Specific volume resistance	$\Omega \times \text{cm}$	$10^{15}$
Surface resistance	$\Omega$	$10^{13}$
Dielectric strength	KV / mm	40
Density	$\text{g/cm}^3$	0,96
Molecular weight	Millions	0,5
Color	-	Standard colors are: Natural, Black and Green

**Availability:**

Sheet:      Size:                      1010 x 2020 mm  
                 Thickness:                10 – 150 mm

                 Size:                      1010 x 3030 mm  
                 Thickness:                10 – 150 mm

                 Size:                      1220 x 2020 mm  
                 Thickness:                10 - 200 mm

                 Size:                      1220 x 2520 mm  
                 Thickness:                10 - 200 mm

                 Size:                      1220 x 3050 mm  
                 Thickness:                10 - 200 mm

Cut pieces:      On request

Parts:             Finished products according to drawing