

# TKG® 500 (PE-HMW)

**Density** 0,96 g/cm<sup>3</sup>

**Colour** White / black / red / yellow / brown / green

**Chemical Designation** PE-HMW (Polyethylene high molecular weight)

PROPERTIES	RESULT	UNIT	PARAMETER	NORM USED
<b>Mechanical properties</b>				
Modulus of elasticity	1060	MPa	In tension	DIN EN ISO 527-2
Tensile strength at yield	27	MPa	50 mm/min	DIN EN ISO 527-2
Impact strength	No break	Kj/m <sup>2</sup>	Máx 7,5j	DIN EN ISO 179-1EU
Ball indentation hardness	46	MPa		ISO 2039-1
Elongation at break	100	%		DIN 527

## Thermal Properties

Glass transition temperature	-95	°C		DIN 53765
Crystalline melting point	130 -135	°C		DIN 53765
Service temperature	90	°C	Short term	
Service temperature	80	°C	Long term	
Thermal expansion	20	10 <sup>-5</sup> K <sup>-1</sup>		DIN 53483
Specific heat	1,80	J/(g·K)		ISO 22007-4:2008
Thermal conductivity	0,41	W/(K·m)		ISO 22007-4:2008
Heat distortion temperature	42 - 49	°C	Method A	R75
Heat distortion temperature	70 - 85	°C	Method B	R75

## Electrical Properties

Surface resistance	10 <sup>11</sup> min	Ω		DIN IEC 60093
Specific volume resistance	10 <sup>14</sup> min	Ω·cm		DIN IEC 60093
Tracking resistance	-			DIN 53480
Dielectric constant	2,40		At 10 <sup>5</sup> Hz	DIN 53483
Dielectric loss factor	-		At 10 <sup>5</sup> Hz	DIN 53483
Dielectric strength	40	kV / mm	1 mm	ASTM 149

## Miscellaneous Properties

Water absorption	0,02	%	24h / 96h (23 °C)	DIN EN ISO 62
Resistance to hot water/bases	Resistant			
Resistance to weathering	Resistant in colour			
Flammability (UL94)	HB		According to	DIN IEC 60995-11-10

## Main Characteristics

- Very low water absorption
- Resistant to dilute acids, solvents and cleaning agents
- UV resistant
- Good electrical insulation
- Easily weldable

## Industry Applications

- Food processing industry
- Chemical machines
- Low load rollers