

TKG® 300 (PE-HD)

Density 0,95 g/cm³

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

Chemical Designation PE-HD (Polyethylene)

PROPERTIES	RESULT	UNIT	PARAMETER	NORM USED
Mechanical properties				
Modulus of elasticity	1000	MPa	In tension	DIN EN ISO 527-2
Modulus of elasticity	1000 – 1400	MPa	In flexure	DIN EN ISO 527-2
Tensile strength at yield	25	MPa	50 mm/min	DIN EN ISO 527-2
Impact strength (Charpy)	140	Kj/m ²	Max. 7,5j	DIN EN ISO 179-1EU
Notched Impact stren. (Charpy)	No break	Kj/m ²	Max. 7,5j	DIN EN ISO 179-1EU
Ball indentation hardness	50	MPa		ISO 2039-1
Creep rupture strength	12,50	MPa	After 1000 hours static load	
Time yield limit	3	MPa	1% elong. after 1000 hours	
Coefficient of friction	0,29	-----	Against steel p=0,05 N/mm ²	
Thermal properties				
Glass transition temperature	-95	°C		DIN 53765
Crystalline melting point	130	°C		DIN 53765
Service temperature	90	°C	Short term	
Service temperature	80	°C	Long term	
Thermal expansion	13 – 15	10 ⁻⁵ K ⁻¹		DIN 53483
Specific heat	1,70 – 2,00	J/(g+K)		ISO 22007-4:2008
Thermal conductivity	0,35 – 0,43	W/(K+m)		ISO 22007-4:2008
Heat distorsion temperature	42 – 49	°C	Method A	R75
Heat distorsion temperature	70 – 85	°C	Method B	R75
Electrical properties				
Surface resistance	10 ¹³ min.	Ω		DIN IEC 60093
Specific volume resistance	10 ¹⁵ min.	Ω*cm		DIN IEC 60093
Tracking resistance	KA 3c			DIN 53480
Dielectric constant	2,40		At 10 ⁵ Hz.	DIN 53483
Dielectric loss factor	00002		At 10 ⁵ Hz.	DIN 53483
Dielectric strength	50 min.	kV/mm	1 mm.	ASTM 149
Miscellaneous properties				
Water absorption	0,01 / 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

Notice: The information given was made with our knowledge indicating our product's possible applications. Existing commercial patents must be observed. These values represent averages taken from samples, so we reserve the right of technical alterations. We cannot give a legally binding guarantee of certain properties or the suitability for a specific application. The customer is solely responsible for the quality and suitability of products for the application and has to test usage and processing prior to use. Data sheet values are subject to periodic review, the most recent update can be found at www.traidvillarroya.com. Traidamid, TKG and TVH as well as their logos are registered trademarks of the Traid Villarroya group of companies, in Europe and other countries.