

HDPE (PE 300)

Technical Information:

Information to be used as a guide only. It corresponds with our current knowledge and indicates possible applications. We cannot guarantee suitability for a specific application. Unless otherwise stated these values represent averages taken from injection moulded samples.

Properties	Unit	Test Method DIN ASTM	Result
MECHANICAL	-	-	-
Density	g/cm ³	53479	0.95-0.96
Tensile strength at yield	MPa	53455	24-31
Tensile strength at break	MPa	53455	36
Elongation at Break	%	53455	400-800
Modulus of elasticity in tension	MPa	53457	1000-1400
Modulus of elasticity in flexure	MPa	53457	1000-1400
Ball indentation hardness	MPa	53456	45-60
Impact strength (Charpy)	KJ/m ²	53453	no break
Creep rupture strength after 1000 hours with static load	MPa	-	12.5
Time yield limit for 1% elongation after 1000 hours	MPa	-	3
Coefficient of friction against hardened and ground steel p+0,05 N/mm ² , v=0,6 m/s	-	-	0.29
Wear conditions as above	µm/km	-	
THERMAL	-	-	-
Crystalline melting point	°C	53736	128-133
Glass transition temperature	°C	53736	-95
Heat distortion temperature method A	°C	ISO 75	42-49
Heat distortion temperature method B	°C	ISO 75	70-85
Max. service temperature short term	°C	-	120
Max. service temperature long term	°C	-	90
Coefficient of thermal conductivity	W/(m K)	-	0.35-0.43
Specific heat	J/(g K)	-	1.7-2
Coefficient of thermal expansion	10 ⁻⁵ /K	-	13-15
ELECTRICAL	-	-	-
Dielectric constant at 10 (5) Hz	-	53483	2.4
Dielectric loss factor at 10(5) Hz	-	53483	0.0002
Specific Volume Resistance	Ωcm	53482	>10 ¹⁶
Surface Resistance	Ω	53482	>10 ¹⁴
Dielectric strength 1mm	kV/mm	53481	>50
Tracking resistance	-	53480	KA 3c

MISCELLANEOUS	-	-	-
Moisture Absorption: Equilibrium in standard atmosphere (23°C / 50% relative humidity)	%	53714	
Water absorption at saturation at 23°C	%	53495	0.02
Resistance to hot water, washing soda	-	-	resistant
Flamability	-	UL 94	HB
Resistance to weathering	-	-	Natural: Not resistant Black: Resitant

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