



### High Density Polyethylene - HDPE (HD300)

HDPE is widely used in automotive, leisure and industrial applications. HDPE has excellent impact strength, even at temperatures as low as -30°C. Coupled with low coefficient of friction and ease of fabrication.

#### Technical Specification

	Test method	Units	HDPE (HD300)
<b>Physical Properties</b>			
Specific gravity (p)	DIN 53479	g/cm <sup>3</sup>	0.95
Water absorption	DIN 53495	%	0.01
Chemical Resistance	DIN 53476	-	DIN 8075
Max. permissible service temperature (no stronger mech. stress involved)			
upper temperature limit	-	°C	90
lower temperature limit	-	°C	-30
<b>Mechanical Properties</b>			
Tensile stress at yield	DIN 53455	MPa	23
Elongation at yield	DIN 53455	%	8
Tensile strength at break	DIN 53455	MPa	32
Elongation at break	DIN 53455	%	>50
Impact strength	DIN 53453	kJ/m <sup>2</sup>	o.B.
Notch impact strength	DIN 53453	kJ/m <sup>2</sup>	o.B.
Ball indentation hardn. / Rockwell			
	DIN 53456	MPa	40
Modulus of elasticity	DIN 53457	MPa	700
<b>Thermal Properties</b>			
Vicat softening temp. VST/B/50	DIN 53460	°C	76
VST/A/50 °C			
Heat deflection temperature HDT/B	DIN 53461	°C	70
HDT/A °C			
Coef. of linear therm. expansion	DIN 53752	k <sup>-1</sup> x 10 <sup>-4</sup>	2
Thermal conductivity at 20 °C	DIN 52612	W / (m*k)	0.41
<b>Electrical Properties</b>			
Volume resistivity	DIN 53482	Ω x cm	>10 <sup>15</sup>
Surface resistivity	DIN 53482	Ω	>10 <sup>16</sup>
Dielectric constant at 1 MHZ	DIN 53483		2.3
Dielectric loss factor at 1 MHZ	DIN 53483		0.0002
Dielectric strength	DIN 53481	kV/mm	>70
Tracking resistance	DIN 53480		KB>600

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