

PE3 (HD) polyethylene
 Mechanical, Physical and Thermal Properties

properties	condition	standard	unit		unit	
colour				nature		nature
density/specific gravity	23 °C	DIN 53479	kg/m ³	950	g/cm ³	0,95
hardness	23 °C	ISO 868	Shore D	63 ±3	Shore D	63 ±3
ball indentation hardness	23 °C	DIN 53456 H 135/30	MPa	≥ 50	psi	≥ 7250
tensile strength	23 °C	ASTM D 4745-79	MPa	≥ 30	psi	≥ 4350
elongation at break	23 °C	ASTM D 4745-79	%	≥ 50	%	≥ 50
izod impact strength	23 °C	ISO 180 / 1A	kJ/m ²	≥ 130		
thermal conductivity		DIN 52612	$\frac{J * 10^3}{m * h * K}$	0,37	$\frac{J * 10^3}{m * h * K}$	0,37
coefficient of thermal expansion	25 °C - 200 °C		K-1 * 10-5	15	K-1 * 10-5	15
coefficient of friction *	23 °C		μ	0,19	μ	0,19
minimum service temperature			°C	-50	°F	-58
maximum service temperature			°C	80	°F	176
young's modulus	23 °C	DIN 53457	MPa	1100	psi	159500

* coefficient of friction dry dynamic Steel 16MnCr5 v=0,6m/s; p=0,05 MPa; t=5h

Chemical Properties

Good chemical properties
 Good corrosion resistance
 Good sliding and antiadhesive behaviour
 Good resistance to abrasive wear
 Good izod impact strength / resilience at shock and impact stress
 No Foodstuff applications