

Material Properties

General Material Data

Criteria	Unit	PP Polypropylene (Homopoly.)	PE Polyethylene (HDPE, UHMWE PE)	POM Polyacetal (Copoly.)	PA6, PA6.6 Polyamide	Carbon steel	Stainless steel
Density	g/cm ³	0.90	0.94	1.42	1.14	7	7
E-module	N/mm ²	1'500	800 – 1'100	3'200	1'400 – 2'000	206'000	195'000
Tensile Strength	N/mm ²	30	24	70	40 – 65	350 – 550	800 – 900
Melting point	°C	165	135	166	223 – 263	1500	1400
Linear coeff. of thermal expansion	(mm/m • °C) (in/ft • °F)	0.13 <i>0.00087</i>	0.20 <i>0.00133</i>	0.09 <i>0.00060</i>	0.12 <i>0.00078</i>	0.011 <i>0.000073</i>	0.010 – 0.016 <i>~0.00009</i>
Ball Hardness	N/mm ²	60	38	114	70 – 90		