TECHNICAL DATA SHEET

HDPE

High-density polyethylene

Property	Standard	Unit	Value
GENERAL PROPERTIES			
Color	—	—	White
Density	ISO 1183	g/cm^3	0.96
MECHANICAL PROPERTIES			
Yield stress / stress at break (tensile)	ISO 527	MPa	30
Tensile modulus of elasticity	ISO 527	MPa	900
Compressive stress at 1% / 2% nominal strain	ISO 604	MPa	3 / —
Rockwell hardness	ISO 2039-1	—	62
Coefficient of friction	—	—	0.3
THERMAL PROPERTIES			
Heat resistance (continuous)	—	°C	90
Heat resistance (short-term)	—	°C	110
Melting point	—	°C	120
Linear thermal expansion coefficient (23–100 °C, mean)	—	m/(m·K)	155 × 10^{-6}
Flammability (UL 94)	ISO 4589	—	HB
ELECTRICAL PROPERTIES			
Dielectric strength	IEC 60243	kV/mm	> 50
Volume resistivity	IEC 60093	Ω·cm	≥ 10^{15}
Surface resistivity	IEC 60093	Ω	≥ 10^{16}
Relative permittivity (100 Hz / 1 MHz)	IEC 60250	—	2.4 / —
CHEMICAL PROPERTIES			
Water absorption (saturation at 23 °C)	ISO 62	%	0.01
Bondability	—	—	0
Food contact	—	—	+
Resistance to acids	—	—	+
Resistance to alkalis	—	—	+
Resistance to carbonated water	—	—	+
Resistance to aromatic compounds	—	—	0
Resistance to ketones	—	—	+

Chemical resistance key: + resistant · 0 depends on application · – not resistant

Typical reference values provided by the manufacturer, obtained on standard test specimens. Values may vary with batch, thickness, processing and service conditions and must not be used as specifications. Validation in the final application is recommended.