Warlond Plastics
Technical Data Sheet

Product: Black HDPE (PE100) – Extruded Sheet
Revision: 19 Aug 2025
Values derived from manufacturer source dated 29 Jan 2018*

Black HDPE (PE100) – Key Technical Properties

Form: Extruded sheet • Material standard: DIN EN ISO 17855-1

Property	Typical Value	Test Method / Notes
Density	0.960 g/cm³	DIN EN ISO 1183
Tensile modulus (Et)	1,100 MPa	DIN EN ISO 527
Yield stress	23 MPa	DIN EN ISO 527
Elongation at yield	9 %	DIN EN ISO 527
Impact strength (Charpy, unnotched)	No break	DIN EN ISO 179
Notched impact strength (Charpy)	25 kJ/m²	DIN EN ISO 179-1eA
Dielectric strength	47 kV/mm	DIN IEC 60243-1
Ball indentation hardness	40 MPa	DIN EN ISO 2039-1
Shore hardness D (15 s)	64	DIN EN ISO 868
Mean coefficient of linear thermal expansion	1.8×10^{-4} K^{-1}	ISO 11359-2
Thermal conductivity	0.38 W/m·K	DIN EN 12667
Surface resistivity	≥ 10^{14} Ω	DIN IEC 60093
Service temperature (typ.)	−50 to +80 °C	Guidance range
Fire behaviour	DIN 4102 B2 – normal flammability	Supplier self-assessment (no test certificate)
Food contact compliance	EU 10/2011: Yes FDA: No	Stated compliance
Physiological safety (BfR)	Yes	German BfR compliance

Application Notes

HDPE offers excellent chemical resistance, low moisture absorption and very good impact toughness. Typical uses include cutting boards, linings, wear strips, trays, and general engineering components.

Standards & Material

Extruded to moulding compound standard: DIN EN ISO 17855-1. Property data are typical values for extruded sheet unless otherwise noted.

Important Notes & Disclaimers

- Typical values measured on extruded sheets (~4 mm). Values may vary with thickness and processing.
- Pressed sheets are typically tested at ~20 mm thickness. For backed sheets, data refer to the non-backed base sheet.
- Information presented is for engineering guidance only and does not constitute a guaranteed specification.
- Suitability must be verified by the processor or end-user for the specific application.
- Data may not be applicable to other product forms (e.g. pipes, solid rods) or products that have undergone downstream processing.