

HDPE**HDPE 5000S****HIGH DENSITY POLYETHYLENE (HDPE)**

This grade is a high-density polyethylene of medium molar mass with a narrow molecular weight distribution, developed for monofilament and yarn applications. It is an easy-flowing polymer with good processing performance on monofilament production lines, and it contains an internal lubricant. Monofilaments made from this resin exhibit good tensile strength and elongation at break.

Typical Application

- Binding twine and ropes
- Fishing nets
- Geotextiles
- Protective netting for agriculture and construction
- Woven sacks and tarpaulins
- Stretched filaments

Product Characteristics

- High rigidity with good heat resistance and low-temperature impact resistance
- High tenacity combined with good processability at high production rates
- Good chemical resistance and wear resistance

Physical Properties

Properties	Test Method	Typical Value	Unit
Melt Flow Rate (190°C/2.16 kg)	GB/T 3682-2000	1.06	g/10 min
Melt Flow Rate (190°C/5.0 kg)	ISO 1133-1	3.3	g/10 min
Melt Flow Rate (190°C/21.6 kg)	ISO 1133-1	33.0	g/10 min
Density	GB/T 1033.2-2010	0.9564	g/cm ³
Peak Melting Point	ISO 3146	135	°C
Tensile Strength at Yield	GB/T 1040.2	25.1	MPa
Nominal Tensile Strain at Break	GB/T 1040.2	1041	%

Processing Guidelines

Recommended extrusion temperature range 220-260°C. The resin's narrow molecular weight distribution and lubricant content give consistent, easy-flowing behavior on monofilament production lines.

1. This grade shares its published family datasheet with the producer's GF 7750 M2 monofilament/yarn grade; both target the same nominal melt flow rate window (1.1 ± 0.2 g/10 min at 190°C/2.16 kg, equivalent to 3.3 ± 0.3 g/10 min at 190°C/5.0 kg).
2. The nominal properties reported herein are typical of the product and do not reflect normal testing variance; they should not be used for specification purposes.
3. Typical values per the producer's published family data; grade-specific certificate of analysis supplied per lot at order.