



GAIL (India) Ltd.
(A Govt. of India Undertaking)
Petrochemicals Marketing

P52A003

High Density Polyethylene (PE 100) for Pipe Extrusion

Application: P52A003 is virgin resin grade, suitable for producing high pressure pipes for potable water meeting the hydrostatic strength requirements as per IS 4984-2016 for PE-100 material. It offers high ESCR, high creep resistance and excellent mechanical properties. It possesses bimodal molecular weight distribution for excellent processability. The material conforms to natural resin designation PE EAN-C50 T-003 of IS: 7328-1992 and shall meet the same given in IS 4984:2016.

The grade has a minimum required strength (MRS) of 10 MPa as per ISO 9080 and is designated as PE-100 according to ISO 12162.

Property	Values*	Unit	Test Method
Melt Flow Index (I ₅)	0.25	g/10min	ASTM D1238
Density	0.952	g/cc	ASTM D1505
MRS	>10	MPa	ISO 9080
SCG	>500	Hrs	ISO 13479
Tensile Strength @Yield	245	kg /cm ²	ASTM D638, Type IV
Elongation @Yield	11	%	ASTM D638, Type IV
Elongation @Break	600	%	ASTM D638, Type IV
Flexural Modulus	10000	kg /cm ²	ASTM D790
Shore D Hardness	62	-	ASTM D2240
Vicat Softening Point	123	°C	ASTM D1525
ESCR (10% Igepol), F ₅₀	>1000	hrs	ASTM D1693, B
Thermal stability (OIT)	>45	minutes	ASTM D 3895
Izod Impact Strength	280	J/m	ASTM D256

* Typical characteristics of the product given purely as a guide. Mechanical properties were determined on compression moulded specimens.

Processing Guidelines:

Barrel temperature: 180 - 230°C

Regulatory Information:

Certificate is available on request.

Packaging & Storage:

P52A003 is available in natural colour/pellet form in 25 kg strong bags made of woven fabric. The product should be stored in dry conditions at temperature below 50°C and protect from UV light.

For any technical assistance contact:

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