

TECHNICAL DATA SHEET

P5100

P5100 is a HDPE pipe grade produced by Mitsui CX Process

P5100 combines excellent processability with good creep resistance, ESCR and mechanical properties

P5100 is recommended for **PE 80** compliant pressure pipes

BIS Designation Code: IS 7328-3B-PB-FXTA

Property	Test Method	Unit	Nominal Value
Melt Flow Index (2.16 kg, 190°C)	ASTM D1238, IS 13360 (Part 4/Sec 1)	g/10 min	0.09
Melt Flow Index (5 kg, 190°C)		g/10 min	0.50
Melt Flow Index (21.6 kg, 190°C)		g/10 min	14
Density (23°C, Annealed)	ASTM D1505, IS 13360 (Part 3/Sec 11)	g/cm ³	0.952
Density (23°C, Annealed)	JIS MCI HZ-F-109	g/cm ³	0.955
Density (27°C, Annealed)	IS 4984	g/cm ³	0.948
Physical Property			
Tensile Strength at Yield	ASTM D638 (50 mm/min)	MPa	25
Tensile Strength at Break		MPa	35
Elongation at Break		%	850
Notched Izod Impact Strength (23°C)	ASTM D256A	J/m	200
Flexural Modulus	ASTM D790A	MPa	1100
Hardness	ASTM D2240	Shore D	65
ESCR (F ₅₀ , 10% Igepal soln. v/v)	ASTM D1693B	Hr	>500
Vicat Softening Point (10 N)	ASTM D1525	°C	125
Heat Deflection Temperature (0.455 MPa)	ASTM D648	°C	64
DSC Melting Temperature	ASTM D3418	°C	131
Oxidative Induction Time	ASTM D3895	min	>30
Suggested Processing Conditions			
Barrel Temperature	160 – 180 °C		
Die Temperature	170 – 190 °C		



Halene – H*

*Halene H is the registered trademark of High Density Polyethylene of Haldia Petrochemicals Limited

Mechanical Properties are tested on specimens from Compression Molded sheets

This grade meets the requirements of:

IS 7328:2020 Specification for Polyethylene Material for Moulding and Extrusion

IS 16738:2018 Positive List of Constituents for Polypropylene, Polyethylene and their Copolymers for its Safe Use in Contact with Foodstuffs and Pharmaceuticals

IS 10146 for use in contact with foodstuffs, pharmaceuticals and drinking water

This product is not recommended for manufacturing of Single Use Plastic (SUP) items listed under Plastics Waste Management (PWM) Rule 2016 and its latest amendment

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