

# HMCRP100B(Black)

HM-CRP100 Black is a black pipe grade resin (PE100) which is manufactured by suspension polymerization of ethylene monomer. HM-CRP100 Black is a bi-model high density polyethylene with 1-Butene as comonomer.

Resin Properties	Unit	Value	Test Mode
<b>Melt Flow Rate (MFR)</b> 190°/5 kg 190°/21.6 kg FRR 21.6/5	g/10 min g/10 min	0.22±0.02 6.2±1.0 28±3	ISO1133
Density	g/cm <sup>3</sup>	0.957±0.002	ISO1183

Mechanical Properties	Unit	Value	Test Mode
<b>Tensile Test</b> Stress at Yield Strain at Break Tensile Modulus, secant, 1mm/min	MPa % MPa	> 23 > 500 > 700	ISO527
Charpy Notched Impact at 23°C	kJ/m <sup>2</sup>	> 24	ISO179
Strain Hardening modulus at 80 °C	MPa	>35	ISO18488
FNCT (4 MPa, 2% Arkopal N100, 80 °C)	hr	>1000	ISO18553
ESCR (F50, 10% Igepal)	hr	>5000	ASTM D1693

Pipe Properties	Unit	Value	Test Mode
<b>MRS Classification</b>	MPa	10	ISO9080
Notched Pipe Test, SCG at 4.6MPa, 80°C	hr	> 500	ISO13479
Creep Rapture Strength	hr	>200	ISO1167
<b>Burst test</b>	Ductile Failure		ASTM D1599

Thermal Properties	Unit	Value	Test Mode
<b>OIT at 210 °C</b>	min	> 30	ISO11357
<b>Melting Point</b>	°C	131±2	ASTM D3418

Pigmentation	Unit	Value	Test Mode
<b>Carbon Black dispersion</b>	Grade	< 3	ISO18553
<b>Carbon Black content</b>	2.0-2.5	%	ISO6964

## Characteristic Properties

- Black PE100 resin

**Density: 0.955-0.959 g/cm<sup>3</sup>**

## Main Applications

- Top quality PE100 pressure pipes for gas and water transportation at higher pressures or with thinner walls than PE80

**MFR: 190/5: 0.19-0.25**

## Additives

- Antioxidant/Process stabilizer
- Lubricant (processing aid)/acid scavenger
- Carbon Black

