# HD8100MB

High Density Polyethylene Black Compound Resin

**Special Characteristics** : PlastMate HD8100MB is a high density polyethylene black pipe compound grade which is certified as a MRS 10.0 (PE100). It is bimodal resins exhibit excellent processability, high thermal stability, good dispersion of carbon black and good chemical resistance properties. They are suitable for high quality pressure pipes, produced by conventional pipe extrusion process.

**Typical Applications** : Pressure pipes , Drinking water pipes, Industrial pipes and Sewer pipes.

**Typical Properties** :

| Properties | HD8100MB | Unit | Test Method |
|---|---|---|---|
| **Physical and Mechanical Properties** | | | |
| Melt Flow Rate (190 °C, 5 kg) | 0.25 | g/10 min | ISO 1133 |
| Density | 0.960 | $g/cm^3$ | ISO 1183 |
| Tensile Strength at Yield | 24 | MPa | ISO 527 |
| Tensile strength at Break | 35 | MPa | ISO 527 |
| Elongation at Break | 750 | % | ISO 527 |
| Flexural Modulus | 10,500 | kg/cm2 | ASTM D790 |
| Carbon Black Content | 2.25 | % wt | ISO 6964 |
| Carbon Black dispersion | < 3 | - | ISO 18553 |
| Durometer Hardness | 64 | Shore D | ASTM D2240 |
| ESCR , $F_{50}$ (Condition B, 25 % Igepal) | >2,000 | Hours | ASTM D1693 |
| Oxidative Induction Time (OIT, 210 °C) | > 40 | Minutes | ISO 11357-6 |
| MRS Classification | 10.0 (PE100) | MPa | ISO12162/ ISO 9080 |
| Resistance to crack growth (@ 80 °C) | > 500 | Hour | ISO 13479 |
| Rapid crack propagation, Pc, S4 | > 10** | Bar | ISO 13477 |

**Recommendation**

Preheat condition : 2 hours at 80 °C
Extruder temperature : 180 - 200 °C
Die temperature : 190 - 210 °C

* NB = Non Break

** Tested on 110 mm OD pipe

**FDA Statement** :
Food and Drug Administration US FDA 21 CFR 177.1520 and Commission Regulation (EU) 10/2011. More compliance regulations and standards that related to the product shall be exhibited in Product Regulatory Certificate (PRC) document.



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