

# 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 chemical resistance properties. They are suitable for high quality pressure pipes, produced by conventional pipe extrusion process.

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

## Typical Properties :

| Properties                                                    | Typical Value | Unit               | Test Method |
|---------------------------------------------------------------|---------------|--------------------|-------------|
| <i>Physical Properties</i>                                    |               |                    |             |
| Melt Flow Rate (190 °C, 5 kg)                                 | 0.25          | g/10 min           | ISO 1133    |
| Density                                                       | 0.960         | g/cm <sup>3</sup>  | ISO 1183    |
| <i>Mechanical Properties (Based on compression specimens)</i> |               |                    |             |
| Tensile Strength @ Yield                                      | 23            | MPa                | ISO 527     |
| Tensile strength @ Break                                      | > 30          | MPa                | ISO 527     |
| Elongation @ Break                                            | > 600         | %                  | ISO 527     |
| Stiffness                                                     | 8000          | kg/cm <sup>2</sup> | ASTM D747   |
| Flexural Modulus                                              | 11500         | kg/cm <sup>2</sup> | ASTM D790   |
| Carbon Black Content                                          | 2.25          | % wt               | ISO 6964    |
| Carbon Black dispersion                                       | < 3           | -                  | ISO 18553   |
| Notched Izod Impact Strength                                  | 50 (NB)*      | kg.cm/cm           | ASTM D256   |
| Durometer Hardness                                            | 64            | Shore D            | ASTM D2240  |
| ESCR , F <sub>50</sub> (Condition B, 25 % Igepal)             | >2000         | Hours              | ASTM D1693  |
| Oxidative Induction Time (OIT, 210 °C)                        | > 40          | Minutes            | ISO 11357-6 |
| MRS Classification                                            | 10.0          | MPa                | ISO 9080    |
| Resistance to crack growth (@ 80 °C)                          | > 500         | hour               | ISO 13479   |

\* NB = Non Break

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## Recommendation :

Preheat condition : 2 hours at 80 °C

Extruder temperature : 180 - 200 °C

Die temperature : 190 - 210 °C

## Disclaimer :

This Applications specified herein is for reference only and not suitable for using in the manufacturing of any products in medical and pharmaceutical sectors.

- Determination of suitability of the product for the use and purpose shall be the customer's responsibility. Customer is obligated to inspect and test the product for such suitability. Customer is responsible for appropriate, safe, legal use processing and handling of the product.
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**Note :** Properties reported here are typical values of the product, not to be considered as specifications.

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