

SABIC® HDPE M300054

HIGH DENSITY POLYETHYLENE

DESCRIPTION

M300054 is a High Density Polyethylene grade with narrow molecular weight distribution suitable for injection molding applications. It has been designed to give good flow properties, low warpage with good dimensional stability and high gloss.

TYPICAL APPLICATIONS

M300054 is recommended for housewares, small containers, caps, cups & tubs and various thin wall articles.

TYPICAL PROPERTY VALUES

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|----------|--------------|
| POLYMER PROPERTIES | | | |
| Melt Flow Rate (MFR) | | | |
| at 190°C and 2.16 kg | 30 | g/10 min | ASTM D1238 |
| MECHANICAL PROPERTIES | | | |
| 1% Secant Modulus ⁽²⁾ | 750 | MPa | ASTM D638 |
| Tensile Strength at Yield | 23 | MPa | ASTM D638 |
| Tensile Strength at Break | 12 | MPa | ASTM D638 |
| Tensile Elongation at Break | 200 | % | ASTM D638 |
| Flexural Strength | 22 | MPa | ASTM D790 |
| Flexural Modulus | 800 | MPa | ISO 178/1A |
| Izod Impact Strength | 28 | J/m | ASTM D256 |
| Hardness (Shore D) | 60 | - | ASTM D2240 |
| ESCR (100% Igepal), F50 ⁽³⁾ | <1 | Hrs | ASTM D1693B |
| ESCR (10% Igepal), F50 | <1 | Hrs | ASTM D1693B |
| THERMAL PROPERTIES | | | |
| Vicat Softening Point | 121 | °C | ASTM D1525 |
| Brittleness Temperature | <-75 | °C | ASTM D746 |

(1) Typical values: not to be construed as specification limits.

(2) Based on Injection molded specimens.

(3) Based on compression molded sheet

PROCESSING CONDITIONS

Typical processing conditions for M300054 are:

Melt temperature: 175-230°C

Mold temperature: 15-60°C

Injection pressure: 600 - 1000 Bar