



# DOW HDPE 53050E

## High Density Polyethylene Resin

### Overview

HDPE 53050E High Density Polyethylene Resin is a high molecular weight high density polyethylene copolymer which has been specifically designed for the production of high strength blown film of various thicknesses even down to below 10 microns. The combination of its high molecular weight, broad molecular weight distribution and density results in tough strong films. The resin can be easily processed on normal HDPE blown lines as well as on modern high output and within a typical melt temperature range of 200 to 220 °C.

Note: HDPE 53050E High Density Polyethylene Resin should comply with FDA regulation 177.1520 and with most European food contact regulations when used unmodified and processed according to good manufacturing practices for food contact applications. Please, contact your nearest Dow office for food contact compliance statements. The purchaser remains responsible for determining whether the use complies with all relevant regulations.

#### Applications:

- Counter bags.
- Carrier bags.
- Disposal waste bags.
- Deep freeze bags.
- Bin liners.
- Wrapping films.
- Film on the reel.
- Coextruded films.

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.952 g/cm <sup>3</sup>	0.952 g/cm <sup>3</sup>	ISO 1183/D <sup>1</sup>
Melt Mass-Flow Rate (MFR)			ISO 1133
190°C/5.0 kg	0.30 g/10 min	0.30 g/10 min	
190°C/21.6 kg	7.5 g/10 min	7.5 g/10 min	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Stress			ISO 527-2/50
Yield, Compression Molded	3480 psi	24.0 MPa	
Break, Compression Molded	5220 psi	36.0 MPa	
Tensile Strain (Break, Compression Molded)	800 %	800 %	ISO 527-2/50
Flexural Modulus - 2% Secant (Compression Molded)	131000 psi	900 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact Strength			ISO 180
Compression Molded	9.52 ft·lb/in <sup>2</sup>	20.0 kJ/m <sup>2</sup>	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Shore Hardness (Shore D, Compression Molded)	64	64	ISO 868
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	262 °F	128 °C	ISO 306/A120

### Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

<sup>1</sup> Annealed

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- use as a critical component in medical devices that support or sustain human life; or
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