



DOWLEX™ 2342M Polyethylene Resin

Overview

DOWLEX™ 2342M Polyethylene Resin is a high density ethylene/octene copolymer resin. It has a unique molecular structure with a linear polyethylene backbone and controlled octene side branches, which provides a combination of flexibility with very high toughness and stress crack resistance. A specified carbon black masterbatch is incorporated into the DOWLEX 2342M Polyethylene Resin during extrusion to arrive at a fully stabilised, homogeneous black sheet with excellent weldability. Sheetting thus produced meets the requirements of the Guidelines and Directives controlling general water barrier membranes such as the North Rhine Westfalia Guidelines or "Guideline for Plastic Membranes in Landfill sites" issued 7/92 from B.A.M. Berlin.

Processability: Typical extrusion temperature range for DOWLEX 2342M Polyethylene Resin is 190 to 230 °C. The resin contains processing stabilisers compatible with those in the Masterbatch added to guarantee short and long term processing, thermal and environmental stability including metal deactivators.

Applications:

- Heavy sheeting.
- General water barrier membranes.

Additive

- Antiblock: No
- Slip: No
- Processing Aid: No

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density			ISO 1183
--	0.932 g/cm ³	0.932 g/cm ³	
-- 1	0.944 g/cm ³	0.944 g/cm ³	
Melt Index			ISO 1133
190°C/2.16 kg	0.85 g/10 min	0.85 g/10 min	
190°C/5.0 kg	2.6 g/10 min	2.6 g/10 min	
Environmental Stress-Cracking Resistance (ESCR)			ASTM D1693A
68°F (20°C), 0.0787 in (2.00 mm), 10% AntaroX, Compression Molded	> 15000 hr	> 15000 hr	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Stress			
Yield ¹	2610 psi	18.0 MPa	ISO 527-2
Yield, 0.0787 in (2.00 mm), Compression Molded ²	2320 psi	16.0 MPa	ISO 527-2/50
Break ¹	> 4350 psi	> 30.0 MPa	ISO 527-2
Break, 0.0787 in (2.00 mm), Compression Molded ²	> 4350 psi	> 30.0 MPa	ISO 527-2/50
Tensile Strain			
Yield ¹	12 %	12 %	ISO 527-2
Yield, 0.0787 in (2.00 mm), Compression Molded ²	14 %	14 %	ISO 527-2/50
Break ¹	> 800 %	> 800 %	ISO 527-2
Break, 0.0787 in (2.00 mm), Compression Molded ²	> 800 %	> 800 %	ISO 527-2/50
Flexural Modulus - 2% Secant			ISO 178
0.0787 in (2.00 mm), Compression Molded	79800 psi	550 MPa	
Tear Resistance ¹	> 750 N	> 750 N	DIN 53356
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Puncture Force ¹	> 1690 lbf	> 7500 N	DIN 54307

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact Strength ³			ISO 180
-40°F (-40°C), Compression Molded	31 ft·lb/in ²	65 kJ/m ²	
73°F (23°C), Compression Molded	No Break	No Break	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Shore Hardness			ISO 868
Shore D, 0.0787 in (2.00 mm), Compression Molded	55	55	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	243 °F	117 °C	ISO 306/A120
Oxidation Induction Time (410°F (210°C))	> 30 min	> 30 min	DIN EN 728

Notes

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

¹ Black 2.5 mm thick sheet extruded from DOWLEX 2342M Polyethylene resin with a specified masterbatch conforming to DIN 16776 as: "PE, EACK 35T022 or D006". Carbon black content: 2.0-2.2%.

² Data are valid for MD and CD direction.

³ 2 mm thick

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