



Experimental XB 81830.95 Medium Density Polyethylene Resin

Overview

XB 81830.95 is a Medium Density Polyethylene Resin produced in the Gas Phase technology. It is designed for blown film applications providing good processability and seal properties. It offers good tear and impact resistance.

Main Characteristics:

- Monolayer and multilayer blown film
- General purpose bags

Complies with:

- U.S. FDA 21 CFR 177.1520 (c) 3.2a
- European Commission Regulation (EU) No 10/2011

Consult the regulations for complete details.

Additive

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

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.939 g/cm ³	0.939 g/cm ³	ASTM D792
Base Density ¹	0.939 g/cm ³	0.939 g/cm ³	Dow Method
Melt Index			ASTM D1238
190°C/5.0 kg	0.38 g/10 min	0.38 g/10 min	
190°C/21.6 kg	11 g/10 min	11 g/10 min	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			ASTM D638
Yield, Compression Molded	2870 psi	19.8 MPa	
Break, Compression Molded	4890 psi	33.7 MPa	
Tensile Elongation			ASTM D638
Break, Compression Molded	1000 %	1000 %	
Flexural Modulus (Compression Molded)	123000 psi	850 MPa	ASTM D790
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	0.59 mil	15 µm	
Film Puncture Resistance	70.0 ft·lb/in ³	5.79 J/cm ³	ASTM D5748
Secant Modulus			ASTM D882
1% Secant, MD	164000 psi	1130 MPa	
2% Secant, MD	116000 psi	798 MPa	
1% Secant, TD	187000 psi	1290 MPa	
2% Secant, TD	129000 psi	887 MPa	
Tensile Strength			ASTM D882
MD : Yield	2320 psi	16.0 MPa	
TD : Yield	2610 psi	18.0 MPa	
MD : Break	5050 psi	34.8 MPa	
TD : Break	3770 psi	26.0 MPa	
Tensile Elongation			ASTM D882
MD : Break	310 %	310 %	
TD : Break	610 %	610 %	
Dart Drop Impact	100 g	100 g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD	10 g	10 g	
TD	270 g	270 g	
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (Compression Molded)	1.4 ft·lb/in	76 J/m	ASTM D256

Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness			ASTM D2240
Shore D, Compression Molded	68	68	
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°)	12	12	ASTM D2457
Haze	62 %	62 %	ASTM D1003
Extrusion	Nominal Value (English)	Nominal Value (SI)	
Melt Temperature	408 °F	209 °C	

Extrusion Notes

Die Gap: 1.2 Mm
 Blow-up Ratio: 3.6
 Output: 7.5 kg/h
 Die Temperature: 437°F
 Melt Temperature: 409°F
 Temperature Profile: 356-392-419-437°F

Notes

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

¹ Base density is estimated using the assumption that every 1000 ppm of antiblock in the finished product raises the density of the polymer by 0.0006 g/cm³. Base density is the estimated density of the polymer if it did not contain any antiblock.

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Additional Information

North America		Europe/Middle East	+800-3694-6367
U.S. & Canada:	1-800-441-4369		+31-11567-2626
	1-989-832-1426	Italy:	+800-783-825
Mexico:	+1-800-441-4369		
Latin America		South Africa	+800-99-5078
Argentina:	+54-11-4319-0100		
Brazil:	+55-11-5188-9000		
Colombia:	+57-1-219-6000	Asia Pacific	+800-7776-7776
Mexico:	+52-55-5201-4700		+603-7965-5392

www.dowplastics.com

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Published: 2017-09-07

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