Technical Data Sheet

DOWLEX™ GM 8091 Polyethylene Resin

Overview

DOWLEX™ GM 8091 Polyethylene Resin is a next generation linear low density polyethylene resin designed for high quality blown film applications requiring a combination of excellent optical properties, tear strength and sealability, and a very good toughness/stiffness balance. DOWLEX™ GM 8091 Polyethylene Resin is also designed to offer very high processability and very low gel level making it ideal for use in lamination films and other specialty packaging.

Sustainability Attribute:

Resoursa™
Advancing resource efficiency with DOW

Note: DOWLEX™ GM 8091 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 regarding food contact compliance statements. The purchaser remains responsible for determining whether the use complies with all relevant regulations.

Applications:
- High clarity tissue overwrap
- Produce bags
- Food packaging films
- Lamination film

Complies with:
- EU, 10/2011
- U.S. FDA FCN 1539

Consult the regulations for complete details.

Additive

- Antiblock: Yes
- Slip: Yes

Physical Properties

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method[1]
Density[2]	0.918	g/cm^3	0.918	g/cm^3	ASTM D792
Base Density[3]	0.916	g/cm^3	0.916	g/cm^3	Dow Method
Melt Index (190°C/2.16 kg)	1.0	g/10 min	1.0	g/10 min	ASTM D1238
Films					
Film Thickness — Tested	2	mil	50	µm	
Film Toughness					ASTM D882
MD	822	ft·lb/in^3	68.0	J/cm^3	
TD	882	ft·lb/in^3	73.0	J/cm^3	
Tensile Strength					ASTM D882
MD: Yield	870	psi	6.00	MPa	
TD: Yield	1060	psi	7.30	MPa	
MD: Break	3920	psi	27.0	MPa	
TD: Break	4060	psi	28.0	MPa	
Tensile Elongation					ASTM D882
MD: Break	500	%	500	%	
TD: Break	550	%	550	%	
Dart Drop Impact	710	g	710	g	ASTM D1709B
Elmendorf Tear Strength					ASTM D1922
MD	600	g	600	g	
TD	790	g	790	g	
Thermal					
Vicat Softening Temperature	226	°F	108	°C	ASTM D1525
Melting Temperature (DSC)	232	°F	111	°C	DSC
Optical					
Gloss (45°)	43		43		ASTM D2457
Haze	18.0	%	18.0	%	ASTM D1003
Extrusion Notes					

Fabrication Conditions for Blown Film Resin:

- Melt Temperature: 190 to 240°C
- Blow-up Ratio: 1.5 to 3.1

1. ASTM: American Society for Testing and Materials
2. Compression Molded
3. 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/cm^3. Base density is the estimated density of the polymer if it did not contain any antiblock.

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

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