DOWLEX™ NG 5056G REN
Polyethylene Resin

Overview

DOWLEX™ NG 5056G REN 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 NG 5056G REN Polyethylene Resin is also designed to offer a very low gel level making it ideal for use in lamination films and other specialty packaging.

Applications:

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

Note: DOWLEX NG 5056G REN 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.

Complies with:

- Europe Commission Regulation (EU) No 10/2011
- U.S. FDA 21 CFR 177.1520(c)3.2a
- U.S. FDA-DMF
- ISCC PLUS certification for bio-circular plastics

Consult the regulations for complete details.

Additive

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

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density [1]	0.919	g/cm³	0.919	g/cm³	ASTM D792
Melt Index [1] (190°C/2.16 kg)	1.1	g/10 min	1.1	g/10 min	ISO 1133
Films	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Film Thickness - Tested	2.0	mil	50	µm	
Film Puncture Energy [2] (2.0 mil (50 µm))	31.0	in·lb	3.50	J	ASTM D5748
Film Puncture Force [2] (2.0 mil (50 µm))	12.1	lbf	54.0	N	ASTM D5748
Tensile Modulus [2]					ISO 527-3
2% Secant, MD : 2.0 mil (50 µm)	28700	psi	198	MPa	
2% Secant, TD : 2.0 mil (50 µm)	34500	psi	238	MPa	
Tensile Stress [2]					ISO 527-3
MD : Yield, 2.0 mil (50 µm)	1090	psi	7.50	MPa	
TD : Yield, 2.0 mil (50 µm)	1160	psi	8.00	MPa	
MD : Break, 2.0 mil (50 µm)	5510	psi	38.0	MPa	
TD : Break, 2.0 mil (50 µm)	5370	psi	37.0	MPa	
Tensile Elongation [2]					ISO 527-3
MD : Break, 2.0 mil (50 µm)	810	%	810	%	
TD : Break, 2.0 mil (50 µm)	920	%	920	%	
Dart Drop Impact [2] (2.0 mil (50 µm))	450	g	450	g	ISO 7765-1/A
Elmendorf Tear Strength [2]					ASTM D1922
MD : 2.0 mil (50 µm)	890	g	890	g	
TD : 2.0 mil (50 µm)	1100	g	1100	g	
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Vicat Softening Temperature [1]	219	°F	104	°C	ASTM D1525

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Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss [2] (45°, 1.97 mil (50.0 µm))	61	61	ASTM D2457
Haze [2] (1.97 mil (50.0 µm))	8.90 %	8.90 %	ISO 14782

Extrusion	Nominal Value (English)	Nominal Value (SI)
Melt Temperature	374 to 464 °F	190 to 240 °C

Extrusion Notes

Fabrication Conditions For Tubular Film Extrusion:

- Melt Temperature: 190 to 240°C.
- Blow-Up Ratio Range: 1.5 to 3:1.
- Recommended Gauge Range: 10 to 150 µm.

Notes

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

[1] Compression Molded

[2] Blown film extruded at 235°C, 50 microns, 2.5 BUR, 1.55mm die gap.

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