Technical Data Sheet

DOWLEX™ GM 8490 Polyethylene Resin

Description

DOWLEX™ GM 8490 Polyethylene Resin is specifically designed for large/high output cast film lines to make high performance industrial stretch films.

It is to be used as a core resin in coextruded cast film structures together with a cling resin for films in the thickness range between 10 and 35 microns.

Sustainability Attribute:

Resoursa™
Advancing resource efficiency with DOW

Main Characteristics

- Excellent balance of processability, mechanical and stretchability performance properties.

Applications

- Cast stretch wrap film
- Artificial turf
- Diaper backsheet

Complies with

- U.S. FDA FCN 1539
- EU, No 10/2011

Consult the regulations for complete details.

Properties[1]

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method[2]
Density	0.918	g/cm³	0.918	g/cm³	ASTM D792
Base Density[3]	0.918	g/cm³	0.918	g/cm³	Internal Method
Melt Index (190°C/2.16 kg)	3.5	g/10 min	3.5	g/10 min	ASTM D1238
Films					
Film Thickness - Tested	0.67	mil	17	µm	
Film Puncture Force[4]	4.86	lbf	21.6	N	
Tensile Strength[5]					ASTM D882
MD: Yield, 0.67 mil (17 µm)	455	psi	3.14	MPa	
MD: Break, 0.67 mil (17 µm)	4970	psi	34.3	MPa	
Tensile Elongation[5]					ASTM D882
MD: Break, 0.67 mil (17 µm)	430	%	430	%	
Dart Drop Impact[4]	260	g	260	g	ASTM D1709A

1. Typical properties: these are not to be construed as specifications. Users should confirm results by their own tests
2. ASTM: American Society for Testing and Materials
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/cm³. Base density is the estimated density of the polymer if it did not contain any antiblock.
4. At 200% elongation.
5. Cast film, 220 m, 7 min; Chill roll 25°C.

Properties (Cont.)

Films	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Elmendorf Tear Strength[5]					ASTM D1922
TD: 0.91 mil (23 µm)	260	g	260	g	
Film Stretch Performance –					Internal Method
Max Elongation	320	%	320	%	
Thermal					
Melting Temperature (DSC)	234	°F	112	°C	Internal Method
Extrusion Notes					

Fabrication Conditions for Cast Film Resin:

- Melt Temperature: 220–280°C
- Line Speed: 250–660 m/min
- Recommended Gauge Range: 10–60 µm

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