

Aegis® H85NP

Polyamide 6

Honeywell

Message:

Aegis® H85NP is a medium viscosity nylon 6 extrusion grade homopolymer for cast or blown BOPA film. It conforms to FDA requirements of 21 CFR 177.1500 as well as EU Directive 2002/72/EC. It possesses the combination of strength, toughness and thermoforming properties associated with nylon 6 as well as excellent heat, chemical, and abrasion resistance.

General Information	
Features	Homopolymer Good strength Good wear resistance Good chemical resistance Heat resistance, high Good toughness Medium viscosity
Uses	Blow molding applications cast film
Agency Ratings	FDA 21 CFR 177.1500 European 2002/72/EC
Forms	Particle
Processing Method	Film extrusion Blow film cast film Thermoforming

Physical	Nominal Value	Unit	Test Method
Density	1.13	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (235°C/1.0 kg)	3.5	g/10 min	ASTM D1238
Water Absorption			ASTM D570
24 hr	1.6	%	ASTM D570
Saturation	9.5	%	ASTM D570
Balance	2.7	%	ASTM D570
Moisture Content		%	
Relative viscosity-@ 96% SAV	3.19		
Viscosity-FAV	85.0		ASTM D789
Films	Nominal Value	Unit	Test Method
Carbon Dioxide Transmission Rate (23°C)	72.8	cm ³ /m ² /24 hr	ASTM D1434

Nitrogen Transmission Rate (23°C)	14.0	cm ³ /m ² /24 hr	ASTM D1434
Oxygen Transmission Rate (23°C)	40	cm ³ /m ² /24 hr	ASTM D3985
Thermal	Nominal Value	Unit	Test Method
Melting Temperature	220	°C	ASTM D3418

Additional Information

Extractible Content: < 0.8 %

Extrusion	Nominal Value	Unit
Drying Temperature	80.0	°C
Cylinder Zone 1 Temp.	230 - 260	°C
Cylinder Zone 2 Temp.	230 - 260	°C
Cylinder Zone 3 Temp.	230 - 260	°C
Cylinder Zone 4 Temp.	230 - 260	°C
Cylinder Zone 5 Temp.	230 - 260	°C
Adapter Temperature	260 - 266	°C
Melt Temperature	260 - 270	°C
Die Temperature	260	°C

Extrusion instructions

The values listed above in Extrusion are for cast film. Typical Barrel Profile for Tubular (Blown) Films:

Barrel Temperature: 246 to 254°C (474 to 490°F)

Adapter Temperature: 260°C (500°F)

Die Temperature: 254°C (490°F)

Processing Melt Temperature: 254 to 260°C (490 to 500°F)

Screw Parameters:

Metering section: 40%

Transition section: 3 to 4 flights

Feed section balance of screw length

Compression ratio: 3.5:1 to 4.0:1

L/D ratio: 24:1

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