



AMPLIFY™ IO 3801 Functional Polymer

Overview

AMPLIFY™ IO 3801 Ethylene Acrylic Acid Ionomer is designed for blown and cast film coextrusion for flexible packaging applications. It provides excellent sealability in coextrusions with nylon and other film structures.

- For Food and Specialty Applications
- Excellent Sealant for use in blown and cast film coextrusions

Complies with:

- U.S. FDA 21 CFR 177.1310 (b)
- Europe EU-Directive 2002/72/EC

Consult the regulations for complete details

Additive

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

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.940 g/cm ³	0.940 g/cm ³	ASTM D792
Melt Index (190°C/2.16 kg)	1.3 g/10 min	1.3 g/10 min	ASTM D1238
Ion Type	Sodium (Na)	Sodium (Na)	
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	2.0 mil	51 µm	
Tensile Strength			ASTM D882 ¹
MD: Yield, 2.0 mil (51 µm)	2200 psi	15.2 MPa	
TD: Yield, 2.0 mil (51 µm)	1820 psi	12.5 MPa	
MD: Break, 2.0 mil (51 µm)	4880 psi	33.6 MPa	
TD: Break, 2.0 mil (51 µm)	4980 psi	34.3 MPa	
Tensile Elongation			ASTM D882 ¹
MD: Break, 2.0 mil (51 µm)	280 %	280 %	
TD: Break, 2.0 mil (51 µm)	400 %	400 %	
Elmendorf Tear Strength			ASTM D1922 ¹
MD: 2.0 mil (51 µm)	20 g	20 g	
TD: 2.0 mil (51 µm)	42 g	42 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	199 °F	93.0 °C	ASTM D1525
Melting Temperature (DSC)	203 °F	95.0 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (20°, 2.00 mil (50.8 µm))	80	80	ASTM D2457 ¹
Haze (2.00 mil (50.8 µm))	3.2 %	3.2 %	ASTM D1003 ¹

Extrusion Notes

Fabrication Conditions For Blown Film:

Equipment used to process this resin should be constructed of corrosion resistant materials. Dies and adapters are recommended to be stainless steels and/or duplex chrome or nickel plated.

- Screw Size: A and B = 2.5 in. (64 mm), C = 2 in. (51 mm); 30:1 L/D/Size
- Screw Type: A = HS, B = DSBI, C = SFSM
- Die Gap: 70 mil (1.78 mm)
- Melt Temperature: A and B = 420°F (216°C), C = 470°F (243°C)
- Output: 10 lb/hr/in. of die circumference
- Die Diameter: 8 in.
- Blow-Up Ratio: 2.5:1
- Screw Speed: 45 rpm
- Frost Line Height: 30 in. (762 mm)

Notes

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

¹ Monolayer film data.

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