

EVALCA EVAL® LC-H101BD Ethylene Vinyl Alcohol Copolymer Resin (discontinued **)

Category : Polymer , Film , Thermoplastic , Ethylene Vinyl Alcohol (EVOH)

Material Notes:

38 mol % Ethylene. Data provided by EVALCA. Applications: Blown film. EVOH is used in packaging applications because of its outstanding gas barrier properties. EVAL™ is now produced as a part of the Kuraray product line.

Order this product through the following link:

http://www.lookpolymers.com/polymer_EVALCA-EVAL-LC-H101BD-Ethylene-Vinyl-Alcohol-Copolymer-Resin-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.17 g/cc	0.0423 lb/in ³	ASTM D1505
Moisture Vapor Transmission	0.820 cc-mm/m ² -24hr-atm	2.08 cc-mil/100 in ² -24hr-atm	40°C, 90% RH
Oxygen Transmission	0.0140 cc-mm/m ² -24hr-atm	0.0356 cc-mil/100 in ² -24hr-atm	20°C; 65% RH; Permeability increases significantly at higher moisture content.
Melt Flow	1.6 g/10 min	1.6 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	
	3.8 g/10 min	3.8 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 210 °C	@Load 4.76 lb, Temperature 410 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	95	95	ASTM D785
Tensile Strength, Yield	67.0 MPa	9720 psi	10%/min. ASTM D638
Film Elongation at Break, MD	250 %	250 %	Orientation not specified; ASTM D882
Elongation at Yield	6.0 %	6.0 %	10%/min. ASTM D638
Modulus of Elasticity	2.40 GPa	348 ksi	Youngs Modulus, ASTM D638, 10%/min.
Flexural Yield Strength	108 MPa	15700 psi	Bending Strength; ASTM D790
Flexural Modulus	3.10 GPa	450 ksi	Bending Elasticity; ASTM D790
Izod Impact, Notched	0.640 J/cm	1.20 ft-lb/in	ASTM D256
Taber Abrasion, mg/1000 Cycles	2.0	2.0	ASTM D1175
Film Tensile Strength at Break, MD	59.0 MPa	8560 psi	Orientation not specified; ASTM D882

Thermal Properties	Metric	English	Comments
CTE, linear	70.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	38.9 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	Below Tg
	120 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	66.7 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	Above Tg
Specific Heat Capacity	2.40 J/g- $^{\circ}\text{C}$	0.574 BTU/lb- $^{\circ}\text{F}$	
Thermal Conductivity	0.340 W/m-K	2.36 BTU-in/hr-ft ² - $^{\circ}\text{F}$	For EVAL F101
Melting Point	175 $^{\circ}\text{C}$	347 $^{\circ}\text{F}$	DSC
Deflection Temperature at 0.46 MPa (66 psi)	90.0 $^{\circ}\text{C}$	194 $^{\circ}\text{F}$	
Vicat Softening Point	165 $^{\circ}\text{C}$	329 $^{\circ}\text{F}$	
Glass Transition Temp, Tg	62.0 $^{\circ}\text{C}$	144 $^{\circ}\text{F}$	Dynamic Viscoelasticity

Optical Properties	Metric	English	Comments
Haze	1.5 %	1.5 %	Film; ASTM D1003
Gloss	90 %	90 %	45 $^{\circ}$; Film; ASTM D2457

Electrical Properties	Metric	English	Comments
Dielectric Constant	5.4	5.4	Frequency Not Specified
Dissipation Factor	0.22	0.22	Frequency Not Specified

Processing Properties	Metric	English	Comments
Melt Temperature	≤ 240 $^{\circ}\text{C}$	≤ 464 $^{\circ}\text{F}$	

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