

EVALCA EVAL® G156A Ethylene Vinyl Alcohol Copolymer Resin (discontinued **)

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

Material Notes:

48 mol % Ethylene. Data provided by EVALCA. Applications: Cast film, specialty applications. 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-G156A-Ethylene-Vinyl-Alcohol-Copolymer-Resin-nbspdiscontinued-.php

| Physical Properties | Metric | English | Comments |
|-----------------------------|---------------------------------------|--|--|
| Density | 1.12 g/cc | 0.0405 lb/in ³ | ASTM D1505 |
| Moisture Vapor Transmission | 0.540 cc-mm/m ² -24hr-atm | 1.37 cc-mil/100 in ² -24hr-atm | 40°C, 90% RH |
| Oxygen Transmission | 0.0640 cc-mm/m ² -24hr-atm | 0.163 cc-mil/100 in ² -24hr-atm | 20°C; 65% RH; Permeability increases significantly at higher moisture content. |
| Melt Flow | 6.4 g/10 min | 6.4 g/10 min | ASTM D1238 |
| | @Load 2.16 kg, Temperature 190 °C | @Load 4.76 lb, Temperature 374 °F | |
| | 14.7 g/10 min | 14.7 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 | 85 | 85 | ASTM D785 |
| Tensile Strength, Yield | 43.0 MPa | 6240 psi | 10%/min. ASTM D638 |
| Film Elongation at Break, MD | 330 % | 330 % | Orientation not specified; ASTM D882 |
| Modulus of Elasticity | 1.90 GPa | 276 ksi | Youngs Modulus, ASTM D638, 10%/min. |
| Film Tensile Strength at Break, MD | 37.0 MPa | 5370 psi | Orientation not specified; ASTM D882 |

| Thermal Properties | Metric | English | Comments |
|------------------------|-------------|------------------------------------|---------------|
| CTE, linear | 100 µm/m-°C | 55.6 µin/in-°F | Below Tg |
| | 130 µm/m-°C | 72.2 µin/in-°F | Above Tg |
| Specific Heat Capacity | 2.40 J/g-°C | 0.574 BTU/lb-°F | |
| Thermal Conductivity | 0.340 W/m-K | 2.36 BTU-in/hr-ft ² -°F | For EVAL F101 |

| Thermal Properties | Metric | English | Comments |
|---|---------|---------|-------------------------|
| Deflection Temperature at 0.46 MPa (66 psi) | 80.0 °C | 176 °F | For EP-E105 |
| Vicat Softening Point | 155 °C | 311 °F | For EP-E105 |
| Glass Transition Temp, Tg | 49.0 °C | 120 °F | Dynamic Viscoelasticity |

| Optical Properties | Metric | English | Comments |
|--------------------|--------|---------|-----------------------|
| Haze | 1.9 % | 1.9 % | Film; ASTM D1003 |
| Gloss | 85 % | 85 % | 45°; Film; ASTM D2457 |

| Electrical Properties | Metric | English | Comments |
|-----------------------|--------|---------|-------------------------|
| Dielectric Constant | 4.8 | 4.8 | Frequency Not Specified |
| Dissipation Factor | 0.22 | 0.22 | Frequency Not Specified |

| Processing Properties | Metric | English | Comments |
|-----------------------|-----------|-----------|----------|
| Melt Temperature | <= 250 °C | <= 482 °F | |

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