



ADVANCENE™ EE-1801-AAH

ETHYDCO - Linear Low Density Polyethylene

General Information

Product Description

ADVANCENE™ EE-1801-AAH is a Linear Low Density Polyethylene Resin is an ethylene-hexene copolymer, linear low density (LLDPE) resin designed for good strength and process ability. This product is recommended for general-purpose packaging applications from thick gauge, heavy-duty bags to high-speed thin gauge applications.

Applications:

- Hexene Linear Low Density Resin
- General Purpose Resin
- Excellent Strength

General

| | | | |
|-------------------|--|--|---|
| Features | <ul style="list-style-type: none"> • Copolymer • General Purpose | <ul style="list-style-type: none"> • Good Processability • High Strength | |
| Uses | <ul style="list-style-type: none"> • Blown Film • Film | <ul style="list-style-type: none"> • General Purpose • Heavy-duty Bags | <ul style="list-style-type: none"> • Packaging |
| Processing Method | <ul style="list-style-type: none"> • Blown Film | <ul style="list-style-type: none"> • Film Extrusion | |

Properties¹

| Physical | Typical Value (English) | Typical Value (SI) | Test Method |
|---|----------------------------|-------------------------|------------------------|
| Density / Specific Gravity | 0.920 | 0.918 g/cm ³ | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 1.0 g/10 min | 1.0 g/10 min | ASTM D1238 ISO 1133 |
| Films | Typical Value (English) | Typical Value (SI) | Test Method |
| Film Puncture Energy | | | Internal Method |
| 0.79 mil (20 µm) | 30.0 in·lb | 3.39 J | |
| 2.0 mil (51 µm) | 45.0 in·lb | 5.08 J | |
| Film Puncture Force | | | Internal Method |
| 0.79 mil (20 µm) | 8.99 lbf | 40.0 N | |
| 2.0 mil (51 µm) | 16.0 lbf | 71.2 N | |
| Film Puncture Resistance | | | Internal Method |
| 0.79 mil (20 µm) | 253 ft·lb/in ³ | 20.9 J/cm ³ | |
| 2.0 mil (51 µm) | 157 ft·lb/in ³ | 13.0 J/cm ³ | |
| Film Toughness | | | ASTM D882 |
| MD : 0.79 mil (20 µm) | 3570 ft·lb/in ³ | 295 J/cm ³ | |
| MD : 2.0 mil (51 µm) | 3060 ft·lb/in ³ | 253 J/cm ³ | |
| TD : 0.79 mil (20 µm) | 4120 ft·lb/in ³ | 341 J/cm ³ | |
| TD : 2.0 mil (51 µm) | 3490 ft·lb/in ³ | 289 J/cm ³ | |

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| Films | Typical Value (English) | Typical Value (SI) | Test Method |
|--|--------------------------------|---------------------------|--------------------|
| Secant Modulus | | | ASTM D882 |
| 2% Secant, MD : 0.79 mil (20 µm) | 29600 psi | 204 MPa | |
| 2% Secant, MD : 2.0 mil (51 µm) | 28900 psi | 199 MPa | |
| 2% Secant, TD : 0.79 mil (20 µm) | 33800 psi | 233 MPa | |
| 2% Secant, TD : 2.0 mil (51 µm) | 26500 psi | 183 MPa | |
| Tensile Strength | | | ASTM D882 |
| MD : Yield, 0.79 mil (20 µm) | 2320 psi | 16.0 MPa | |
| MD : Yield, 2.0 mil (51 µm) | 1770 psi | 12.2 MPa | |
| TD : Yield, 0.79 mil (20 µm) | 2230 psi | 15.4 MPa | |
| TD : Yield, 2.0 mil (51 µm) | 1600 psi | 11.0 MPa | |
| MD : Break, 0.79 mil (20 µm) | 8800 psi | 60.7 MPa | |
| MD : Break, 2.0 mil (51 µm) | 5920 psi | 40.8 MPa | |
| TD : Break, 0.79 mil (20 µm) | 6990 psi | 48.2 MPa | |
| TD : Break, 2.0 mil (51 µm) | 6800 psi | 46.9 MPa | |
| Tensile Elongation | | | ASTM D882 |
| MD : Break, 0.79 mil (20 µm) | 580 % | 580 % | |
| MD : Break, 2.0 mil (51 µm) | 700 % | 700 % | |
| TD : Break, 0.79 mil (20 µm) | 800 % | 800 % | |
| TD : Break, 2.0 mil (51 µm) | 850 % | 850 % | |
| Dart Drop Impact | | | |
| 0.79 mil (20 µm) | 94 g | 94 g | ASTM D1709A |
| 0.79 mil (20 µm) | < 100 g | < 100 g | ASTM D1709B |
| 2.0 mil (51 µm) | 130 g | 130 g | ASTM D1709A |
| 2.0 mil (51 µm) | 270 g | 270 g | ASTM D1709B |
| Elmendorf Tear Strength ² | | | ASTM D1922 |
| MD : 0.79 mil (20 µm) | 300 g | 300 g | |
| MD : 2.0 mil (51 µm) | 820 g | 820 g | |
| TD : 0.79 mil (20 µm) | 670 g | 670 g | |
| TD : 2.0 mil (51 µm) | 1200 g | 1200 g | |
| Seal Initiation Temperature ³ | | | Internal Method |
| 0.79 mil (20 µm) | 230 °F | 110 °C | |
| 2.0 mil (51 µm) | 248 °F | 120 °C | |
| Thermal | Typical Value (English) | Typical Value (SI) | Test Method |
| Vicat Softening Temperature | 217 °F | 103 °C | ASTM D1525 |
| Melting Temperature (DSC) | 255 °F | 124 °C | Internal Method |
| Optical | Typical Value (English) | Typical Value (SI) | Test Method |
| Gloss | | | ASTM D2457 |
| 20°, 0.787 mil (20.0 µm) | 62 | 62 | |
| 20°, 2.01 mil (51.0 µm) | 90 | 90 | |
| 45°, 0.787 mil (20.0 µm) | 50 | 50 | |
| 45°, 2.01 mil (51.0 µm) | 61 | 61 | |
| Haze | | | ASTM D1003 |
| 0.787 mil (20.0 µm) | 12.0 % | 12.0 % | |
| 2.01 mil (51.0 µm) | 18.0 % | 18.0 % | |
| Additional Information | Typical Value (English) | Typical Value (SI) | Test Method |
| Seal Strength | | | Internal Method |
| 302°F (150°C), 0.8 mil (20.0 µm) | 1000 g | 1000 g | |
| 302°F (150°C), 2.0 mil (51.0 µm) | 2100 g | 2100 g | |

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Processing Information

| Extrusion | Typical Value (English) | Typical Value (SI) |
|------------------|--------------------------------|---------------------------|
| Melt Temperature | 448 °F | 231 °C |