

Technical Data Sheet

CirculenRenew C14 LD2420F



Low Density Polyethylene

Product Description

CirculenRenew C14 LD2420 F is part of the *Circulen@* product family of circular and sustainable solutions. *CirculenRenew* C14 polymer reduces the carbon footprint as it replaces fossil feedstock through using renewable raw materials made from bio-based waste and residue oils. The renewable content of *CirculenRenew* C14 is measured by an accredited third party laboratory and stated as a parameter on the Certificate of Analysis (CoA).

CirculenRenew C14 LD2420 F is a drop-in solution and therefore doesn't require any adaptation of the existing processing equipment.

CirculenRenew C14 LD2420 F is a non-additivated, low density polyethylene. It is characterized by a good melt strength leading to a good bubble stability during blown film extrusion. It is delivered in pellet form.

This product is not intended for use in medical and pharmaceutical applications.

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|--------------------------|---|
| Application | Agriculture Film; Bags & Pouches; Food Packaging Film; Hygiene Film; Liner Film; Shrink Film |
| Market | Flexible Packaging |
| Processing Method | Blown Film |
| Attribute | General Purpose; Good Heat Seal; Good Melt Strength; Good Optical Properties; Good Processability |

| Typical Properties | Nominal Value | Units | Test Method |
|----------------------------------|---------------|-------------------|---------------|
| Physical | | | |
| Melt Flow Rate, (190 °C/2.16 kg) | 0.75 | g/10 min | ISO 1133-1 |
| Density | 0.923 | g/cm ³ | ISO 1183-1 |
| Mechanical | | | |
| Tensile Modulus | 260 | MPa | ISO 527-1, -2 |
| Tensile Stress at Yield | 11 | MPa | ISO 527-1, -2 |
| Film | | | |
| Dart Drop Impact Strength, F50 | 150 | g | ASTM D1709 |
| Tensile Strength | | | |
| MD | 26 | MPa | ISO 527-1, -3 |
| TD | 24 | MPa | ISO 527-1, -3 |
| Tensile Strain at Break | | | |
| MD | 300 | % | ISO 527-1, -3 |
| TD | 600 | % | ISO 527-1, -3 |
| Coefficient of Friction | >0.8 | | ISO 8295 |
| Impact | | | |
| Failure Energy | 5.5 | J/mm | DIN 53373 |

| | | |
|---|------------|-------------|
| Thermal | | |
| Vicat Softening Temperature, (A/50) | 96 °C | ISO 306 |
| Peak Melting Point | 111 °C | ISO 11357-3 |
| Optical | | |
| Haze, (50 µm) | <8 % | ASTM D1003 |
| Gloss | | |
| (20°) | >40 | ASTM D2457 |
| (60°) | >90 | ASTM D2457 |
| Additional Information | | |
| Test Specimen | Film | |
| Film properties tested using 50 µm thickness blown film extruded at a melt temperature of 180°C and a blow-up ratio of 2.5:1. | | |
| Processing Parameters | | |
| Extrusion Temperature | 170-220 °C | |