

Technical Data Sheet

*Circulen*Renew C14 LD2420K



Low Density Polyethylene

Product Description

*Circulen*Renew C14 LD2420 K is part of the *Circulen*@ product family of circular and sustainable solutions. *Circulen*Renew 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 *Circulen*Renew C14 is measured by an accredited third party laboratory and stated as a parameter on the Certificate of Analysis (CoA).

*Circulen*Renew C14 LD2420 K is a drop-in solution and therefore doesn't require any adaptation of the existing processing equipment.

*Circulen*Renew C14 LD2420 K is a non-additivated, low density polyethylene. It is characterized by a good processability. Films made from *Circulen*Renew C14 LD2420 K exhibit good optical properties. It is delivered in pellet form.

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

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|--------------------------|---|
| Application | Coatings, Protective; Food Packaging Film; Hygiene Film; Shrink Film; Surface Protection Film |
| Market | Flexible Packaging |
| Processing Method | Blown Film; Cast Film; Extrusion Coating; Injection Molding |
| Attribute | Good Heat Seal; Good Optical Properties; Good Processability |

| Typical Properties | Nominal Value | Units | Test Method |
|----------------------------------|---------------|-------------------|---------------|
| Physical | | | |
| Melt Flow Rate, (190 °C/2.16 kg) | 4.0 | g/10 min | ISO 1133-1 |
| Density | 0.924 | 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 | 100 | g | ASTM D1709 |
| Tensile Strength | | | |
| MD | 22 | MPa | ISO 527-1, -3 |
| TD | 17 | MPa | ISO 527-1, -3 |
| Tensile Strain at Break | | | |
| MD | 300 | % | ISO 527-1, -3 |
| TD | 600 | % | ISO 527-1, -3 |
| Coefficient of Friction | >0.7 | | ISO 8295 |
| Impact | | | |
| Failure Energy | 3.5 | J/mm | DIN 53373 |

Thermal

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|-------------------------------------|--------|-------------|
| Vicat Softening Temperature, (A/50) | 92 °C | ISO 306 |
| Peak Melting Point | 111 °C | ISO 11357-3 |

Optical

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|---------------|------|------------|
| Haze, (50 μm) | <8 % | ASTM D1003 |
| Gloss | | |
| (20°) | >60 | ASTM D2457 |
| (60°) | >105 | ASTM D2457 |

Additional Information

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|---|------|
| Test Specimen | Film |
| Film properties tested using 50 μm thickness blown film extruded at a melt temperature of 170°C and a blow-up ratio of 2.5:1. | |

Processing Parameters

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|-----------------------|------------|
| Extrusion Temperature | 150-190 °C |
| Blown Film Extrusion | |