

Technical Data Sheet

Circulen 2420F Plus



Low Density Polyethylene

Product Description

Circulen 2420 F Plus is a circular polymer, which contains building blocks from non-mechanical recycling processes converting renewables and organic wastes into new cracker feedstock.

The bio content of recycled cracker feedstock is measured and certified on the Certificate of Analysis.

Circulen 2420 F Plus 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.

Regulatory Status

For regulatory compliance information, see *Circulen 2420F Plus* [Product Stewardship Bulletin \(PSB\) and Safety Data Sheet \(SDS\)](#).

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|--------------------------|---------------------------------------------------------------------------------------------------|
| Status | Commercial: Active |
| Availability | Africa-Middle East; Asia-Pacific; Europe |
| 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 N) | 96 | °C | ISO 306 |

| | | |
|-------------------------------------------------------------------------------------------------------------------------------|------------|------------|
| Peak Melting Point | 111 °C | ISO 3146 |
| 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 | |

Notes

These are typical property values not to be construed as specification limits.