

Polyethylene

Recleo" PE S0003

Post-Consumer Recyclate



Accelerating Action
on Circularity

Description

Recleo PE S0003 is a transparent low gel low density polyethylene post-consumer recyclate (rLDPE) supplied in pellet form for high-end blown film applications. This material is an ideal LDPE used where sustainability and circularity matter. PE S0003 is a 100% post-consumer recyclate coming from commercial waste mainly. Due to the nature of recyclates, some variation in colour can be observed between batches.s.

Cas No. 9002-88-4

Typical characteristics

Recleo" PE S0003 can be described with following typical characteristics:

| | |
|-------------------|--------------------------|
| High transparency | Pellet shape: lenticular |
| Low gel level | Filtration: 100 µm |
| Low odour | |

Applications

Recleo" PE S0003 is intended for following applications:

- Non food contact consumer packaging where transparency and toughness are key parameters
- High end collation shrink packaging
- Non-food contact primary packaging

Note: Minor quantity of BorShape" LLDPE significantly boosts mechanical performances of PE S0003 helping converters, brand owners and retailers meeting their sustainability goals without compromising key mechanical properties for similar packaging performance.

Physical properties

| Property | Typical value * | Unit | Test method |
|---------------------------------|-----------------|----------|-------------|
| Density | 0.925 | g/cm³ | ISO 1183 |
| Melt flow rate (190 °C/2.16 kg) | 0.5 | g/10 min | ISO 1133-1 |
| Bulk density | 470 | g/l | ISO 60 |
| Moisture content ¹ | d 0.1 | % | |

* Data should not be used for specification work

¹ internal method

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Film properties

| Property | Typical value * | Unit | Test method |
|--------------------------------|-----------------|------|-------------|
| Tensile Modulus MD | 230 | MPa | ISO 527-3 |
| Tensile Modulus TD | 270 | MPa | ISO 527-3 |
| Tensile strength MD | 19 | MPa | ISO 527-3 |
| Tensile strength TD | 20 | MPa | ISO 527-3 |
| Tensile strain at break MD | 360 | % | ISO 527-3 |
| Tensile strain at break TD | 570 | % | ISO 527-3 |
| Tear resistance (Elmendorf) MD | 2.0 | N | ISO 6383-2 |
| Tear resistance (Elmendorf) TD | 4.6 | N | ISO 6383-2 |
| Dart drop | 110 | g | ISO 7765-1 |
| Haze | 25 | % | ASTM D1003 |
| Gloss 45° | 28 | GU | ASTM D2457 |

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| Processing setting | Typical value/range |
|--------------------|---------------------|
| Melt temperature | 160 - 190 °C |

Due to differences in extrusion machine design the optimum temperature adjustments are individual and should be evaluated for each production line.

Processing techniques

Recleo PE S0003 is easily processed on conventional extruders. Following parameters should be used as guideline:

Packaging and storage

PE S0003 should be stored in dry conditions at temperatures below 50°C and protected from UV-light. Improper storage can initiate degradation, which can result in odour generation and colour changes and can have negative effects on the physical properties of this product.

Product compliance documents

Latest versions of product safety information sheets (PSIS), product safety data sheets (SDS) and other product liability documents are available in our website www.borealisgroup.com.

Sustainability aspects

Borealis is ever mindful of the impact of our products on the planet. We promote Design for Circularity (DfC) and Design for Recycling (DfR) to conserve natural resources and to reduce the environmental impact of products over their entire lifetime (including production, use phase and after phase). DfR helps ensure that material can be effectively recycled while maximizing the material performance efficiency.

Further information on sustainability and Design for Recycling (DfR) can be found from our websites www.borealisgroup.com and www.borealiseverminds.com.

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