

Polyethylene

NAV101

Post-Consumer Recyclate



Accelerating Action  
on Circularity

Description

NAV101 is a transparent low density polyethylene post-consumer recyclate (rLDPE) supplied in pellet form for high-end blown film applications. NAV101 is an ideal LDPE used where sustainability and circularity matter. NAV101 is a 100% post-consumer recyclate including a large part of recycled post-consumer plastic waste coming from pre-sorted municipal (household) waste. NAV101 is part of the EuCertPlast certificate according to the European Standard EN 15343:2007 (certificate available upon request). Due to the nature of recyclates, some variation in colour can be observed between batches.

Cas No. 9002-88-4

Typical characteristics

NAV101 can be described with following typical characteristics:

High transparency	Available in homogenised 24-ton truckloads
Low odour	Filtration: 100 µm

Applications

NAV101 is intended for following applications:

- Collation shrink film
- Shrink film
- Lamination film for non-food contact primary packaging
- Non-food contact primary packaging
- Secondary and tertiary packaging where transparency is key

Note: Minor quantity of BorShape® LLDPE significantly boosts mechanical performance, 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)	0.75	g/10min	ISO 1133-1
Bulk density	490	g/l	ISO 60
Moisture content <sup>1</sup>	≤ 0.05	%	

\* Data should not be used for specification work

<sup>1</sup> internal method

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### Film properties

Property	Typical value *	Unit	Test method
Tensile Modulus MD	215	MPa	ISO 527-3
Tensile Modulus TD	255	MPa	ISO 527-3
Tensile strength MD	15	MPa	ISO 527-3
Tensile strength TD	16	MPa	ISO 527-3
Tensile strain at break MD	230	%	ISO 527-3
Tensile strain at break TD	530	%	ISO 527-3
Tear resistance (Elmendorf) MD	1.6	N	ISO 6383-2
Tear resistance (Elmendorf) TD	4.3	N	ISO 6383-2
Dart drop	75	g	ISO 7765-1
Haze	29	%	ASTM D1003
Gloss (45°)	35	GU	ASTM D2457

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### Processing techniques

NAV101 is easily processed on conventional extruders.  
Following extrusion parameters should be used as guidelines:

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

Due to differences in screw and die head designs the optimum temperature adjustments are individual and should be evaluated for each production line.

### Packaging and storage

NAV101 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](http://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](http://www.borealisgroup.com) and [www.borealiseverminds.com](http://www.borealiseverminds.com).

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### Disclaimer

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