NOVA Chemicals
Polyethylene

Info Sheet
Flexible Films

Ready-to-Recycle Resins

Designed for Circularity

Answer the demands of a circular economy with NOVA Chemicals' ready-to-recycle resins. This portfolio of octene and butene linear low density polyethylene (LLDPE) resins is designed to retain their physical, processability and optical properties after mechanical recycling. They are also ideally suited to be used as virgin content in applications that incorporate a high percentage of recyclate. All the resins provide balanced physical properties to enhance structure design versatility and excellent productivity on blown and cast film lines and downstream converting equipment.

GRADE	TYPE	DESCRIPTION
VPs412-A	Octene LLDPE	Robust sealant with high caulkability for fast sealing and fast setting
VPsK914-A/C	Octene LLDPE	Ultra-durable performance sealant for high-speed packaging lines
SPsK919-C/F	Octene LLDPE	Exceptional abuse resistance for heavy duty applications
SPs116-C/D	Octene LLDPE	All-purpose, ultra versatile performance resin to replace conventional LLDPEs
FP120-CE	Octene LLDPE	All around performer with high toughness and strength plus easy processability
FG220-A	Octene LLDPE	Exceptional toughness – ideal workhorse for cast film
PF-0118-FI	Butene LLDPE	Exceptional toughness and strength over conventional butene LLDPEs

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Applications

Our ready-to-recycle resins are ideal for a wide range of flexible packaging applications:

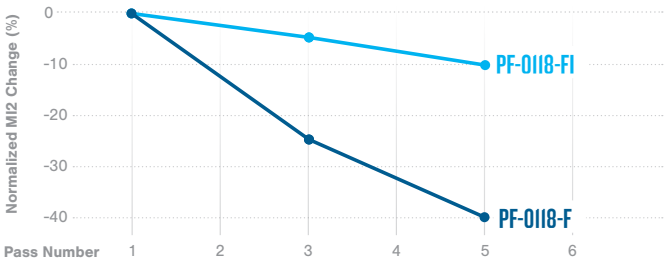
- Heavy duty sack
- Collation shrink film
- Multipack overwrap
- Stretch film
- Dunnage
- Agricultural film
- Household and personal care products
- Core layers of select multilayer food packaging*

*With an appropriate FDA "no objection" PCR stream

Polyethylene properties typically degrade with every mechanical recycling pass, or heat history. Our ready-to-recycle resins are designed to retain their performance through several heat histories, helping to increase the supply of high-quality post-consumer recycled PE for flexible film applications.

Studies were conducted with either 25% rLDPE ("r" = recycled content) or 25% rHDPE added to the base virgin resin. We provide data for representative grades from the suite of ready-to-recycle resins; however, the same trends are observed for all blends.

Melt Flow Retention Rate

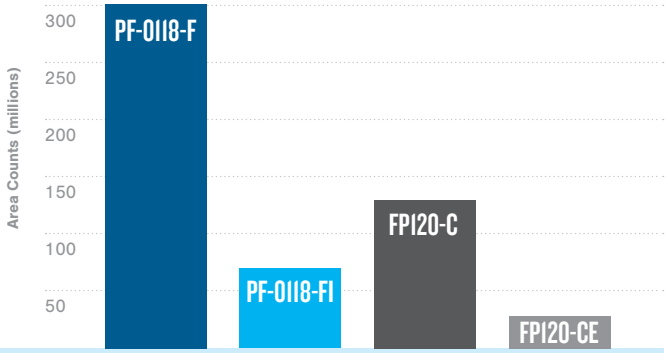


Melt flow stability is maintained[1]

[1] A multi-pass study was conducted using a Leistritz twin screw pelletizer with a melt temperature of 250°C. Pass 3 represents standard commercial blown film line processing conditions.

Total Oxidized Volatiles

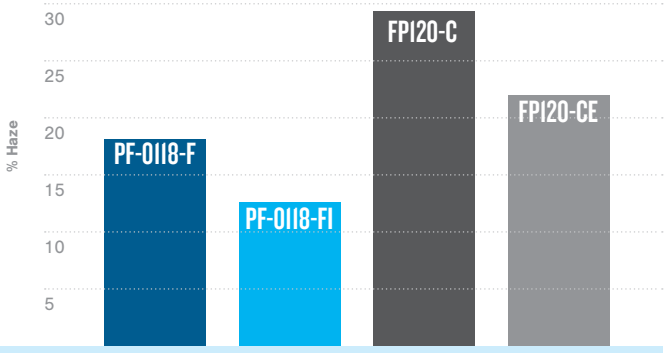
Oxidized volatile species measured include acetone, acetic acid, butyrolacetone. *t*-butanol, and hexanal



Volatile emissions are reduced by 70-80% vs standard resins

Film Haze

Haze is a common issue in films that include recycled content



Haze is reduced by up to 25% vs standard resins

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