ExxonMobil

Energy lives here™

Innovative injection-molded packaging solutions with Oppera™ modifiers

Key benefits

Cleared for food contact*

Enhanced stiffness
Up to 60%

Improved barrier performance
Higher water and oxygen barrier performance

Extended shelf-life

Excellent optics
Low haze and high gloss for an appealing product display

If you are looking for an injection-molded packaging solution that is chlorine-free, cleared for food contact* and offers exceptional stiffness and barrier properties for longer product shelf-life, Oppera modifiers may be your answer.

Potential applications

Based on the key advantages offered by Oppera modifiers in injection-molded packaging, here are some applications where it can make a significant difference to the end result:

- Coffee, soybean, milk powder capsules
- Cold brew concentrated coffee containers
- Beverage cups
- Instant food packages

New performance possibilities

Oppera modifiers, used in combination with homo-polypropylene (hPP), provides a new level of barrier and stiffness performance and creates other new possibilities to enhance your packaging aesthetics and image.

*Food contact compliance varies by country. Please check with your local ExxonMobil representative for specific jurisdiction and applications in your market.


Powder containers


Liquid containers


Food containers

Oppera™ modifiers and ExxonMobil™ PP raw material properties

Materials	Basic properties			
ExxonMobil PP	Melt flow rate (g/10 min)	Flexural Modulus (MPa)	Notched Izod impact (J/m)	HDT (°C)
ExxonMobil PP3155E3	36	1215	25.47	91.87
Test method	ASTM D1238	ExxonMobil method based on ASTM D790	ExxonMobil method based on ASTM D256	ExxonMobil method based on ASTM D648

Oppera modifiers	Supply region	Softening point (°C)	Test method
Oppera PR 100	EU, US	138	ExxonMobil method
Oppera PR 120	EU, AP	125	ExxonMobil method

You may be in the market for a product that extends your possibilities with the highest performance standards. Or perhaps you prefer a solution that balances your technical requirements and your bottom line. ExxonMobil offers you a choice of two Oppera modifier grades to fulfil your needs:

Oppera PR 100

Where the highest performance matters

- Highest 140°C[(1)] softening point
- Higher stiffness
- Higher barrier
- Lowest volatiles

Oppera PR 120

Where both performance and cost matter

- High 125°C[(1)] softening point
- Lower volatiles and better barrier than competition product at similar softening point

[(1)] Typical value, Test method: ETM E-24

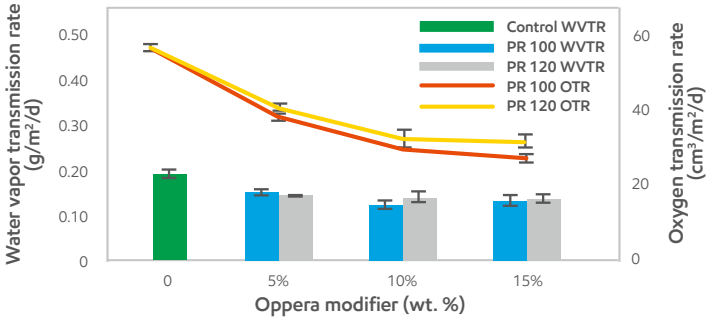
Using Oppera PR 100 or Oppera PR 120, you can tailor the barrier performance of your injection-molded PP packaging within these ranges:

- **30% ~ 50%** decrease of oxygen transmission
- **15% ~ 35%** decrease of water vapor transmission

Test results are generated by ExxonMobil test methods that may not fully conform to the ASTM and/or ISO methods. Test methods are available upon request.

Barrier performance

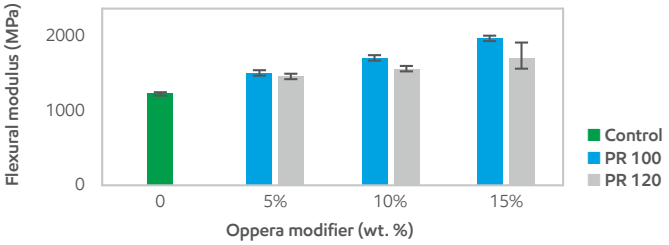
Oppera modifiers reduce oxygen and water vapor transmission.



Water vapor transmission rate, ExxonMobil method based on ASTM F1249
Oxygen transmission rate, ExxonMobil method based on ASTM D3985

Stiffness performance

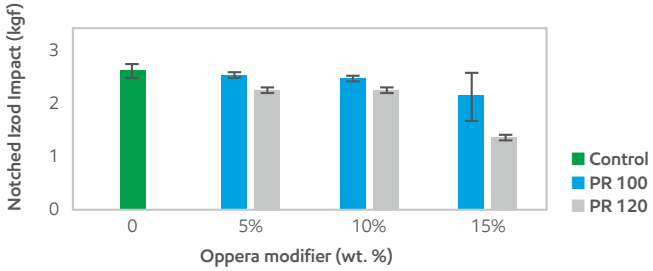
As Oppera modifier concentration increases, the stiffness of polypropylene shows an obvious improvement.



Flexural Modulus, ExxonMobil method based on ASTM D790

Mechanical performance

Increased stiffness without impairing impact performance when dosage is below 10%.



Notched Izod Impact, ExxonMobil method based on ASTM D256

Contact us for more information:
exxonmobilchemical.com

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A0820-457E49