



We create chemistry

# Irgaclear<sup>®</sup> technology

On-demand clarifier solutions enabling blown film extrusion with polypropylene

## The benefits at a glance

### Ease of polymer modification

- Clarifying agent is easily introduced via a masterbatch
- Dosage of the masterbatch between 1% to 5%
- Very good flowability and improved processing window
- Flexibility to accommodate various polypropylene grades

### Stronger mechanical performance

- Significant increase of materials stiffness
- Efficient in both machine and transversal direction
- Exploit potential of polypropylene at low thickness
- Downgauging without performance loss

### Improved aesthetics

- Drastic reduction of film haziness
- Removal of flowlines and visual defects
- Superior gloss and shiny surface

### Sustainability credits

- Food contact compliant solution
- No impact on organoleptic properties
- Good barrier for food preservation
- Fit for recycling

Better utilization of resources, energy and film converting assets are becoming essential for the supply of technical films in a sustainable and economically viable manner.

Blown film lines, agile and efficient, are rarely running with polypropylene resins despite a clear interest in this polymer's intrinsic properties.

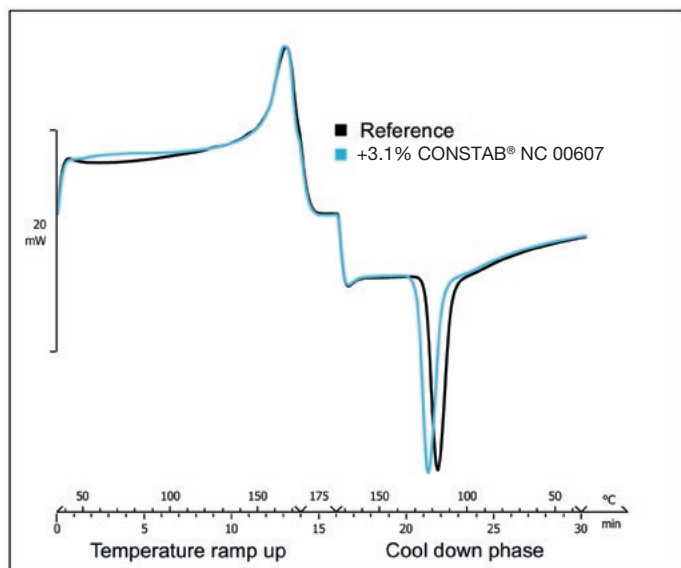
Clarifying and nucleation additives technology can ease processing and provides opportunities to produce industrially high-quality blown films with polypropylene.

BASF Irgaclear<sup>®</sup> technology is a unique performance enhancer for polypropylene films. At very low concentration, it provides a good balance between processing stability, mechanical and aesthetic properties.

Data on this page have been provided by **CONSTAB® Polyolefin Additives GmbH – Member of Kafrit Group**.  
The mentioned Irgaclear technology is formulated in CONSTAB® NC 00607 PP functional masterbatch.

## Polypropylene morphology modification

Irgaclear® technology will accelerate crystallization, starting at higher temperature in the melt. Crystallinity and aesthetic will be optimized.



## Drastic haze reduction with Irgaclear®

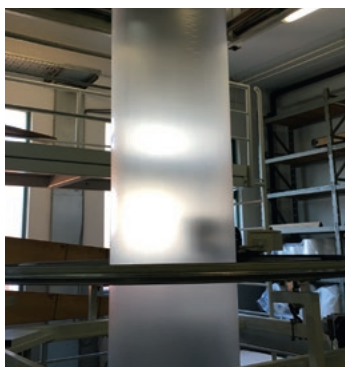
Three layers films have been produced and modified to optimize processing and aesthetics.



Haze = 62%: Reference	Haze = 31%	Haze = 7%
– 40 µm thickness	– 40 µm thickness	– 40 µm thickness
– Same polymer in the 3 layers	– 10% copolymer in the middle layer	– 5% copolymer in the middle layer
– No additive	– No additive	– +3.1% CONSTAB® NC 00607 PP

## Bubble stability with Irgaclear® in CONSTAB® NC 00607 PP

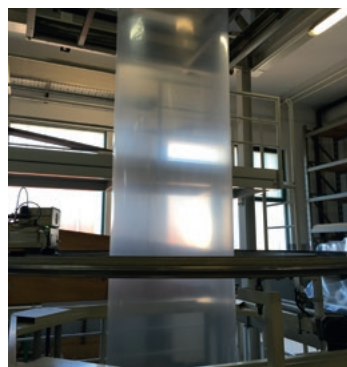
With the introduction of the additive package, visual defects are eliminated with flow lines removal and strong reduction of haziness. Polymer melt strength enables stable processing conditions.



**Reference film**

PP-Homo without additives

- Film thickness: 40 µm
- Processing Temperature: 190 °C
- Bubble Ø: 0.8 m
- Throughput: 175 kg/h (+8% versus ref.)



**Clarified film**

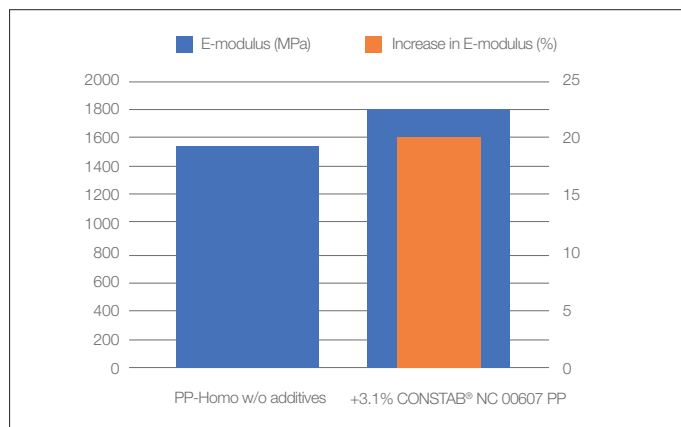
+3.1% CONSTAB® 00607 PP

Films have been produced by **PLASTIKA - ANDREJ MESOJEDEC** s.p. in Stratun, Slovenia.

## Superior mechanical performance

Very good intrinsic mechanical properties of polypropylene films are enhanced by the addition of CONSTAB® NC 00607 PP.

### Stiffness



Film thickness: 40 µm  
Tensile testing measured in machine direction

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