

# LESS IS MORE ...

Composite barrier films  
Superclear and NICE



Superclear and NICE

## LESS IS MORE ... THINNER FILMS WITH STRONG PROTECTIVE EFFECT

Superclear and NICE represent the new generation of films: thinner, more efficient, more sustain-able. Compared to conventional films, the film thickness can be reduced by up to 35 percent – depending on the application. This is made possible by using innovative extrusion technology and special formulations based on high-performance polymers. This results in high-capacity films offering ideal product protection while breaking new ground in terms of product presentation thanks to the films extraordinary brilliancy and transparency.

Superclear and NICE are **milestones** of innovative packaging technology.

High-performance barrier films offer **new possibilities** for environmentally friendly and economically efficient food packaging solutions.

REDUCED AMOUNT OF



Raw materials/  
materials



Energy



Waste



CO<sub>2</sub> emissions

# INNOVATIVE TECHNOLOGY

Up to  
**35%**  
reduction of  
material!

Reduced amounts of material and thinner films are also beneficial in terms of environmental protection due to the reduction of required energy, resources, as well as carbon emissions. Developed and optimized by Wipak, this technology allows for the efficient and ecological use of raw materials. The unique technology provides for features such as transparency and skin effect (Superclear) or form stability and stableness (NICE).



LESS IS ...

... MORE  
PRODUCTIVITY

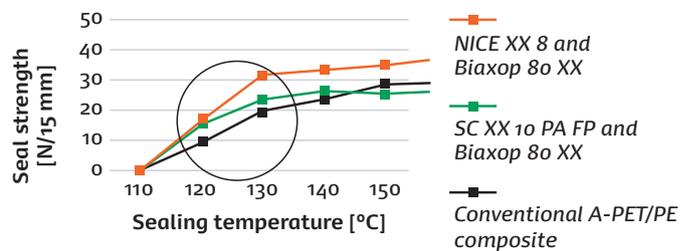
... MORE EFFICIENCY



Good formability. Superclear and NICE require less energy for forming. While traditional PA/PE composites are processed at 110–120° C, Superclear and NICE films can already be processed at forming temperatures of 80° C.

## TIGHT SEALING AT LOWER TEMPERATURES

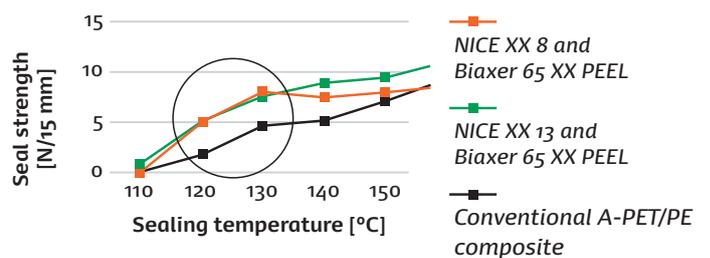
### Flexible films



Superclear and NICE can be processed using all common packaging machines. Thanks to the thinner composites and the reduced energy consumption the cycle performance and thus the production output can be increased. The result: more packages produced in the same time period.

When compared to conventional PA/PE composites, thinner NICE and Superclear-type films are able to seal earlier, already reaching consistent seal strength of 17 or 18 Newton/15mm at 120° C.

### Semi-rigid films



Both types of NICE films already reach a seal strength of 5 Newton (typical for peel systems) at 120° C. Thicker A-PET/PE composites however require 140° C to reach this sealing temperature. This means that NICE films less energy to achieve optimum sealing.

\* Comparison under laboratory conditions. Sealing time: 0.5 seconds at 50 Newton pressure per cm<sup>2</sup>. Both sealing plates heated. Standardized test according to DIN 55529

# NICE

## ... MORE STABILITY

The alternative to semi-rigid films – suitable for safe packaging of cheese, sausage or fish slices.

Up to  
**50%**  
reduction of  
material\*

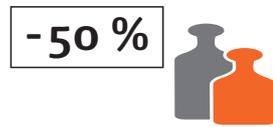
### Environmental impact of NICE

*Deviation from reference package: peelable A-PET/PE composite*

CO<sub>2</sub> emissions



Surface weight



Required raw materials/materials



### NICE

Thickness: 150 µm  
Surface weight: 145 g/m<sup>2</sup>

Strong barrier at high  
relative humidity (>50%)

Semi-rigid



High residual thickness in corners

Thermoformable



### Conventional A-PET/PE composite (peelable)

Thickness: 250 µm  
Surface weight: 313 g/m<sup>2</sup>

\* depending on type

# Superclear

... MORE TRANSPARENCY



Ideal skin effect for vacuum packages – the second skin for ham, sausage or cheese.

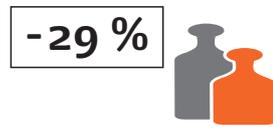
## Environmental impact of Superclear

*Deviation from reference package: PA/PE composite*

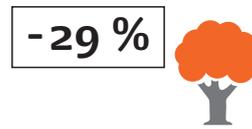
CO<sub>2</sub> emissions



Surface weight



Required raw materials/materials



### Superclear

Thickness: 159 µm  
Surface weight: 157 g/m<sup>2</sup>



### Conventional PA/PE composite

Thickness: 230 µm  
Surface weight: 224 g/m<sup>2</sup>

Excellent transparency

Even recovery/  
skin effect

Extremely strong barrier at  
high relative humidity (>50%)



Reduced curl  
with asymmetric  
film structures

Glue-free

\* depending on type

# Superclear and NICE

... MORE FLEXIBILITY

More options for MAP packages – for example for bread and bakery products.



## Environmental impact of Superclear and NICE as bottom web

Deviation from reference package: PA/PE composite

CO<sub>2</sub> emissions



Surface weight



Required raw materials/materials



### Conventional PA/PE composite

Thickness: 230 µm  
Surface weight: 224 g/m<sup>2</sup>

Strong barrier at high relative humidity (>50%)  
*Superclear und NICE*



\* depending on type



The Wipak Group develops and produces sophisticated packaging solutions for food products, as well as medical instruments and devices. As part of the Finnish Wihuri Group, Wipak has become a leading European provider of multi-layer films – with a focus on barrier films. Our extensive range of services such as package design, film development and technical support are an integral part of our solutions, making sure that our products help to create added value for our customers.

### Wipak online solutions

You will find more detailed product information and application notes describing our packaging solutions for food and medical applications at [www.wipak.com](http://www.wipak.com)

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