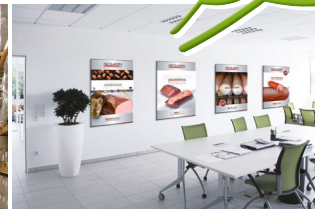


NICOLAISEN®

CASING & PACKAGING

Your partner for consultation and development in the field of artificial casings and shrink bags



The new generation of packaging

NatureFlex™ – and biodegradable compostable cellulose film.

ProNature Flex is a regenerated cellulose film which, depending on the application, is coated on both sides with plastic, while retaining its biodegradability.

A complete portfolio of films is available, one solution for each application, all based on cellulose.

Why NatureFlex™ films?

Highlighting the brand

Range of water vapor and oxygen barriers

UV light barrier (metallized, white and colors)

Easy to open packaging

Sustainable, renewable and compostable

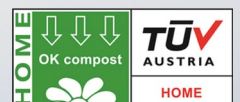
Provides a high level of protection against spoilage and weight loss

ProNature Flex films meet all global standards for industrial composability and are also OK Compost Home certified.

Combination with other biopolymers for technical laminates



Regenerated cellulose ~ Our alternative to plastic



NatureFlex™
NatureFlex™
BIODEGRADABLE



The offered products are:

- NatureFlex™ 100** (pure cellulose glass film) - water vapor and smoke permeable (not sealable)
- NatureFlex™ touch** (coated) - sealable, easily permeable to water vapor (for protection of touching)
- NatureFlex™ S400** (coated) - sealable, good water vapor and oxygen barrier
- NatureFlex™ OM Convenience** (coated) - sealable, easily permeable to water vapor
- NatureFlex™ S500** (with metal vaporization) - highest barrier properties suitable for laminates, alternative to aluminum foil (not sealable)



Many products have technically challenging demands on packaging films. The range of different products is constantly growing, and each type has unique packaging requirements. With our NatureFlex™ films, we offer a range designed to meet the requirements of sensitive products.

Technical features

- Tailor-made gas and moisture control ensure optimum ripening of the product.
- Excellent bacterial barrier as protection against unwanted infection with microorganisms.
- Optimum stiffness, folding properties and anti-static properties for machinability.
- Easy to print.
- Choice of transparent colors for product differentiation and brand color association.
- Excellent folding properties for effective wrapping.
- Cuddly when wet, and dimensionally stable after drying, this capability ensures a tight fit around the product for optimum appearance.
- Wide range of transparent colors for an attractive portion of presentation and taste association.
- Excellent folding properties give full control during the wrapping process.
- Peelability ensures easy-to-open packs for the convenience of the consumer.

for metallized NatureFlex™ film, laminated on paper

- High barrier against gas and water vapor ensures product protection and long shelf life.
- Adequate protection of the product against light.
- Excellent folding properties and natural affinity to paper.
- Renewable and compostable alternative to aluminum film.

Comparison of properties of the films

property	unit		NatureFlex™ 100	NatureFlex™ touch	NatureFlex™ S400	NatureFlex™ OM Convenience	NatureFlex™ S500
thickness	µm		21- 42	23-45	19- 45	23-30	23- 45
water vapour permeability	g/ m ² /d	38°C 90% RH	n/a	600	20	(25°C 75% RH) 150	10
oxygen permeability	cm ³ / m ² /d	23°C 50% RH	10,0	5,0	5,0	5,0	1,0
obfuscation	%		2	4	5,5	3	
tensile strength	MN/ m ²	longitudinal	125	125	125	125	125
		transverse	70	70	70	70	70
elongination at fracture	MN/m ²	longitudinal	22	22	22	22	22
		transverse	70	70	70	70	70



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