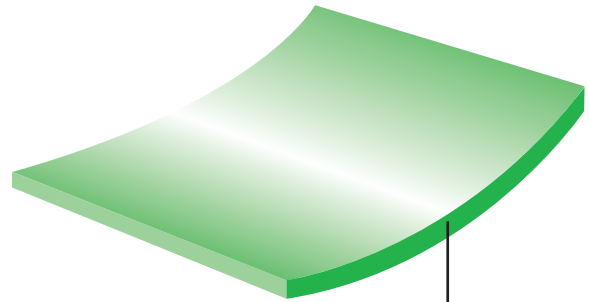


NatureFlex™ NP

Data

Features - Transparent, Non Heat-sealable Compostable Film

- Based on renewable sources
- Certified as compostable in both industrial and home composting environments, also suitable for anaerobic digestion.
- Excellent transparency and gloss
- Both sides of the film are equally receptive to inks and adhesives
- Highly permeable to water vapour with excellent barrier to gases and aromas
- Inherent, anti-static properties
- Excellent dead-fold characteristics



Transparent Cellulose Film

Applications

NP films can be used for twistwrap, glued bags and lamination, for products where protection from moisture is not required.

Property	Test Basis	Test Conditions	Units		NP					
					21μ	23μ	25μ	28μ	35μ	42μ
Thickness	Futamura Test		Micron		20.8	22.6	24.3	27.8	34.7	41.7
Yield	Futamura Test		m ² /kg g/m ²		33.3 30.0	30.8 32.5	28.6 35.0	25.0 40.0	20.0 50.0	16.7 60.0
Permeability to: Water vapour	ASTM E96	38°C 90% RH	g/m ² . 24hrs		Not applicable					
Oxygen	ASTM F 1927	23°C 50% RH	cc/m ² . 24hrs		10					
Optical: Gloss	ASTM D 2457	45°	Units		80					
Haze (wide angle)	ASTM D 1003	2.5°	%		2					
Coefficient of friction	ASTM D 1894	Static Dynamic			0.50					
					0.40					
Tensile strength	ASTM D 882		MN/ m ²	MD TD	125 70					
Elongation at break	ASTM D 882		%	MD TD	22 70					
Elasticity modulus (1% secant)	ASTM D 882		MN/ m ²	MD TD	≥2000 ≥1000					

All properties are tested under standard laboratory conditions: 23±2°C;50±5% RH, unless otherwise stated.
Where relevant, tests are based on international testing standards.
MD - Machine Direction TD - Transverse Direction

NatureFlex™ NP

Data

Environmental Data

Measure	Typical Value/ Suitability for use	Validation or Test Method
Biobased carbon content (¹⁴ C)	98%	ASTM D6866
Biomass content (total)	95%	Futamura calculation
Carbon footprint (GHG) kgCO ₂ eq/kg (incl.biogenic)	2.6	Peer reviewed LCA 2020 GaBi software Impact 2002+ (Global warming 500yr - midpoint)
Industrial compostability	Certified	EN13432, EN14995, AS4736 ASTM D6400 and ISO 17088
Home compostability	Certified	OK Compost Home, AS5810, NFT51-800
Anaerobic digestion	Approved	ISO 15985

NatureFlex films are suitable for a range of Organic Recycling methods, as detailed above, and for incineration with energy recovery. However they are not designed for mechanical recycling methods.



Reel Specifications

Nominal Reel Diameters Other lengths are available subject to negotiation

Film	Length/(metres)			
21μ	1800	3600	7200	10800
23μ	1700	3400	6800	10200
25μ	1550	3100	6200	9300
28μ	1300	2600	5200	7800
35μ	1050	2100	4200	6300
42μ	900	1800	3600	5400
Outside diameter for 77mm core	240mm	330mm	450mm	non-stand-ard
Outside diameter for 153mm core	non-stand-ard	355mm	475mm	570mm



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Food Contact

NatureFlex NP is formulated to comply with EU legislation for many room temperature food contact applications. Customers intending to use the film in a food contact application must request the Declaration of Compliance which gives full details. For information on other countries please contact your Futamura Sales Office.

Health and Safety Guidelines

For Health and Safety information, please refer to literature reference N190.



Film Storage & Use

To maintain the high quality of this product during storage it is recommended that NatureFlex NP should be stored in its original wrapping away from any source of local heating or direct sunlight.

Recommended conditions of storage are:

Temperature: 17-23°C

Relative Humidity: 35-55%

NatureFlex NP is suitable for use for 6 months from the date of delivery and stocks should be used in rotation.

Films should be allowed to reach operating room temperatures for 24 hours before use.

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