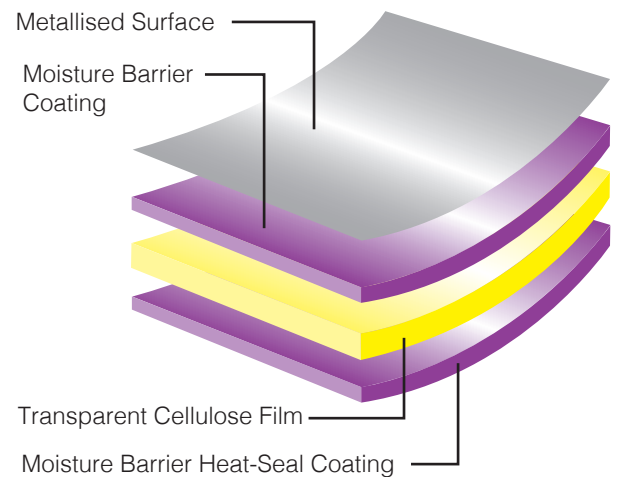


NatureFlex™ NKME

Data

Features - High Barrier Metallised Compostable Film

- Based on renewable resources
- Certified as compostable in both industrial and home composting environments, also suitable for anaerobic digestion
- Excellent moisture barrier
- Excellent dead-fold characteristics
- Highly receptive surfaces for ease of conversion
- Ultra high lustre and sparkle
- Excellent barrier to UV/visible light
- Heat-sealable on non-metallised surface
- Inherent anti-static properties
- Controlled slip characteristics
- Excellent barrier to gases and aromas
- Resistant to oils and greases
- Cold-seal compatible



Applications

The incorporation of a minimal amount of PVdC to optimise moisture and gas barrier functionality allows for simpler and lighter packaging to extend and maintain shelf life of the packaged products.

NKME has been specifically formulated for lamination applications.

Technical Properties (Typical Values)

Property	Test Basis	Test Conditions	Units	NKME	
				20μ	30μ
Thickness	Futamura Test		Micron	20.1	29.9
Yield	Futamura Test		m ² /kg g/m ²	34.5 29.0	23.3 43.0
Permeability to: Water vapour	ASTM E96	38°C 90% RH	g/m ² .24 hrs	10	
Oxygen	ASTM F 1927	23°C 0% RH 23°C 50% RH	cc/m ² .24 hrs	0.5 1.0	
Optical: Optical Density	Futamura Test			2.5	
Coefficient of friction (film to film)	ASTM D 1894	Metallised surface Non-metallised surface		0.40	
				0.30	
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	≥1200 ≥600	
Sealing range	Futamura Test	0.5 secs 69 kN/m ²	°C	115-170	
Seal strength	Futamura Test	135°C; 0.5 secs; 69 kN/m ²	g(f)/25mm	225	

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

Environmental Data

Measure	Typical Value/ Suitability for use	Validation or Test Method
Biobased carbon content (¹⁴ C)	90%	ASTM D6866
Biomass content (total)	87%	Futamura calculation
Carbon footprint (GHG) kgCO ₂ eq/kg (incl.biogenic)	5.35	Peer reviewed LCA 2010 GaBi software
Industrial compostability	Certified	EN13432, EN14995, ASTM D6400 and ISO 17088
Home compostability	Certified	OK Compost Home
Anaerobic digestion	Approved	ISO 15985
Marine biodegradation	Approved	ASTM D6691-09



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 thermal (melt) recycling methods. Please check for availability of FSC™ certified film.

Reel Specifications

Nominal Reel Diameters

Film	Length/(metres)			
	1900	3800	7600	11400
20µ 30µ	1250	2500	5000	7500
Outside diameter for 77mm core	240mm	330mm	450mm	ns
Outside diameter for 153mm core	ns	355mm	475mm	570mm

Other reel lengths are available subject to negotiation.

ns = non-standard.

NatureFlex NKME is available with the metallised surface wound facing either the inside or the outside of the reel. The metallised surface is identified by the code:

I - for inside

O - for outside

Food Contact

The non-metallised surface of NatureFlex NKME 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. The metallised surface should not be placed in contact with foods. For information on other countries please contact your Futamura Sales Office.

Film Storage

To maintain the high quality of this product during storage it is recommended that NatureFlex NKME 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 NKME is suitable for use for 4 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.

Health and Safety Guidelines

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



www.futamuragroup.com

email: info@futamuragroup.com

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Sales Offices

Europe (UK) Tel +44 (0)16973 41212

Americas (USA) Tel +1 770 818 3012

Asia-Pacific (Japan) Tel +81 52 562 1841

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