

# Cellophane MST/MT33

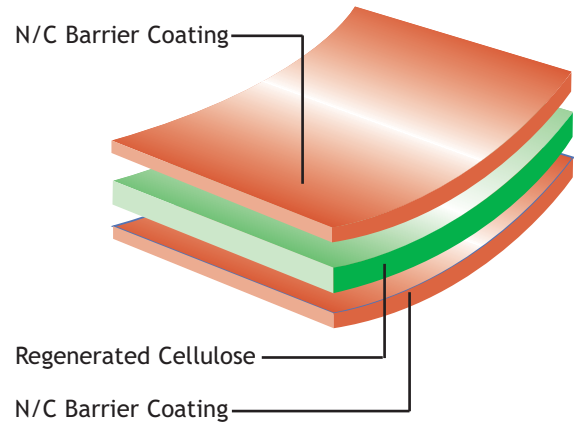
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Known outside the USA as Cellophane™ MS/MF

## Features - General Purpose Films

Regenerated cellulose film (RCF), coated on both sides with nitrocellulose by a solvent process.

- MST/MS grades heat-sealable on both sides
- MT33/MF grade non heat-sealable
- Good barrier to water vapor, gases and aromas
- Anti-static
- Resistant to oils and greases
- Both sides of the film are equally receptive to inks, adhesives and tear-tapes
- Excellent dead-fold characteristics
- High gloss and transparency
- Biodegradable base film



## Applications

**220/195MST** Suitable for use as a single film for general overwrapping on vertical and horizontal form-fill-seal machines.

**140MST** Used as a single film for heavy duty packaging.

**MT33** Specifically designed for twist and bunch wrapping of hot and sticky candy products, such as caramels and nougats on high speed machinery.

## Technical Properties (Typical Values)

Property	Test Method	Test Conditions	Units	MST/MS type films			MT33/MF
				220MST 320MS	195MST 360MS	140MST 500MS	220MT33 320MF
Thickness	Innovia Films test		mil	0.87	0.99	1.37	0.87
Yield	Innovia Films test		in <sup>2</sup> /lb	22000	19500	14100	22000
Permeability to: Water vapor	ASTM E96	100° F 90% RH	g/100in <sup>2</sup> . 24 hr	1.3			
Oxygen	ASTM F 1927	75° F 0-5% RH	cc/100in <sup>2</sup> . 24 hrs.bar	0.19			
Optical: Gloss	ASTM D 2457	45°	units	90			
Haze (wide angle)	ASTM D 1003	2.5°	%	4			
Coefficient of friction (film to film)	ASTM D 1894	Static Dynamic		0.25 0.20			
Tensile strength	ASTM D 882		kpsi MD TD	17 9			
Elongation at break	ASTM D 882		% MD TD	22 70			
Elasticity modulus (1% secant)	ASTM D 882		kpsi MD TD	>290 >145			
Sealing range	Innovia Films test	0.5 secs; 10 psi	°F	195-320			N/A
Seal strength	Innovia Films test	275° F; 0.5 secs; 10 psi	g(f)/1 <sup>1/2</sup> in	180			N/A

All properties are tested under standard laboratory conditions: 75°F; 50± 5% RH, unless otherwise stated.

MD Machine Direction TD Transverse Direction

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## Roll Specifications

### Roll Lengths vs Approximate Outside Diameter

Film	Length/(feet)		
	9 1/2" O.D. (3" Core)	13" O.D. (3" Core)	18" O.D. 18 3/4" O.D. (3" Core) (6" Core)
220MT33/320MF	5700	11400	22800
220MST/320MS	5700	11400	22800
195MST/360MS	5000	10000	20000
140MST/500MS	3600	7200	14400

Other roll lengths are available subject to negotiation.

### Sheets

We can provide sheets to a range of sizes and shapes upon request.

### Film Storage

To maintain the high quality of these products during storage it is recommended that Cellophane MST/MS and MT33/MF should be stored in their original wrapping away from any source of local heating or direct sunlight.

Recommended conditions of storage are:

Temperature: 60-75 °F

Relative Humidity: 35-55%

Cellophane MST/MS and MT33/MF are 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.

### Food Contact

Cellophane MST/MS and MT33/MF are suitable for most applications involving direct contact with foodstuffs. Cellophane nitrocellulose coated films are manufactured to meet current FDA food contact regulations relating to regenerated cellulose films, specifically 21 CFR 177.1200. For specific inquiries, please refer to literature reference A120 or contact our Technical Services Department.

### Health & Safety Guidelines

For Health and Safety information, please refer to literature reference A190.



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