

General film

FE-2000

FE-2000 is a standard type polycarbonate film with high transparency and workability as well as beautiful gloss on the surface, adopted in a wide variety of applications including printed plates and molded forms.



Types and Grades

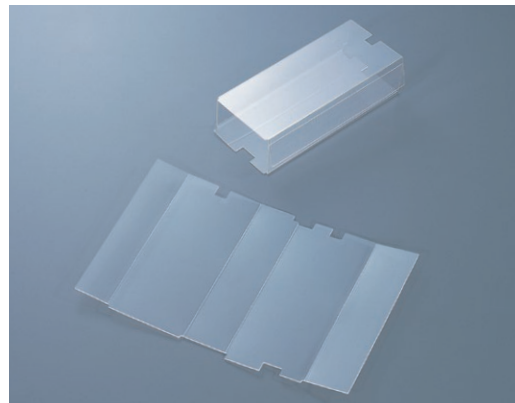
General film (without masking)

Thickness (μm)	100	200	300	400	500
Width (mm)	1,300				
Length (m)	200	100	100	50	50

One-sided masking film (Semi-stock)

Thickness (μm)	100	130	180	200	250	300
Width (mm)	1,300					
Length (m)	200	200	100	100	100	100

- Core - Paper tube (3 inches = inner diameter of 76.2 mm)
- Please contact us about the use of cut-size films.



Insulation material



Nameplates (printed)

Matte film

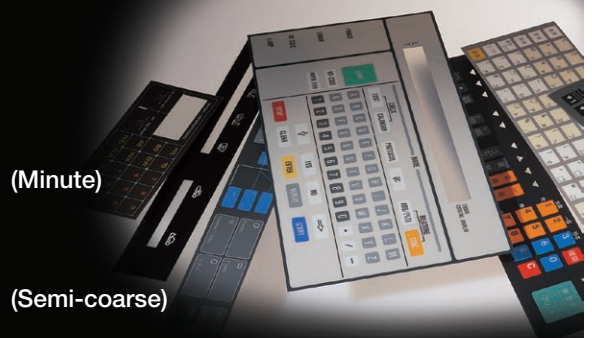
FE-2000M01

(Minute)

FE-2000M12

(Semi-coarse)

These are special films that can reduce reflection with the matte finish on their surfaces. These are adopted in printed plates, or display panels and membrane switches for automobiles, home and office appliances.

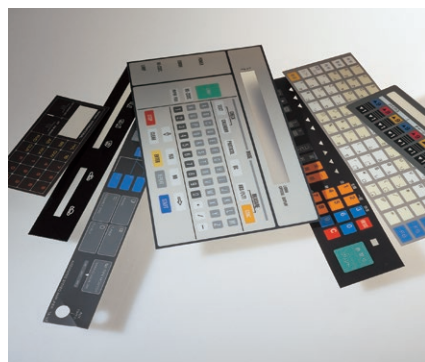


Types and Grades

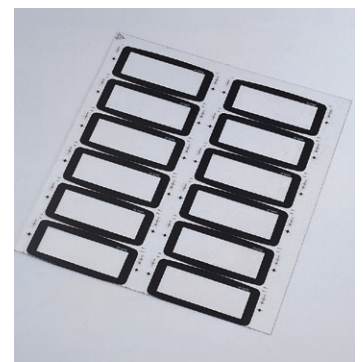
Roll type

Thickness (μm)	130	180	250	300	500
Width (mm)	1,300				
Length (m)	200	150	100	100	50

- Please contact us about the use of cut-size films.



Printed board



Printed plate

Basic physical properties of FE-2000·FE-2000M01·FE-2000M12

Category	Test Item	Condition	Test Method	Unit	FE-2000 FE-2000M01 FE-2000M12
Physical properties	Density	—	ISO 1183 JIS K7112	g/cm ³	1.2
	Tensile strength	Thickness 100μm	ISO 527-1~3 JIS K7127, 7161-1,2	MPa	55~59
	Nominal strain at break	Thickness 100μm		%	120~140
Thermal properties	Coefficient of Thermal expansion	—	JIS K7140	cm/cm/°C	6~7×10 ⁻⁵
	Second-order transition point	—	—	°C	149
	Melting temperature	—	—	°C	220~230
	Thermal conductivity ratio	—	JIS A1412-3	cal/cm·sec·°C	4~5×10 ⁻⁴
	Specific heat	—	JIS K7123	kJ/kg·K	1.09~1.17
	Brittle temperature	—	ASTM D746	°C	-135
	Flammability	Thickness 100μm or over	UL94	—	VTM-2
Gas permeability	Water vapor	Thickness 300μm	JIS Z0208	g/m ² ·24h	11
	N ₂	Thickness 300μm	JIS K7126	cc·cm/cm ² ·sec·cmHg	2.4×10 ⁻¹¹
	O ₂	Thickness 300μm	JIS K7126	cc·cm/cm ² ·sec·cmHg	12.8×10 ⁻¹¹
	CO ₂	Thickness 300μm	JIS K7126	cc·cm/cm ² ·sec·cmHg	24×10 ⁻¹¹
Electric properties	Dielectric breakdown strength	Thickness 60μm 25°C	JIS K6911	MV/m	150~165
	Volume resistivity	23°C	JIS K6911	Ω·cm	2×10 ¹⁶
	Dielectric constant	23°C	JIS K6911	—	3.0
	Dielectric loss tangent	23°C	JIS K6911	—	0.001~0.012

The above values are actual measurement, not a guarantee of performance.

Heat stability of FE-2000·FE-2000M01·FE-2000M12

Temperature	Time	Shrinkage		
		Thickness (μm)		
		100	300	500
100°C	2 hours	No change	No change	No change
120°C	2 hours	No change	No change	No change
130°C	2 hours	No change	No change	No change
140°C	2 hours	Less than 1%	Less than 1%	No change
150°C	2 hours	Less than 3%	Less than 1%	Less than 1%

According to JIS C2318 (Electric polyester film)