

# T E S T C E R T I F I C A T E

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**GRADE : FPM-19NC**

Property		Units	Spec.	Measured Values	Test Methods
Size	Width	mm	495 ± 5	496	Scale
	Length	M	200 + 2	202	Encoder
Average Thickness		μm	19±2	19.4	Micrometer Methods
Tensile Strength	MD	kgf/mm <sup>2</sup>	20±3.5	22.1	ASTM-D882
	TD		25±3.5	25.8	
Elongation at Break	MD	%	130±20	140	
	TD		130±20	134	
Heat Shrinkage	MD	%	3±1.00	3.11	ASTM D-2305 (190°C/20min)
	TD		0±1.00	-0.2	
Transmittance		%	89 ± 2	90	ASTM D-1003
Haze			3 ± 1	3.21	
Resistance	US		0.5±0.1	0.51	ASTM D-1894
	UK		0.5±0.1	0.52	
Surface Roughness	FRONT FACE	Ra	-	-	-
		Rz	-	-	
		Rmax	-	-	
External	Shifted layer(roll edge) : less than 1mm			OK	naked
	Projection edge : Non			OK	
	Alien substance : less than 3EA/m <sup>2</sup>			OK	

Remark