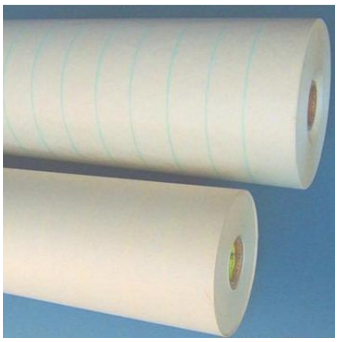
6641 Polyester Film/Polyester Fibre Non-woven Flexible Laminate(F-DMD)

Standard No.: Q/DJ$_3$-207-1999



Polyester film/polyester fibre non-woven flexible laminate (Class F DMD) is made from high melting point polyester film and hot-rolling polyester non-woven fabric. The polyester film and polyester non-woven fabric are bonded by F-class adhesive. It has excellent heat-resistance, electrical, mechanical and impregnated properties. It is suitable for slot insulation, interphase insulation and liner insulation in Class F electric motor and electric apparatus.

1 Technical requirements

1.1 General requirements

As per Chapter 2 of GB 5591.1

1.2 Dimensions

Nominal width: 1000mm Nominal weight: 50kg±5kg

The splices should be no more than 4 in one roll.

1.3 Properties are as shown in Form 1

Form 1

No.	Properties			Units	Values							
1	Nominal thickness			mm	0.15	0.18	0.20	0.23	0.25	0.30	0.35	0.40
2	Thickness tolerance			mm	±0.020	±0.025	±0.030	±0.030	±0.030	±0.035	±0.040	±0.040
3	Grammage			g/m^2	150±22	190±28	210±32	240±36	260±39	310±46	390±58	440±66
4	Tensile strength	MD	No bending	N/ 10mm	⩾80	⩾100	⩾120	⩾130	⩾150	⩾170	⩾200	⩾300
			After bending		⩾80	⩾90	⩾105	⩾115	⩾130	⩾150	⩾180	⩾220
		TD	No bending		⩾80	⩾90	⩾105	⩾115	⩾130	⩾150	⩾180	⩾220
			After bending		⩾70	⩾80	⩾95	⩾100	⩾120	⩾130	⩾160	⩾200
5	Elongation		MD	%	⩾10					⩾5		
			TD		⩾15					⩾5		
6	Breakdown voltage (No bending)		At room temperature	kV	⩾7.0	⩾8.0	⩾9.0	⩾10.0	⩾11.0	⩾13.0	⩾15.0	⩾18.0
			155℃±2℃		⩾6.0	⩾7.0	⩾8.0	⩾9.0	⩾10.0	⩾12.0	⩾14.0	⩾17.0
7	Stiffness		MD	N	⩾10	⩾15	⩾20					
			TD		⩾15	⩾20	⩾30					
8	Bonding property at room temp.			-	No delamination							
9	Bonding property at 180℃±2℃ 10min				No delamination, no bubble, no adhesive flow							
10	Bonding property after humidity			-	No delamination							
11	Temperature index			-	⩾155							

2 Testing Methods

As per GB 5591.2-1985

3 Inspection, marks, package, transportation and storage

3.1 Inspection items are as per Clause 1.1, 1.2 and Item 1,2,3,4, 8,9 6 as well as Item 6(at room temperature) of Form 1 in Clause 1.3.

3.2 The other items are as per GB 5591.1-1985.

4 Remarks

Class F DMD has many advantages as the following: cheap price, good flexibility , high mechanical and electrical properties, convenient application; excellent consistency with many impregnating varnish. It is very suitable for using with 1040 impregnating varnish produced by our factory.