

Sheet 330

Requirements for combined flexible triplex materials of three layers – P-PAA/F-PI/P-PAA (aramid calendered paper on both sides of PI film)

1 Description

This sheet gives the requirements for triplex materials consisting of calendered aramid paper (P-PAA) laminated on both sides of polyimide film (F-PI).

2 Thermal classification

Experience has shown that the combined flexible materials listed in this sheet may be suitable for use in electrical apparatus with ratings up to and including the range of 180 °C to 200 °C.

3 Single-layer requirements

Use paper which meets the requirements of IEC 819-1 and IEC 819-3.

Use a PI film which meets the requirements of IEC 674-1 and IEC 674-3.

4 Additional requirements

Additional requirements are given in the table below.

Property	Clause in IEC 626-2	Units Tolerance						
Laminate nominal thickness	2	mm	0,14	0,17	0,20	0,22	0,30	0,32
Laminate thickness tolerance	2	± %	15	15	15	15	15	15
Laminate nominal grammage	3	g/m ² ±12 %	135	170	190	220	300	330
Film nominal thickness		µm	25	50	25	50	25	50
Aramid paper nominal thickness		µm	50	50	80	80	130	130
Unfolded tensile strength	4	N/10 mm min. MD CMD	140 80	160 90	160 100	200 180	270 150	300 260
Folded tensile strength	4	N/10 mm min. MD CMD	70 50	90 70	80 60	160 100	140 90	180 130
Elongation, unfolded	4	% min. MD CMD	15 15	17 17	15 15	17 17	15 15	17 17
Electric breakdown voltage, 6 mm diameter electrodes	9	kV min. Unfolded Folded	7 6	9 8	7 6	9 8	7 6	9 8
NOTES MD = machine direction CMD = cross machine direction min. = minimum								