

## D<sup>TM</sup> NHN(6650) Polyimide Film & NOMEX<sup>®</sup> Amide Paper Composites

D<sup>TM</sup> NHN(6650) Polyimide Film & NOMEX<sup>®</sup> Amide Paper Composites are a family of 3-ply laminates of NOMEX<sup>®</sup> bonded to one side or both sides of polyimide film. It has not only excellent dielectric and mechanical strength of polyimide film, but the better tear resistance and excellent varnish adsorption NOMEX<sup>®</sup> Amide paper, so it is a reliable class- H insulation material for electrical machines.

### Characteristics:

- \*High mechanical strength, good dielectric strength with thinner slot insulation ply.
- \*Good thermal stability, it can work for a long term under 180°C for class-H insulation.
- \*Excellent tear resistance and flexibility, easy to be applied.
- \*Low dielectric dissipation, it can work in harsh condition.

### Specification:

Type		NHN-17	NHN-20	NHN-22	NHN-25	NHN-30	NHN-35
Typical thickness	mm	0.17	0.20	0.22	0.25	0.30	0.35
Thickness tolerance	mm	±0.02	±0.02	±0.02	±0.02	±0.03	±0.03
Basic Weight	g/m <sup>2</sup>	175	220	224	260	330	360
NOMEX <sup>®</sup> paper thickness	mm	0.05	0.05	0.075	0.075	0.13	0.13
Polyimide Film thickness	mm	0.05	0.075	0.05	0.075	0.04	0.075

\* Other thickness and size are available on customer's demand.



### Properties:

Property items	Test methods	Units	Typical Value					
			NHN-17	NHN-20	NHN-22	NHN-25	NHN-30	NHN-35
1. Visual			The surface should be even and free from wrinkle, blister and impurity					
2. Breakdown voltage	A	kV	≥ 8	≥ 9	≥ 9	≥ 9	≥ 9	≥ 10
	After Bending		≥ 7	≥ 8	≥ 8	≥ 8	≥ 8	≥ 9
3. Tensile strength	M.D.	N/c m	≥ 140	≥ 160	≥ 180	≥ 200	≥ 210	≥ 270
	MD after bending		≥ 90	≥ 90	≥ 130	≥ 150	≥ 160	≥ 180
	C.D.		≥ 90	≥ 100	≥ 110	≥ 120	≥ 130	≥ 170
	CD after bending		≥ 70	≥ 80	≥ 80	≥ 100	≥ 110	≥ 130
4. Elongation	M.D.	%	≥ 10	≥ 10	≥ 10	≥ 10	≥ 10	≥ 10
	C.D.		≥ 8	≥ 8	≥ 8	≥ 8	≥ 8	≥ 8
5. Adhesion	A	---	No delamination.					
	200±2℃/10min	---	No delamination, no bladder, no gel					

### Packing & storage:

Packed in carton after sealed by plastic film, keep in dry environment at room temperature, keep from fire and humidity, shelf life 12 months.

### Application:

NHN(6650) Polyimide Film & NOMEX® Amide Paper Composites is applicable for slot, phase and ground insulation of class-H motors, but layer insulation of transformers.