

## Flexible Insulation

### Nomex 414

#### GENERAL

Type 414 is designed for applications requiring a strong, yet flexible and conformable sheet. It is electrically and thermally similar to Type 410, but is calendared under different conditions to provide its unique properties, including high tear strength.

#### CHEMICAL STABILITY

The compatibility of Nomex aramid paper with virtually all classes of electrical varnishes and adhesives (polyimide's, silicones, epoxies, polyesters, acrylics, phenolics, synthetic rubbers, etc.) is demonstrated by the many UL recognised systems. Nomex papers are also fully compatible with transformer fluids (mineral and silicone oils and other synthetics) and with lubricating oils and refrigerants used in hermetic systems.

#### THERMAL PROPERTIES

The effects of long-time exposure of Nomex to high temperature are the basis for the recognition of Nomex paper as insulation suitable for use in 220°C by Underwriters laboratories, the U.S. Navy, and others, and are confirmed by more than 25 years' commercial experience.

#### APPLICATIONS

Type 414 was designed for use as slot insulation in hand – wound motors and for linear wrapping of wire, but is also used in other applications where its specific characteristics are desirable (such as folded or punched parts).

#### PROPERTIES

Nominal Thickness	mm	.086	.18	.25	.30	.38
<b>Dielectric Strength</b>						
<b>AC Rapid Rise (ASTM D-149)</b>	kV/mm	21	28	30	30	29
<b>Full Wave Impulse (ASTM D-3426)</b>	kV/mm	43	51	51	51	47
<b>Dielectric Constant (ASTM D-150)</b>	60Hz	1.7	2.5	2.7	2.8	2.9
	1kHz	1.7	2.5	2.7	2.8	2.9
<b>Dissipation Factor (ASTM D-150)</b>	60Hz	.005	.008	.008	.008	.009