## Composties for Today's Challenges

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## Lamitex® XXX Tube Technical Data

Lamitex ${ }^{\circledR}$ XXX paper/ phenolic convolute wrapped tubes is a premium grade composite formulated for electrical and mechanical applications in high humidity conditions. It retains good electrical properties in high frequency applications and whose low moisture absorption rate accounts for its excellent electrical insulation strengths and dimensional stability.

| Mechanical Properties | Conditioning |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Standard | Test Specimen | IEC 212 | Values |
| Flexural Strength | ISO 178 | id $>3.937$ inch | 1 | 17,400 psi |
| Compressive Strength, Axial | ISO 604 |  | 1 | 18,850 psi |
| Cohesion between layers | EN 61212-2 | id>3.937 inch | 1 | $21,030 \mathrm{psi}$ |
| Electrical Properties |  |  |  |  |
| Electric Strength in oil @ $194^{\circ} \mathrm{F}$ : |  |  |  |  |
| Perpendicular to Laminations | IEC 243-1 | .118" wall thk | 2 | 170 kVpm |
| Parallel to Laminations | IEC 243-1 | >.118" wall thk | 2 | $25 \mathrm{kV} / \mathrm{inch}$ |
| Insulation resistance after immersion in water | IEC 167 | id $>.315$ " and or od>.394" | 4 | 200 M ohm |
| Permittivity $50 \mathrm{~Hz} \& 1 \mathrm{MHz}$ | IEC 250 |  | 3 | 5.0 |
| Dissipation Factor 50 Hz and 1 MHz | IEC 250 |  | 3 | 0.030 |
| Physical and Thermal Properties |  |  |  |  |
| Thermal endurance index @ 20,000 hrs | IEC 216 |  | - | $248{ }^{\circ} \mathrm{F}$ |
| Density | IEC 1183-A | All | 1 | $1.25 \mathrm{~g} / \mathrm{cm}^{3}$ |
| Water Absorption | D1-24/23 |  |  | 0.60\% |

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\begin{array}{ll}
\text { Conditioning: } & 1: 24 \mathrm{~h} @ 73^{\circ} \mathrm{F} \& 50 \% \mathrm{RH} \\
& \text { 2: } 24 \mathrm{~h} @ 73^{\circ} \mathrm{F} \& 50 \% \mathrm{RH}+1 \mathrm{hr} \text { in oil at } 194^{\circ} \mathrm{F} \\
& 3: 96 \mathrm{~h} @ 221^{\circ} \mathrm{F}+1 \mathrm{hr} @ 73^{\circ} \mathrm{F} \& 20 \% \mathrm{RH} \\
& 4: 24 \mathrm{~h} @ 122^{\circ} \mathrm{F}+24 \mathrm{hr} \text { in water at } 73^{\circ} \mathrm{F}
\end{array}
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The standard length(s) for inside diameters $.118^{\prime \prime}-.331^{\prime \prime}$ is $59^{\prime \prime}, .335^{\prime \prime}-.394^{\prime \prime}$ is $53.1^{\prime \prime}$, IDs $>.394$ to 3.937 is $53.2^{\prime \prime}, 59^{\prime \prime}$ or $65^{\prime \prime}$ and $>3.937-49.2^{\prime \prime}$ is $48^{\prime \prime}$, 53.1, or 65".

All values are average test results from typical production material and extensive testing. No Warranty is implied or guaranteed and testing is recommended for each application.

