# Resinite Phenolic Impregnated Tubing

"Resinite" is a registerd trademark of Precision Paper Tube Co.

Precision Paper Tube Company

Catalog No. R-504

# "Resinite" Phenolic Impregnated Tubing

**General Description:** "Resinite" tubing is spiral wound from neutral, natural, electrical grade kraft paper which is then vacuum impregnated with high quality, electrical grade, phenolic resins. After impregnation, the tubing is baked at 300°F. in order to cure the resin and to form a homogenous product that has its own special, high quality characteristics for electrical and mechanical applications. Resinite tubing may be centerless ground to close tolerances and is again resin coated for a complete seal. It is generally available as round tubing but can be made in rectangular and square forms. However, due to the nature of the process, some twisting may occur in these latter forms.

**Advantages:** Resinite tubing presents a unique combination of low cost coupled with high mechanical strength and good dielectric properties. It will support itself not only under loads of heavy coil windings, but also in other situations where paper or plastic would give way. It will also support lugs and terminals (see "Fabricating"), and can be used as rollers or as high strength dielectric insulating containers.

**Minimum Wall Thickness:** .006"

**Suggested Uses:** Collars, Insulators, Fuse Parts, Spacers, Protecting Covers, Terminal Rings, Motor Spacers, Mechanical Cores, IF & RF Coil Forms, Flyback Transformers, Electrical Transformers, Shafts & Tuning Rods.

**Resinite Tubing Properties:**

**RG-8108:** A formulation that is intended primarily for mechanical applications where higher phenolic content is not required.

| | |
|---|---|
| Dielectric Strength - VPM | 210 |
| Temperature Classification - °C | 90 (O) |
| Moisture Absorption (72hrs.,100%hum.,105°F) | 12% |
| Coefficient of Thermal Expansion - part/°C | $1.3 \times 10^{-5}$ |

**RB-8111:** The standard grade "Resinite" tubing that is used for most electrical applications. It has high strength and extremely favorable electrical qualities.

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|---|---|
| Dielectric Strength - VPM | 260 |
| Temperature Classification - °C | 105 (A) |
| Volume Resistivity-ohms/cm. (.013"wall,.280"OD) | $1.2 \times 10^{12}$ |
| Dielectric Constant (@ 1MHz) | 3.32 |
| Moisture Absorption (72hrs.,100%hum.,105°F) | 2.86% |
| Coefficient of Thermal Expansion - part/°C | $1.02 \times 10^{-5}$ |

**RS-8717:** A superior grade of tubing that provides extremely high strength with the best stability over a wide temperature range. Best grade for machining.

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|---|---|
| Dielectric Strength - VPM | 290 |
| Temperature Classification - °C | 105 (A) |
| Volume Resistivity-ohms/cm. (.013"wall,.280"OD) | $1.2 \times 10^{12}$ |
| Dielectric Constant (@ 1MHz) | 3.32 |
| Moisture Absorption (72hrs.,100%hum.,105°F) | 2.10% |
| Coefficient of Thermal Expansion - part/°C | $1.01 \times 10^{-5}$ |

# Flame Retardant Resinite

**General Description:** Resinite FR9120 and FR9120-1 are spiral wound from neutral, natural, dielectric kraft tubing and are impregnated with special, flame retardant resins. FR9120 is the standard grade tubing for basic coil winding and bobbin use and FR9120-1 is the fabricating grade where further fabrication is required, such as punching, notching, threading, lugging or slitting.

**Advantages:** For the first time, a low cost, moisture resistant, paper base tubing for electrical and electronic uses in flame retardant applications. This tubing has all the attributes of well known Resinite tubing but in a flame retardant grade.

**Minimum Wall Thickness:** .015"

**Suggested Uses:** Applications that must meet flame retardant specifications in electrical and electronic devices; particularly those that require the mechanical qualities of Resinite such as transformers and coil forms, switch covers, pilot light shields, etc.

| **Material Properties:** | **FR9120** | **FR9120-1** |
|---|---|---|
| Dielectric strength. VPM | 250 | 250 |
| Temperature Class - °C. | 105(A) | 105(A) |
| Volume Resistivity (Ohms/cm.) | $1.1x10^{12}$ | $1.5x10^{12}$ |
| Dielectric Constant (@ 1 MHz) | 2.62 | 2.73 |
| Moisture Abs.(72hrs.@ 100%hu.) | 2.91% | 3.12% |
| Color (Surface) | Blue/Green | Brown/Black |

## Fabricating

Resinite tubing can be fabricated by punching, slitting, cutting, grinding, sanding and turning. We can apply lugs and terminals to your specifications along any part of its outside wall or on a separate collar which is then adhered to the tubing. Its heat resistance is such that Resinite will readily accept dip or hand soldering of terminals. It can be embossed to accept threaded iron cores.