Nonmetallic - Cable tray Overview

Why specify our cable tray?

Nonmetallic cable tray systems have been tested and proven in the harsh environment of the offshore oil and gas industry. This tray is ideally suited to withstand the corrosive conditions inherent in the petroleum, mining, and fertilizer industries. In these applications, nonmetallic tray is exposed daily to wind, weather, and saltwater.

Nonmetallic cable tray gives you the load capacity of steel plus the inherent characteristics afforded by our pultrusion technology: non-conductive, non-magnetic and corrosion-resistant. Although light in weight, their strength-to-weight ratio surpasses that of equivalent steel products.



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01 A surface veil is applied during the pultrusion process to ensure a resin rich surface for superior corrosion resistance as well as an ultraviolet exposure barrier.

Nonmetallic - Cable tray

Overview (continued)



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Table 1 – Typical properties of pultruded components gland

| Properties | | | Isophthalic Polyester | |
|----------------------------------|-------------|-----------------------|-----------------------|------------|
| | Test method | Unit/value | Longitudinal | Transverse |
| Tensile strength | ASTM D638 | psi | 30,000 | 7,000 |
| Tensile modulus | ASTM D638 | psi x 10 ⁶ | 2.5 | 0.8 |
| Flexural strength | ASTM D790 | psi | 30,000 | 10,000 |
| Flexural modulus | ASTM D790 | psi x 10 ⁶ | 1.6 | 0.8 |
| Izod impact | ASTM D256 | ftlbs/in | 25 | 4 |
| Compressive strength | ASTM D695 | psi | 30,000 | 15,000 |
| Compressive modulus | ASTM D695 | psix10⁵ | 2.5 | 1.0 |
| Barcol hardness | ASTM D2583 | _ | 50 | 45 |
| Shear strength | ASTM D732 | psi | 5,500 | 5,500 |
| Density | ASTM D1505 | lbs/in3 | 0.065 | _ |
| Coefficient of thermal expansion | ASTM D696 | in/in/°F | 5.0 x 10-6 | _ |
| Water absorption | ASTM D570 | Max % | 0.5 | _ |
| Dielectic strength | ASTM D149 | V/mil (vpm) | 200 | _ |
| Flammability classification | UL94 | VO (both resins) | _ | - |
| Flame spread | ASTM E-84 | 20 Max (both resins) | - | _ |

T&B nonmetallic cable tray systems are manufactured from glass fiber-reinforced plastic shapes that meet the ASTM E-84 Class 1 flame rating and self-extinguishing requirements of ASTM D-635. A surface veil is applied during pultrusion to ensure a resin-rich surface and ultraviolet resistance.

Table 1 – Typical properties of pultruded components gland

| Properties | Ignition | Burning | Rating | Avg. Extent of Burning |
|-----------------------------------|------------|------------|--------|---------------------------|
| Flame resistance (FTMS 406-2023) | 75 seconds | 75 seconds | - | - |
| Intermittent flame test (HLT- 15) | _ | - | 100 | _ |
| Flammability test (ASTM D635) | - | 5 seconds | _ | 15mm |