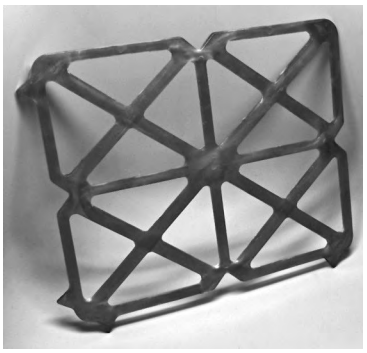
P24XL Delta Tie



The Dayton Superior P24XL Delta Tie is a two-dimensional truss of structurally non-conductive, non-metallic, non-corrosive fiber composite used as a wythe connector for insulated precast concrete wall panel construction. The P24XL Delta Tie is just like the widely used P24, but it is designed for applications with 1" to 8" of insulation.

The size is 9" x 11" x 5/32" with ½" tabs and v-notch installation aides.

Ties are normally installed in the seams between sheets of insulation, or the insulation can be cut and the ties positioned through the insulation. For insulation with an integral vapor barrier, it is important to insure that it is also cut so as to not interfere with the concrete tie embedment. Ties must be installed a minimum of 4" and a maximum of 12" from any edge or opening. A typical spacing pattern provides one tie for every 2-8 square feet of panel surface area. The preferred tie orientation is parallel to the height of the panel.

Delta Tie Type	Insulation Thickness (inches)	Tension Capacity * (lbs)	Shear Capacity * (lbs)
P24XL (9"x11")	1" - 5"	5800	3700
P24XL (9"x11")	6"	3400	3075
P24XL (9"x11")	7"	4000	2800
P24XL (9"x11")	8"	3200	1650

* Ultimate Strength per tie is defined as resistance derived as the 5% fractile of the mean ultimate resistance, determined from tests. This is based upon a 90% probability (confidence level) that 95% of tie will exceed the characteristic resistance. Please refer to ACI 355 10.3

Specifications

Composite Modulus: 8,370,000 psi

Composite Tensile Strength: 167, 400 psi

Poisson's Ratio: 0.26

Density: 100 lbs/cu ft

Alkali Resistance: Made from continuous wound alkali resistant glass fibers in an alkali resistant epoxy bisphenol A vinyl ester resin. The resin is rated for continuous alkali exposure at up to 180˚F, and is also UV resistant. The resin's glass transition temperature is 285˚F, and its melting point is 650˚F.

Glass Content: 1.45 micron, 2.4 g/m, 14GPa tensile strength, continuous roving fibers at 77% by weight. The continuous operating temperature of the 19% zirconium glass fiber is 900˚F.

Thermal Conductivity: 0.1447 BTU/hr F ft (0.25 W/m•C) where Insulation Board is 0.014, and Concrete is 1.2414. The Delta Tie R-Value is 0.576 sq ft F hr/BTU per inch of thickness.

CTE: Is matched to concrete at 0.0000055 in/in/F.