



VIPER STEEL

GENERAL



Triple coated, in-line galvanized structural steel tubing, cold-formed and induction welded of a modified grade carbon steel, providing a finished tubular product with exceptional mechanical and corrosion resistant properties manufactured by [Allied Tube & Conduit](#).

MATERIAL

Hot-Rolled Steel Strip Conforming to the Requirements of ASTM A569

1.000" x 14 Ga./ 5.000" x 8 Ga.: Modified Grade 1010

All other sizes/gauges: Modified Grade 1015

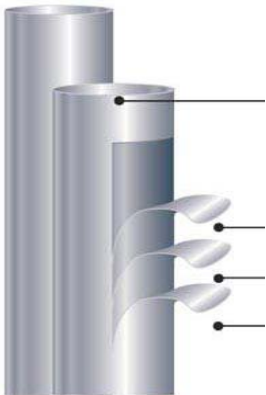
Minimum Mechanical Properties of the Finished Tube

1.000" x 14 Ga./ 5.000" x 8 Ga.: 50,000 psi Yield Strength
55,000 psi Tensile Strength

All other sizes/gauges: 55,000 psi Yield Strength
60,000 psi Tensile Strength

All dimensional tubing tolerances are in accordance with ASTM A500, Section 10.

COATINGS



Full zinc based organic coating applied to 100% of the interior surface as a [corrosion barrier](#)

In-line, hot-dip [galvanized](#) to a nominal coating zinc weight of 0.6 oz/ft²

Chromate conversion coating applied over the galvanized surface

Clear organic polymer ([Gatorshield](#)) applied as the top surface coat to retard oxidation, enhance surface appearance and provide a primer for subsequent painting or [powder coating](#) processes as desired.

CORROSION PERFORMANCE



The tubing shall demonstrate the ability to withstand a minimum of 1000 hours of accelerated salt fog testing to the condition of 5% surface red rust, when tested in accordance with [ASTM B117](#) standards. Further protection can be provided for bolts and clamps with the application of a [Sun Seal](#) process that will add up to 10 times the life to a standard zinc plated component.



STEEL COMPONENTS

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Stabilizing [cables](#) to efficiently transfer wind, snow and seismic induced stresses to the foundation/anchoring system provide frame bracing of the structure. Cable diameter for main wind bracing shall be a minimum of 3/8" diameter and larger if so required, with structural frames provided with 3/8" thick steel attachment lugs for all main cable assemblies.

CONNECTIONS

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Connections between structural elements are designed so as to transfer the compressive and tensile forces present in a given joint. Primary axial steel, secondary purlins, and end wall frame connections shall be made with 5/8" diameter [Grade 5](#) bolts.

WELDS

Welded connections between structural elements shall be sandblasted and then coated with a [molten zinc spray](#) to restore the corrosion resistance of the galvanized Gatorshield tube.