

## Hardwire 12x-4-12 Low Density Composite

Category : Metal , Ferrous Metal , Carbon Steel , High Carbon Steel , Metal Foam, Mesh, or Honeycomb

### Material Notes:

The 12X Hardwire is a high carbon steel cord with a micro-fine brass or AO-brass (Adhesion Optimized) coating. The 12X wire cord is used where the traits of high tensile strain, excellent conformability, great looks and bond-ability to very high viscosity resins are required. The 12X wire cord is made by twisting two different individual wire diameters together in 12 strands and then over twisting 1 wire around the bundle (3 @ 0.00866 in and 9 @ 0.00784, plus wrap). The result is very flexible wire cord with great tensile strain capability. Characteristics: The 12X cord is the most flexible cord and should be used for more complex structures. The over-wrap wire creates a mechanical lock with the resin system and with the other 12X wires it interacts with. The over-wrap wire also creates a perfect standoff for adhesive bonding. This wire type is preferred in applications where the wire layer is in place on a preexisting substrate and resin is rolled on to the surface. In this case the over wrap wire creates a small stand off from the surface allowing for the perfect amount of adhesive resin to penetrate behind the wire layer and wet the original preexisting substrate being reinforced. The cord bonds to highly viscous resin systems like cementitious systems or highly filled thermosets or traditional thermoplastics. In these cases the over wrap wire functions the way threads act on a screw, forming a strong mechanical interlock with the resin being used. Under tension loads the over wrap wire works to tighten down on the other 12 wires thus optimizing the composite action of the wire cord and evenly sharing the tensile load between all the individual wires contained in the cord structure. The 12X cord is the best looking for architectural applications. The complex geometry of the 12X cord works to diffract light and add engineering appeal to the structure. All information provided by Hardwire, LLC.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Hardwire-12x-4-12-Low-Density-Composite.php](http://www.lookpolymers.com/polymer_Hardwire-12x-4-12-Low-Density-Composite.php)

Physical Properties	Metric	English	Comments
Density	1.38 g/cc	0.0499 lb/in <sup>3</sup>	Laminate Density

Mechanical Properties	Metric	English	Comments
Modulus of Elasticity	13.8 GPa	2000 ksi	Effective Modulus
Flexural Yield Strength	165 MPa	24000 psi	Sheet Stress

## Contact Songhan Plastic Technology Co.,Ltd.

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