

## Hexcel® HexWeb® HRH-49 - 1/4 - 2.1 Woven Kevlar Honeycomb

Category : Polymer , Thermoset , Aramid

**Material Notes:**

**Designation:** Material-Cell Size (inches)-DensityHexWeb® HRH-49 is manufactured using KEVLAR® 49 fabric. A thermosetting adhesive is used for the node bonds and a 350°F cure modified epoxy resin is applied for initial and final impregnations. The standard cell size is 1/4 inch. Due to the low resin content of HexWeb® HRH-49, core movement may occur during handling and part curing if proper restraining techniques are not employed.**Features:** Lightweight; Excellent thermal stability; Very low coefficient of thermal expansion; Good flatwise tensile strength; Excellent dielectric properties.**Applications:** HexWeb® HRH-49 has been developed by Hexcel for use as a sandwich core material in radomes and antennas. When used with KEVLAR® 49 or graphite facings, the HexWeb® HRH-49 sandwich has been considered to have good thermal stability when exposed to cyclic heat exposures such as encountered in space applications.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Hexcel-HexWeb-HRH-49-14-21-Woven-Kevlar-Honeycomb.php](http://www.lookpolymers.com/polymer_Hexcel-HexWeb-HRH-49-14-21-Woven-Kevlar-Honeycomb.php)

Physical Properties	Metric	English	Comments
Density	0.0336 g/cc	0.00122 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Compressive Yield Strength	>= 0.689 MPa	>= 100 psi	Stabilized, min
	0.896 MPa	130 psi	Stabilized
Compressive Modulus	0.172 GPa	25.0 ksi	Stabilized
Shear Modulus	0.00896 GPa	1.30 ksi	Plate Shear, W Direction
	0.0186 GPa	2.70 ksi	Plate Shear, L Direction
Shear Strength	>= 0.207 MPa	>= 30.0 psi	Plate Shear, W Direction, min
	0.276 MPa	40.0 psi	Plate Shear, W Direction, typ
	>= 0.345 MPa	>= 50.0 psi	Plate Shear, L Direction, min
	0.586 MPa	85.0 psi	Plate Shear, L Direction, typ

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