



HexWeb® HRH-78

Nomex Commercial Grade Honeycomb

Product Data

Description

HexWeb® HRH-78 is manufactured from commercial grade aramid paper sheets. A thermosetting adhesive is used to bond these sheets at the nodes, and after expanding, the block is dipped in a phenolic resin. After curing the resin, slices are cut to the desired thickness. Using this process, a wide range of cell sizes, paper thicknesses, and densities can be produced. An OX-Core® configuration featuring enhanced formability is available upon request.

Features

- High strength at low densities
- Small cell sizes at low densities
- Damage resistant under normal shop use
- Formable
- Flame resistant
- Good bonding surfaces
- Good thermal and electrical insulator

Applications

HexWeb® HRH-78 was developed by Hexcel to offer most of the characteristics of HexWeb® HRH-10 for exclusive use in *non-aerospace* applications, such as pleasure boats, skis, surfboards, ground antennas, and navy joiner panels. Since the NOMEX® paper used in this core will not fully meet aerospace specifications, Hexcel is able to offer this core at a lower price.

Standard Dimensions

HexWeb® HRH-78 NOMEX® commercial grade honeycomb materials are available in the following standard dimensions.

Product	L	W	T Max	T Min
HRH-78 materials	48 in ± 2 in	96 in ± 6 in	34 in	0.060 in

Other L, W, and T dimensions are available upon request.

Thickness Tolerance

Tolerances on cut thickness are as follows:

0.060 in to 2.000 in tolerance will be ± 0.006 in

2.001 in to 4.000 in tolerance will be ± 0.010 in

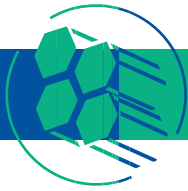
4.001 in and over tolerance will be ± 0.125 in

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Type Designation

HexWeb® HRH-78 honeycomb is designated as follows:

Material – Cell Size – Density

Example: HexWeb® HRH-78 – 1/4 – 3.0

Where:

HexWeb® HRH-78 – designates honeycomb type

1/4 – is the cell size in inches

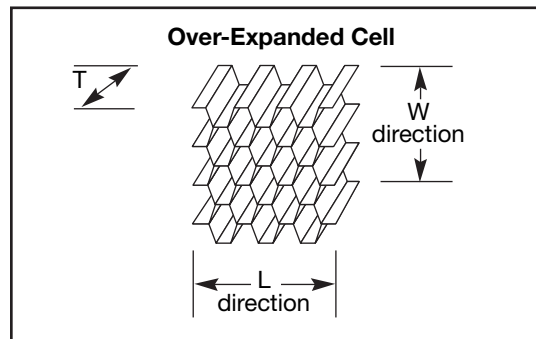
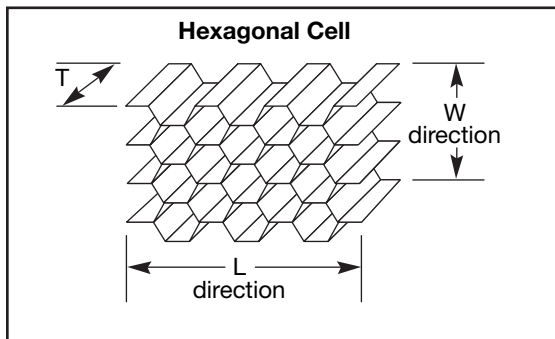
3.0 – is the nominal density in pounds per cubic foot

Dimensional Nomenclature

T = Thickness, or cell depth

L = Ribbon direction, or width

W = Long direction, or direction perpendicular to the ribbon



Availability

HexWeb® HRH-78 will be shipped F.O.B. Casa Grande, Arizona. Lead times will vary with particular core types selected. Contact the nearest Hexcel Sales Office for delivery information.

Specifications

General – HexWeb® HRH-78 will be supplied in flat expanded sheets ready for bonding. Sheets may be supplied as standard panels, cut to specific forms, machined or heat formed to contours as specified by the purchase order.

Configuration – The average cell size as measured across the parallel flats (nodes) of cells will be ± 10% of the nominal. Cell determination will be made by measuring the length of 10 consecutive cells in 6 random locations and averaging the results. Double laps will be permitted as long as the core slices are within density tolerance. Unbonded nodes will be permitted to the extent that no opening larger than three times the nominal cell size is created and the minimum mechanical properties are obtainable.

Density – The acceptable tolerance will be ± 10%.

Mechanical Properties of HexWeb® HRH-78 at Room Temperature

Hexcel Honeycomb Designation Material – Cell – Density	Compressive			Plate Shear			
	Bare	Stabilized		L Direction		W Direction	
	Strength psi	Strength psi	Modulus ksi	Strength psi	Modulus ksi	Strength psi	Modulus ksi
HRH-78 – 1/8 – 3.0	typ	typ	typ	typ	typ	typ	typ
HRH-78 – 1/8 – 8.0	280	315	18.5p	160	5.3p	90	3.1p
HRH-78 – 3/16 – 3.0	1600	1750	60.0p	470	15.0p	250	7.8p
HRH-78 – 3/16 – 6.0	270	330	18.2p	124	4.6p	81	3.5p
HRH-78 – 1/4 – 3.0	1025	1100	–	450	13.0p	235	5.5p
HRH-78 – 1/4 – 3.0	265	285	19.0p	120	4.6p	80	3.0p
HRH-78 – 3/8 – 1.5	85	95	6.0p	60	2.5p	33	1.5p

p = Preliminary value obtained from limited testing.
Other cell sizes and densities are available upon request.



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Important

Hexcel Corporation believes, in good faith, that the technical data and other information provided herein is materially accurate as of the date this document is prepared. Hexcel reserves the right to modify such information at any time. The performance values in this data sheet are considered representative but do not and should not constitute specification minima. The only obligations of Hexcel, including warranties, if any, will be set forth in a contract signed by Hexcel or in Hexcel's then current standard Terms and Conditions of Sale as set forth on the back of Hexcel's Order Acknowledgement.

For more information

Hexcel is a leading worldwide supplier of composite materials to aerospace and other demanding industries. Our comprehensive product range includes:

- Carbon Fiber
- RTM Materials
- Honeycomb Cores
- Continuous Fiber Reinforced Thermoplastics
- Carbon, Glass, Aramid and Hybrid Prepregs
- Structural Film Adhesives
- Honeycomb Sandwich Panels
- Special Process Honeycombs
- Reinforced Fabrics

For US quotes, orders and product information call toll-free 1-800-688-7734. For other worldwide sales office telephone numbers and a full address list please click here: <http://www.hexcel.com/contact/salesoffices>.