



HexWeb® HRP

Fibreglass/Phenolic Honeycomb

Product Data

Description

HexWeb HRP is a glass fabric reinforced honeycomb in which a heat-resistant phenolic resin is used both for initial and final impregnations. This product was developed for use at service temperatures up to 175°C. However, it is also well suited for short exposures at higher temperatures. The HRP-series honeycomb is available in the standard hexagonal configuration, as well as in the two formable geometries - OX-Core® and Flex-Core®.

Features

- High Strength up to 175°C
- Good Insulation Properties
- Good Dielectric Properties
- Good Bonding Surface
- Readily Heat Formed

Applications

HexWeb HRP has proven to be an excellent core material for radomes, aircraft structural parts and fairings, heat shields, and other assemblies that see elevated temperature service.

Custom Processing

HexWeb HRP materials can be provided machined or formed ready for bonding. This can include edge chamfering, simple and complex taper cuts and other special machined configurations as well as precurved core formed to cylindrical or compound curvatures. Contact the nearest Hexcel Sales Office for additional information.

Standard Dimensions

HexWeb HRP honeycomb is available in the following standard sizes for the hexagonal and overexpanded configurations.

	L	W	Block T	T min
Hexagonal	915 +25 -50mm	2440± 150mm	560mm	3mm
Overexpanded	560± 50mm	2440± 150mm	450mm	3mm

Other cell sizes, densities, and dimensions are available on special request. Please contact your nearest Hexcel Sales Office for additional information. One block minimum buy may apply.

Thickness Tolerance

Tolerances on cut thickness are as follows:

3 to 50mm tolerance will be \pm 0.15mm

50 to 100 tolerance will be \pm 0.25mm

100mm and over tolerance will be \pm 1.65mm

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Type Designation

HexWeb HRP honeycomb is designated as follows:

Material - Cell size - Density

Example: HRP - 3/16 - 4.0

Where:

HRP - designates honeycomb type

3/16 - is the cell size in inches

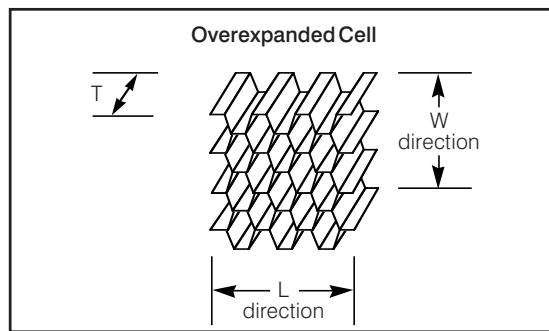
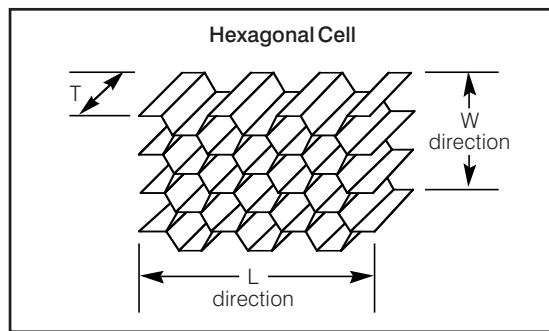
4.0 - is the normal density in pounds per cubic foot

Dimensional Nomenclature

T = Thickness, or cell depth

L = Ribbon direction, or width

W = Long direction, or direction perpendicular to the ribbon



Availability

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

Mechanical Properties

The following mechanical properties apply to the various HRP core types when tested per MIL-STD-401B at 12.7mm thickness, and meet the requirements of MIL-C-8073D, AMS3715, and most airframe manufacturers' specifications.

Hexcel Honeycomb Designation	Compressive						Plate Shear				
	Bare		Stabilized			L Direction			W Direction		
	Strength Mpa	Strength Mpa	Modulus Mpa	Strength Mpa	Modulus Mpa	Strength Mpa	Modulus Mpa	Strength Mpa	Modulus Mpa	Strength Mpa	Modulus Mpa
Hexagonal	typ	min	typ	min	typ	typ	min	typ	typ	min	typ
HRP-3/16-4.0*	3.31	2.76	4.07	3.31	393	2.14	1.45	90	1.10	0.90	45
HRP-3/16-5.5	5.52	4.28	6.21	5.17	655	3.38	2.69	131	1.83	1.38	76
HRP-3/16-7.0	7.93	5.52	8.97	7.17	938	4.48	3.52	207	2.55	2.00	97
HRP-3/16-8.0	9.31	7.59	10.55	8.83	1131	5.17	4.14	228	3.17	2.55	131
HRP-3/16-12.0	15.86	12.41	17.38	13.52	1793	6.79	5.62	303	4.66	3.62	193
HRP-1/4-3.5	2.69	1.93	3.14	2.76	317	1.72	1.24	69	0.86	0.69	34
HRP-1/4-4.5	4.03	3.31	4.41	3.86	483	2.45	1.93	103	1.38	1.07	55
HRP-1/4-5.0	4.69	3.66	5.66	4.55	579	2.76	2.10	138	1.59	1.24	69
HRP-1/4-6.5	7.07	5.52	8.14	6.34	828	4.00	3.10	159	2.28	1.79	90
HRP-3/8-2.2	1.14	0.86	1.24	1.00	90	0.83	0.62	41	0.41	0.31	21
HRP-3/8-3.2	2.17	1.79	2.69	2.07	262	1.41	1.10	76	0.76	0.59	34
HRP-3/8-3.5	2.34	2.00	2.83	2.24	283	1.45	1.14	78	0.83	0.66	37
HRP-3/8-4.5	3.79	3.10	4.76	3.66	448	2.24	1.79	97	1.31	1.03	55
HRP-3/8-6.0	5.72	4.48	6.90	5.52	690	3.24	2.76	159	1.93	1.45	81
HRP-3/8-8.0	9.66	6.90	10.62	8.14	1034	4.83	3.72	186	3.10	2.41	124
OX-Core											
HRP/OX-1/4-4.5	3.86	3.31	4.66	3.72	297	1.72	1.38	48	1.79	1.45	103
HRP/OX-1/4-5.5	5.34	4.00	6.14	4.62	448	2.07	1.59	69	2.28	1.76	124
HRP/OX-1/4-7.0	7.93	5.86	8.48	6.83	579	2.72	2.14	97	3.10	2.41	138
HRP/OX-3/8-3.2	2.34	1.79	2.69	2.07	221	0.97	0.76	31	1.03	0.83	62
HRP/OX-3/8-5.5	4.83	4.00	5.66	4.24	414	1.86	1.45	69	2.45	1.90	117

Bold print indicates products which are readily available.

*This item is also available from the Welkenraedt, Belgium facility.



Important

All information is believed to be accurate but is given without acceptance of liability. Users should make their own assessment of the suitability of any product for the purposes required. All sales are made subject to our standard terms of sale which include limitations on liability and other important terms.

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- Honeycomb Cores
- Continuous Fibre Reinforced Thermoplastics
- Carbon, glass, aramid and hybrid prepregs
- Reinforcement Fabrics
- Structural Film Adhesives
- Honeycomb Sandwich Panels
- Special Process Honeycombs

For US quotes, orders and product information call toll-free 1-800-688-7734

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