



HexWeb® HRH-327

Fiberglass Reinforced Polyimide Honeycomb

Product Data

Description

HexWeb® HRH-327 is a glass-fabric, bias weave reinforced honeycomb that incorporates a polyimide resin system for the node adhesive as well as both the initial and final web impregnations. This material has been developed for extended service temperatures up to 500°F with short-term capabilities up to 700°F.

Features

- High-strength retention up to 500°F continuous service
- 700°F short and intermittent term exposures
- All polyimide resin and adhesive system
- Good insulation properties
- Good dielectric properties

Applications

A high-temperature nonmetallic honeycomb for use in sandwich structures that require good electrical properties or that see service temperatures in the range of 350°F-500°F. Applications include sandwich structures for Mach 2 and Mach 3 aircraft, high-energy radomes, structural and acoustical engine inlets and liners.

Standard Dimensions

HexWeb® HRH-327 polyimide honeycomb materials are available in the following standard cell sizes and dimensions:

| Product – Cell | L | W | T Min. |
|--------------------|----------------|----------------|--------|
| HRH-327 – 1/8 in. | 42 in. ± 1 in. | 72 in. ± 3 in. | 0.125 |
| HRH-327 – 3/16 in. | 42 in. ± 1 in. | 72 in. ± 3 in. | 0.125 |

Other L, W, and T dimensions and densities may be available on special request. Please contact the nearest Hexcel Sales Office for additional information. One block minimum buy may apply.

Thickness Tolerance

Tolerances on cut thickness are as follows:

0.125 in. to 1.500 in. tolerance will be ± 0.006 in.

1.501 in. to 3.000 in. tolerance will be ± 0.010 in.

3.001 in. and over tolerance will be ± 0.062 in.

Type Designation

HexWeb® HRH-327 honeycomb is designated as follows:

Material –Cell Size – Density

Example– HRH-327 – 3/16 – 4.5

Where:

HRH-327 – designates honeycomb type

3/16 – is the cell size in inches

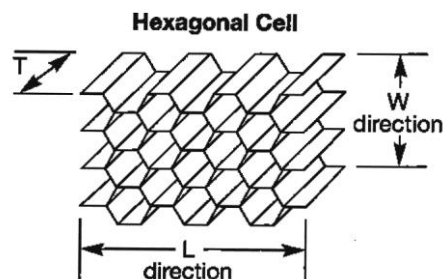
4.5 – is the nominal density in pounds per cubic foot





Dimensional Nomenclature

T = Thickness, or cell depth
L = Ribbon direction
W = Transverse direction, or direction perpendicular to the ribbon



Images for explanation only and do not represent actual appearance.

Availability

HexWeb® HRH-327® polyimide honeycomb is supplied as follows:

SHIPPING TERMS: FCA Hexcel, Casa Grande, AZ, USA (Incoterms 2010)

MATERIAL TITLE TRANSFER: Hexcel, Casa Grande, AZ, USA

Lead times will vary with the particular core type selected.

The information in this Data Sheet is subject to change without notice.

Contact your nearest Hexcel Sales Office for delivery information.

Mechanical Properties Typical Values Represented Below

| Hexcel Honeycomb Designation Material-Cell-Density | Compressive | | | Plate Shear | | | | | |
|---|--------------|------|-------------|--------------|------|-------------|--------------|------|-------------|
| | Stabilized | | | L Direction | | | W Direction | | |
| | Strength psi | | Modulus ksi | Strength psi | | Modulus ksi | Strength psi | | Modulus ksi |
| | typ | min | typ | typ | min | typ | typ | min | typ |
| HRH-327 – 1/8 – 3.2 | 310 | 220 | 27 | 195 | 140 | 19 | 95 | 70 | 7.5 |
| HRH-327 – 1/8 – 5.5 | 790p | 600p | 80p | 465p | 300p | 30p | 245p | 175p | 14.5p |
| HRH-327 – 3/16 – 4.0 | 440p | 340p | 40p | 280p | 200p | 24p | 130p | 90p | 10.0p |
| HRH-327 – 3/16 – 4.5 | 520 | 400 | 58 | 320 | 220 | 33 | 150 | 110 | 11.0 |
| HRH-327 – 3/16 – 5.0 | 600p | 480p | 68p | 370p | 280p | 37p | 180 | 135p | 12.0p |
| HRH-327 – 3/16 – 6.0 | 780 | 625 | 87 | 460 | 345 | 45 | 230 | 170 | 15.0 |
| HRH-327 – 3/16 – 8.0 | 1210 | 1000 | 126 | 700 | 490 | 55 | 420 | 300 | 22.0 |

p = preliminary values. Test data obtained at 0.500 inch thickness.

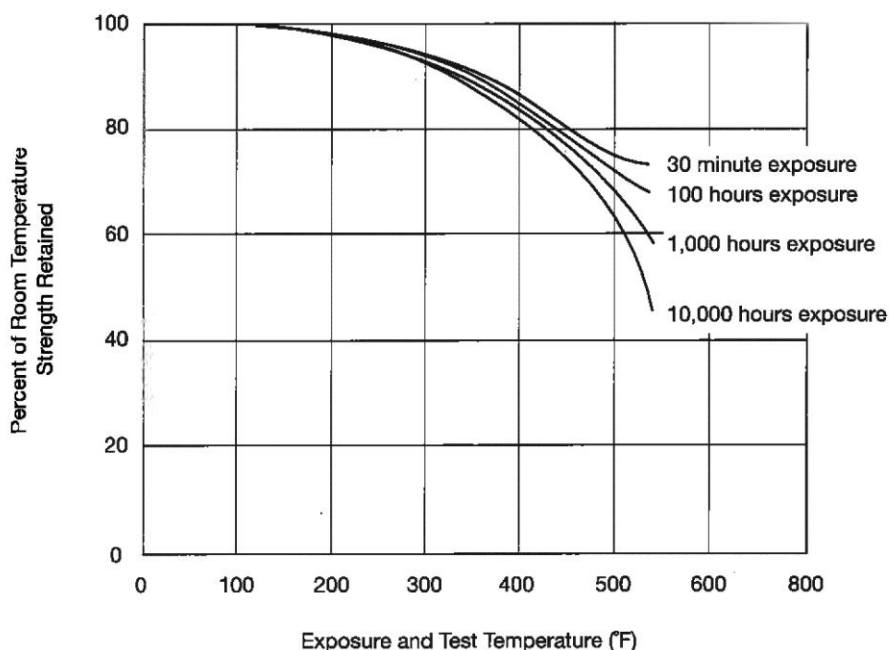
HRH-327 Honeycomb is normally not tested for bare compressive strength.

Tolerance for nominal densities shown above is $\pm 10\%$

Post cure (550° or 700°) must be specified when ordering



Post-Cured HexWeb® HRH-327 Typical Strength Retention at Elevated Temperatures



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
- Reinforced Fabrics
- Carbon, Glass, Aramid and Hybrid Prepregs
- RTM Materials
- Engineered Core
- HexTOOL® composite tooling material
- Structural Film Adhesives
- Honeycomb Cores

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>.