

Hexcel® HexWeb® CR III 5/32-5056-.001 Corrosion Resistant Specification Grade Aluminum Honeycomb

Category : Metal , Metal Foam, Mesh, or Honeycomb , Nonferrous Metal , Aluminum Alloy , 5000 Series Aluminum Alloy

Material Notes:

Grade is designated as "Cell Size-Alloy-Foil Gauge."5052 and 5056 expanded aerospace grade aluminum honeycomb materials are available in a wide selection of cell sizes and foil gauges. The HexWeb® CR III coating has been developed to offer superior protection for aluminum honeycomb exposed to corrosive environments. The HexWeb® CR III system offers a clear protective film that interacts with the aluminum surface forming a stable, tightly adherent bond. The coating is primarily in an organo-metallic polymer type that differs from the normal conversion-type corrosion protective coatings.Hexcel expanded honeycomb is manufactured by bonding together sheets of aluminum foil, then expanding to form a cellular honeycomb configuration. Resulting panels have sharp, clean cell walls, are essentially burr-free, and are suitable for high-quality core-to-facing bond.Aluminum HexWeb® CR III Specification Grade honeycomb materials are predominantly used in sandwich structures to meet design requirements for highly engineered structural components. As a structural core material it finds applications in all types of aerospace vehicles and supporting equipment where sandwich structure offers rigid panels of minimum weight, aerodynamic smooth surfaces, and high fatigue resistance. The same structural properties are also used for commercial applications such as tools, snow and water skis, bulkheads, and floors. Other nonstructural uses are direction air/fluid flow control, RF shielding, and energy absorption.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hexcel-HexWeb-CR-III-532-5056-001-Corrosion-Resistant-Specification-Grade-Aluminum-Honeycomb.php

| Physical Properties | Metric | English | Comments |
|---------------------|-------------|----------------------------|----------|
| Density | 0.0609 g/cc | 0.00220 lb/in ³ | Nominal |

| Mechanical Properties | Metric | English | Comments |
|----------------------------|-------------|------------|-------------------------------|
| Compressive Yield Strength | >= 2.48 MPa | >= 360 psi | Bare, min |
| | >= 2.59 MPa | >= 375 psi | Stabilized, min |
| | 3.10 MPa | 450 psi | Bare, typ |
| | 3.45 MPa | 500 psi | Stabilized, typ |
| Compressive Modulus | 0.965 GPa | 140 ksi | Stabilized, typ |
| Shear Modulus | 0.165 GPa | 24.0 ksi | Plate Shear, W Direction, typ |
| | 0.393 GPa | 57.0 ksi | Plate Shear, L Direction, typ |
| Shear Strength | >= 1.07 MPa | >= 155 psi | Plate Shear, W Direction, min |
| | 1.34 MPa | 195 psi | Plate Shear, W Direction, typ |
| | >= 1.88 MPa | >= 272 psi | Plate Shear, L Direction, min |

| Mechanical Properties | 2.31 MPa Metric | 335 psi English | Plate Shear, L. Direction, typ Comments |
|-----------------------|--------------------|--------------------|--|
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