Hexcel® HexWeb® CR III 3/8-5052-.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-38-5052-001-Corrosion-Resistant-Specification-Grade-Aluminum-Honeycomb.php

Physical Properties	Metric	English	Comments
Density	0.0256 g/cc	0.000926 lb/in³	Nominal

Mechanical Properties	Metric	English	Comments
Compressive Yield Strength	>= 0.414 MPa	>= 60.0 psi	Bare, min
	>= 0.483 MPa	>= 70.0 psi	Stabilized, min
	0.621 MPa	90.0 psi	Bare, typ
	0.655 MPa	95.0 psi	Stabilized, typ
Compressive Modulus	0.138 GPa	20.0 ksi	Stabilized, typ
Shear Modulus	0.0758 GPa	11.0 ksi	Plate Shear, W Direction, typ
	0.145 GPa	21.0 ksi	Plate Shear, L Direction, typ
Shear Strength	>= 0.221 MPa	>= 32.0 psi	Plate Shear, W Direction, min
	0.345 MPa	50.0 psi	Plate Shear, W Direction, typ
	>= 0.414 MPa	>= 60.0 psi	Plate Shear, L Direction, min

Mechanical Properties	Metric	English	Comments
	0.586 MPa	85.0 psi	Plate Shear, L Direction, typ

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