

Hexcel® HexWeb® CR III 3/8-5052-.004 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-38-5052-004-Corrosion-Resistant-Specification-Grade-Aluminum-Honeycomb.php

Physical Properties	Metric	English	Comments
Density	0.0865 g/cc	0.00312 lb/in ³	Nominal

Mechanical Properties	Metric	English	Comments
Compressive Yield Strength	>= 3.45 MPa	>= 500 psi	Bare, min
	>= 3.69 MPa	>= 535 psi	Stabilized, min
	5.10 MPa	740 psi	Bare, typ
	5.52 MPa	800 psi	Stabilized, typ
Compressive Modulus	1.38 GPa	200 ksi	Stabilized, typ
Shear Modulus	0.254 GPa	36.8 ksi	Plate Shear, W Direction, typ
	0.593 GPa	86.0 ksi	Plate Shear, L Direction, typ
Shear Strength	>= 1.57 MPa	>= 228 psi	Plate Shear, W Direction, min
	1.93 MPa	280 psi	Plate Shear, W Direction, typ
	>= 2.62 MPa	>= 380 psi	Plate Shear, L Direction, min

Mechanical Properties	2.96 MPa Metric	430 psi English	Plate Shear, L. Direction, typ Comments
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Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China