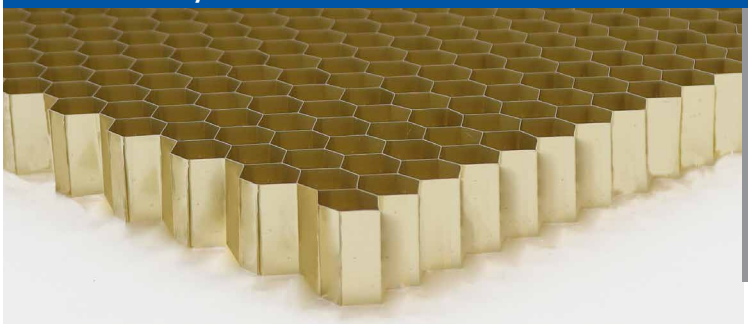
EC®

HONEYCOMB CORE PORTFOLIO

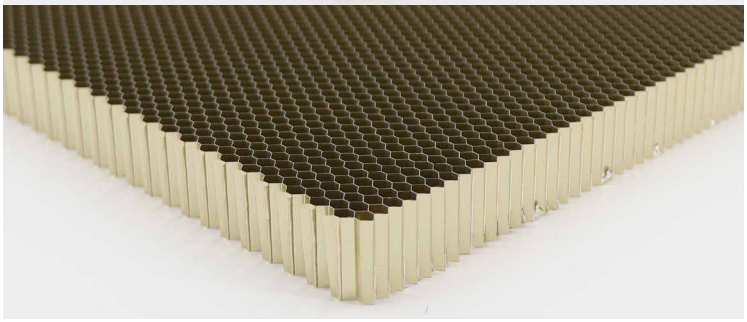
For Aviation,
Space, Defence and
Industrial Application

NEW PRODUCTS

ECM 5052/5056 PAA-CP Aluminium Honeycomb Core

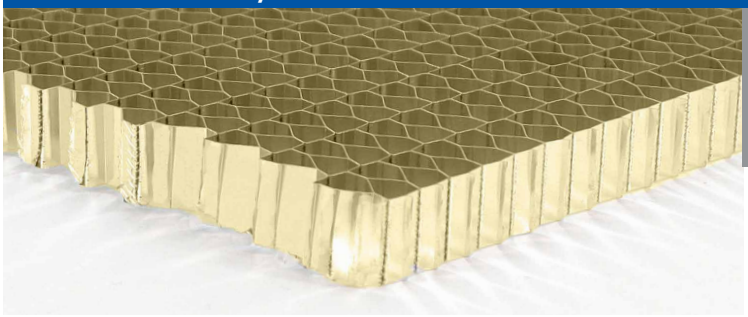


Aluminium honeycomb cores combine particularly high strength and stiffness with a low density. They are used as lightweight materials for the production of components and structural parts in the aerospace, defence technology and industrial sectors. In addition to high corrosion resistance, thermal conductivity and temperature resistance are of particular importance in a variety of applications.



- Increased application temperatures
- High thermal conductivity/removal of heat from critical areas
- Flame resistance
- Excellent moisture and corrosion resistance
- Fungus resistance
- Very high compressive strength
- High mechanical attributes

ECM-3D 5052/5056 PAA-CP Aluminium Honeycomb Core



ECM 3D 5052/5056 is our counterpart to our 3D versions made of Nomex® and Kevlar® . This core can be formed in 3 directions giving engineering a lot of design opportunities.

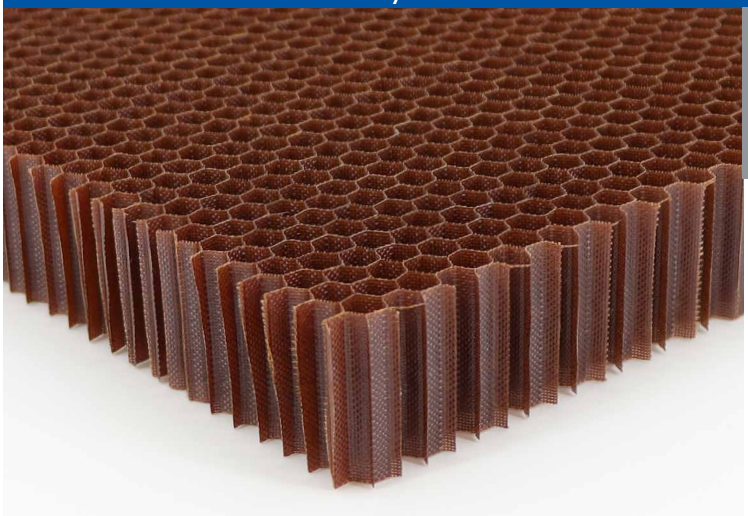
Reduced manufacturing costs:

- Lower layup time
- Less waste
- Reduced machining time
- Less splicing
- Less tooling

Design advantages:

- Malleable in 3-dimensions
- Available in different cell-sizes and -densities

ECG-CE Glassfiber Cyanate Ester Resin Honeycomb Core



ECG-CE core is a non-metallic, lightweight structural material with outstanding flammability properties. EC uses different types of glass fabrics. This type of glassfibre core is coated with a cyanate ester resin system.

- High application temperatures
- E-glass, S-glass, Quartz-glass
- Corrosion resistant
- Moisture resistant
- High RF-performance for different band ranges
- Electronic insulation

HONEYCOMB CORE PORTFOLIO

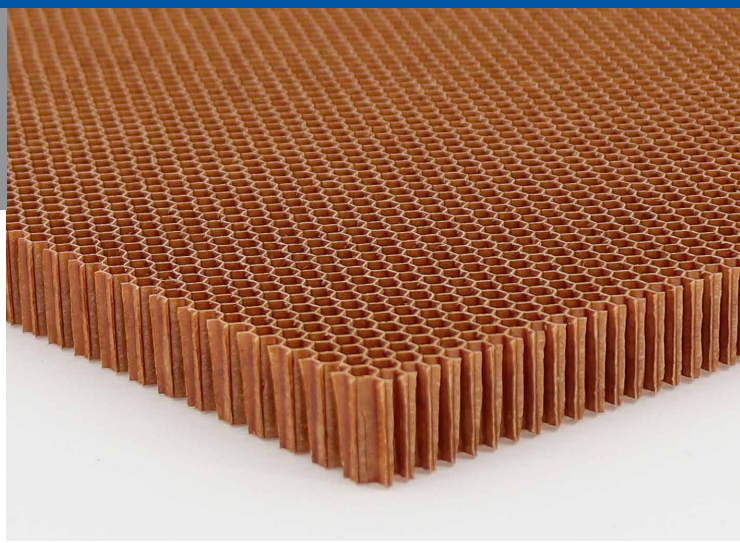
ECA/ECA-I Nomex® Aramid Fiber Honeycomb Core

ECA core is a non-metallic, lightweight structural material with outstanding mechanical and flammability properties. EC uses exclusively for all types DuPont Nomex® T412 to ensure highest quality standards. The core is coated with phenolic resin according to MIL-R- 9299.

- Fire resistant / self extinguishing
- High strength to weight ratio
- Corrosion resistant
- Available in hexagonal, overexpanded (OX) and 3D cell geometry
- Certified worldwide to a large panel of OEM's and tier 1, 2 and others
- Crush core variant available i.e. ECA 3.2-29 to ABS 5696
- Perforated/slotted variant available

ECK Kevlar® Para-Aramid Fiber Honeycomb Core

ECK core is a non-metallic, ultra lightweight structural material with outstanding mechanical and flammability properties. EC uses exclusively for all types DuPont Kevlar® N636 to ensure highest quality standards. The core is coated with phenolic resin according to to MIL-R- 9299.



- Fire resistant / self extinguishing
- Outstanding high strength to weight ratio
- Corrosion resistant
- Available in hexagonal, overexpanded (OX) and 3D cell geometry
- Certified worldwide to a large panel of OEM's and tier 1, 2 and others
- Perforated/slotted variant available

ECM/ECM-P 3003 ZrOx Aluminium Honeycomb Core

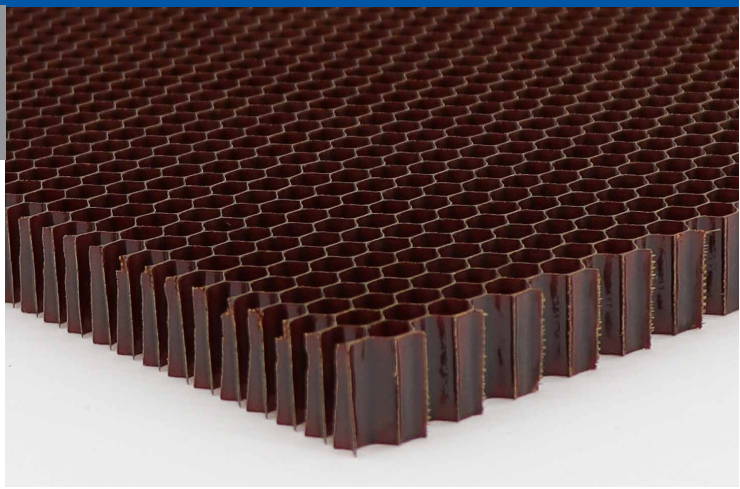
Aluminum honeycombs in the 3003 alloy have proven particularly successful on the industrial market due to their excellent compressive strength, hexagonal cell structure and low weight. With a length of up to 6.000 mm, the thickness of the plate can be individually selected up to 300 mm.

- Material: Alu-Alloy 3003 (AlMnCu)
- Corrosion protection: circonium oxide coated
- Foil thickiness: 60 µm and 80 µm
- Cell size: 3,2 mm - 19,2 mm
- Density: 29 kg/m3 - 130 kg/m3
- Service temperature: -55 °C up to 177 °C
- Micro and macro perforation: available
- Available in 3D-Version

HONEYCOMB CORE PORTFOLIO

ECG Glassfiber Honeycomb Core

ECG core is a non-metallic, lightweight structural material with outstanding flammability properties. EC uses different glass fabric types. The core is coated with phenolic resin according to MIL-R- 9299.



- Fire resistant / self extinguishing
- High strength to weight ratio
- Corrosion resistant
- Available in hexagonal, overexpanded (OX) and 3D cell geometry
- Certified worldwide to a large panel of OEM's and tier 1, 2 and others
- Perforated/slotted variant available

ECG-PI Glassfiber Polyimid Resin Honeycomb Core

ECG-PI core is a non-metallic, lightweight structural material with outstanding temperature resistance properties. EC uses different glass fabric types. The core is coated with a polyimid resin system.

- Fire resistant / self extinguishing
- Service temperature up to 270°C
- Short duration exposure up to 370°C (sandwich panel)
- High strength to weight ratio
- Corrosion resistant

ECC Carbon Honeycomb Core

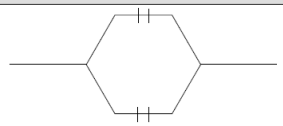
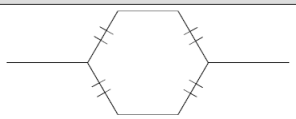
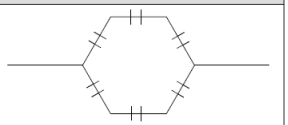
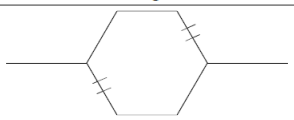
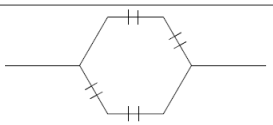
ECC core is a high-performance carbon fiber honeycomb with high mechanical and thermal properties for special applications. EC has developed structural carbon honeycomb cores from PAN fibers, which are the precursor of high-quality carbon fibers. ECC honeycomb core is used in new generation satellite structures for antennas and instrument benches to achieve thermal stability. Various resin systems make the ECC honeycomb suitable for a wide range of applications in the aerospace industry.

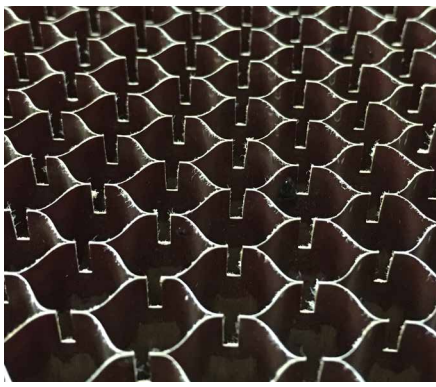
- High stiffness
- Low CTE
- Low outgasing
- High temperature performance
- Perforated cell walls for space application
- Venting capabilities for autoclave or OOA applications
- Available with different resin systems

ECA/ECK/ECG Slotted Honeycomb Core

Slotted core is offered for both hexagonal and OX cell geometry

Slotting options of our fully automated slotting process:

Drainage 2 faces	Drainage 4 faces	Drainage 6 faces
 Drainage 2A	 Drainage 4A	 Drainage 6A
 Drainage 2B	 Drainage 4B	

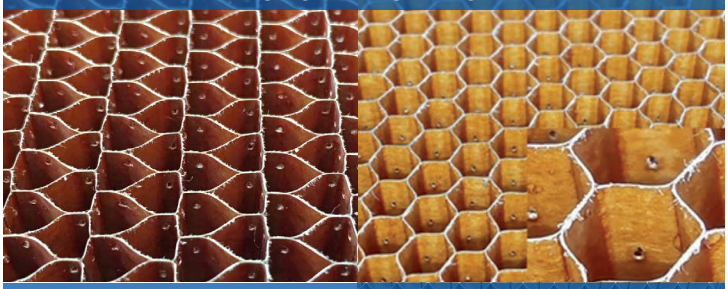


ECA/ECK/ECG/ECM Perforated Honeycomb Core

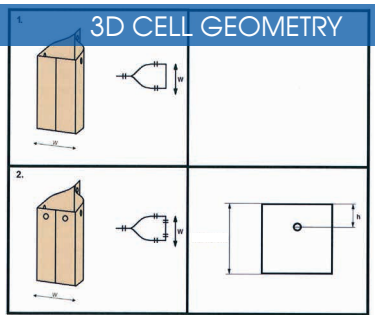
Perforated core is available for hexagonal - , OX- and 3D cell geometry

Venting is achieved by a fully automatic micro and macro perforation process.

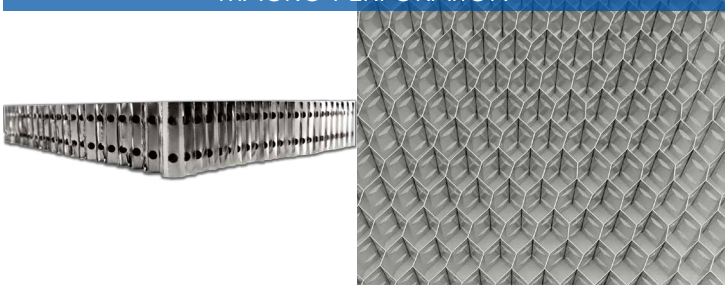
MICRO-PERFORATION



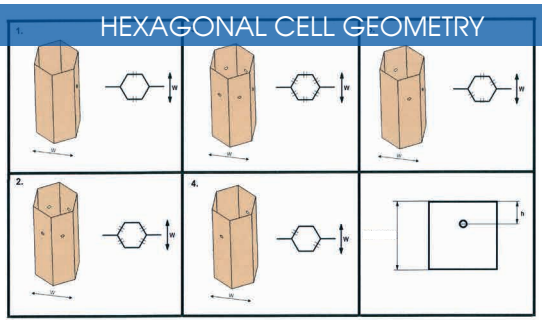
3D CELL GEOMETRY



MACRO-PERFORATION

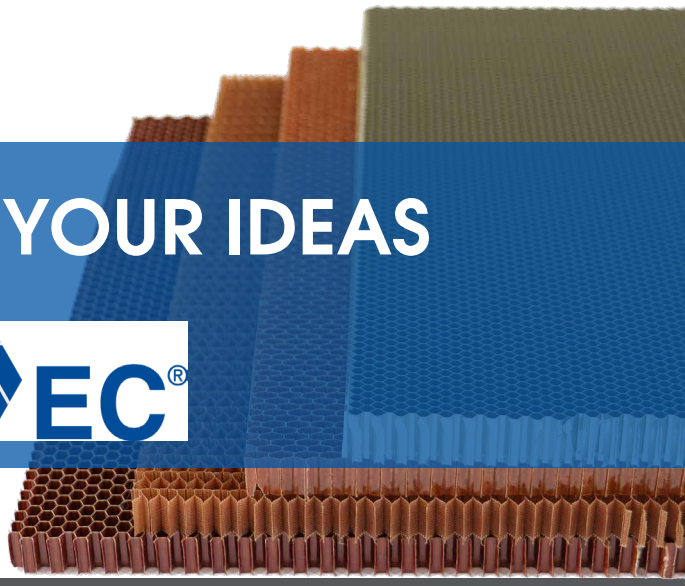


HEXAGONAL CELL GEOMETRY



WE REINFORCE YOUR IDEAS

EC®



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