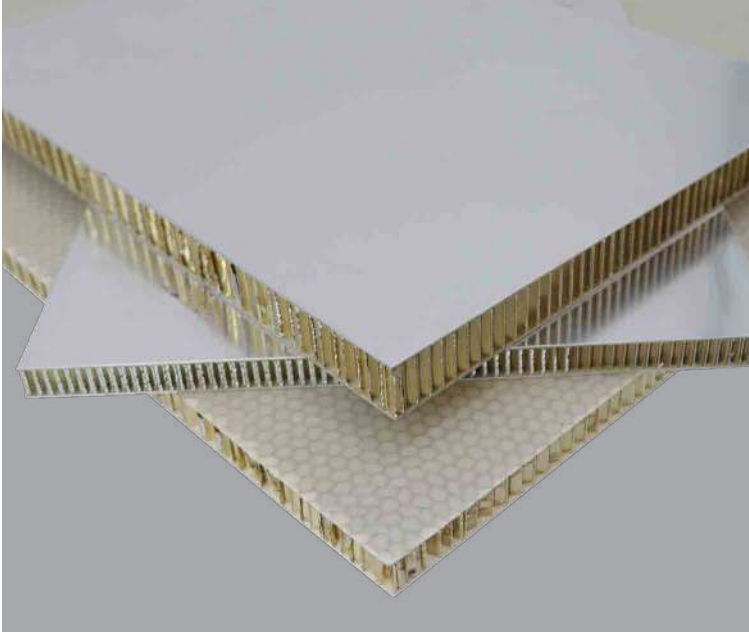




PANEL PORTFOLIO

For Aviation,
Space, Defence and
Industrial Application

Aluminium 5052/5056 Panel



Aluminium Panels with 5052/5056 PAA-CP core with different face sheet options and different materials, e.g. Al 2024, Al 6061, Al 7075, Glass fiber reinforced plastics (GFRP), Carbon fiber reinforced plastics (CFRP)

- Excellent moisture and corrosion resistance
- High impact strength
- Superior strength to weight ratio
- Increased application temperatures

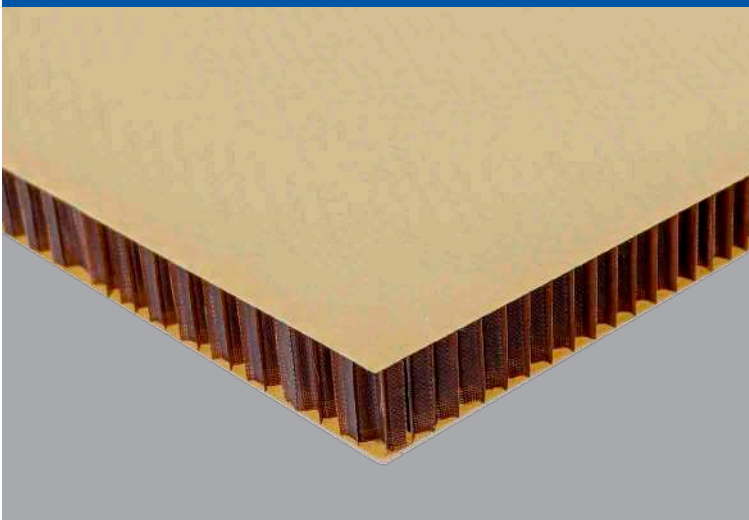
Carbon Panel



Customized panels with CFRP honeycomb core and CFRP face sheets. Available in various sizes.

- High modul fibres for face sheets
- Cyanate ester resin system; on request, alternative resin systems available.
- Perforated/Vented honeycomb core
- Space qualified
- No ITAR restrictions

Quartz Glass Panel



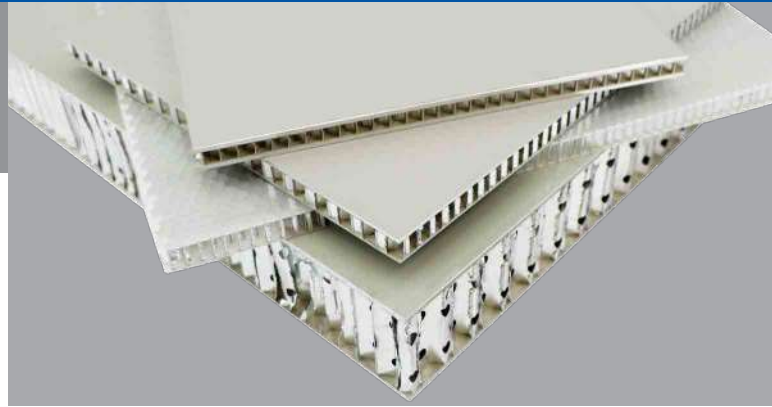
Customized panels with quartz glass honeycomb core and quartz glass skins for applications with special RF requirements. Available in various sizes.

- Perforated/vented honeycomb core
- RF properties (low losses and high permittivity)
- Extreme weight savings (Panelweight less than $\leq 1,5 \text{ kg/m}^2$)
- Outgassing (accord. ECSS-Q-ST-70-02)
- Space qualified
- No ITAR restrictions

Aluminium 3003 Panel

Industrial Aluminium Panels are successfully used for industrial applications due to their excellent mechanical properties combined with low weight. We produce special application panels with lengths of up to 18,000 mm.

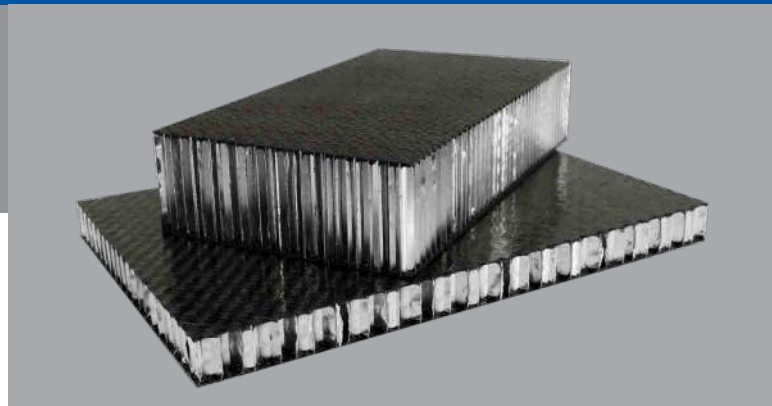
- Skin Material: Primered Aluminium Sheets with alloy 5754 available in different thicknesses
- Core Material: ECM/ECM-P in alloy 3003, ZrOx coated
- Core with micro/macro perforation available
- Available with durable service temperature from -55 °C up to 180 °C and 200 °C for short temperature peaks



Aluminium Carbon Panel

The design of Aluminium Carbon Panels consists of a carbon laminate manufactured by EC in combination with a perforated aluminium honeycomb in different alloys. Due to the special manufacturing process of the carbon laminate and panel itself, these panels are high temperature resistance.

- Skin Material: Manufactured Carbon Laminate in different thicknesses available
- Core Material: ECM/ECM-P in alloy 5052, 5056, 3003
- Guaranteed durable temperature resistance of 180 °C, even up to 270 °C for short temperature peaks
- Panel design adapted to customer requirements

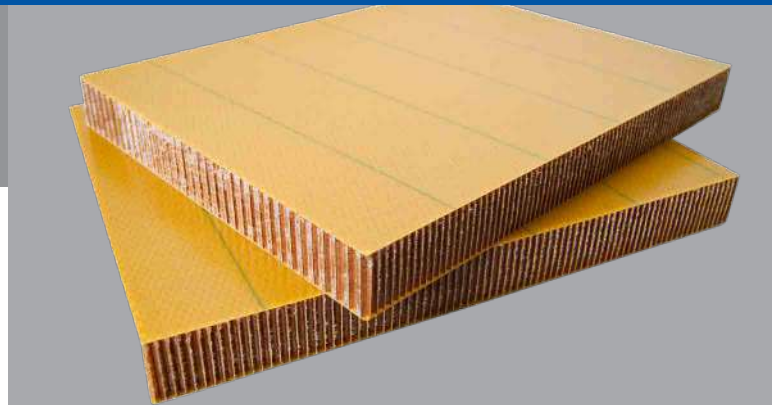


Aviation/Industrial Phenolic Panel

Custom made durable multi-use sandwich panels made with hardened fiberglass-fabric phenolic skin. Available in various sizes. Suitable for a wide range of applications in aircraft cabin interiors.

Features:

- Light weight
- High durability
- Corrosion resistance
- Panels tested according to EASA CS-25 are designed to be used in aeroplanes as interior elements

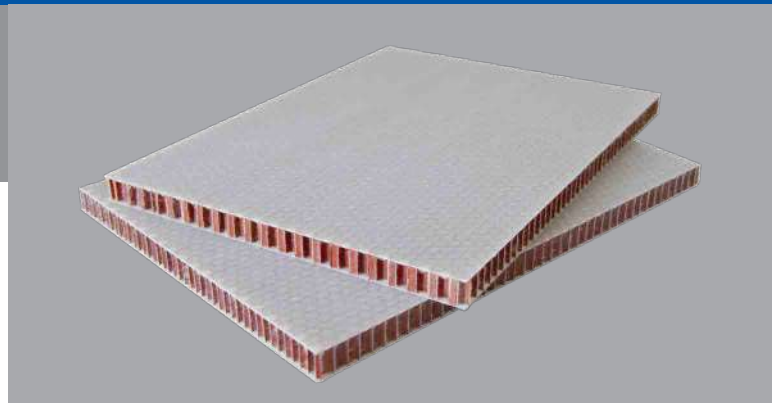


Aviation/Industrial Epoxy Panel

Custom Made Panels with epoxy skins. Available in various sizes. Suitable for a wide range of applications for aircraft cabin interiors.

Features:

- Light weight
- High durability
- Corrosion resistance
- Panels tested according to EASA CS-25 are designed to be used in aeroplanes as load carrying elements.

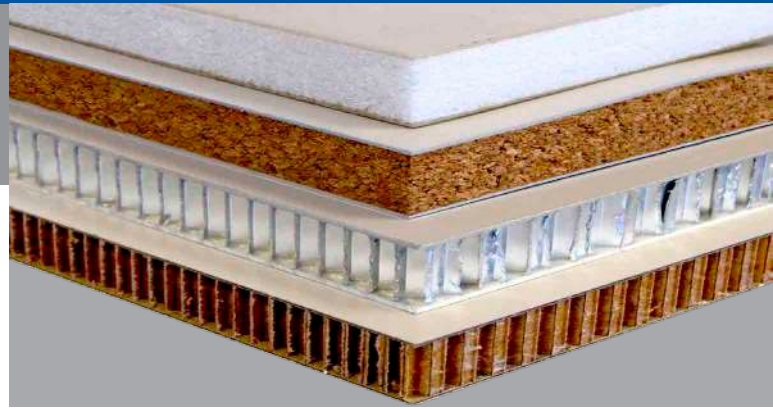


Rail Panel

Panels, customized in every aspect
core: honeycomb, foam, cork, balsa, etc.
skins: aluminium, FRP (glas, carbon), steel, etc.

Features:

- Design to cost
- Design to specification
- Machining
- Integration of profiles and fixation points



Aviation Semifinished/Finished Panel

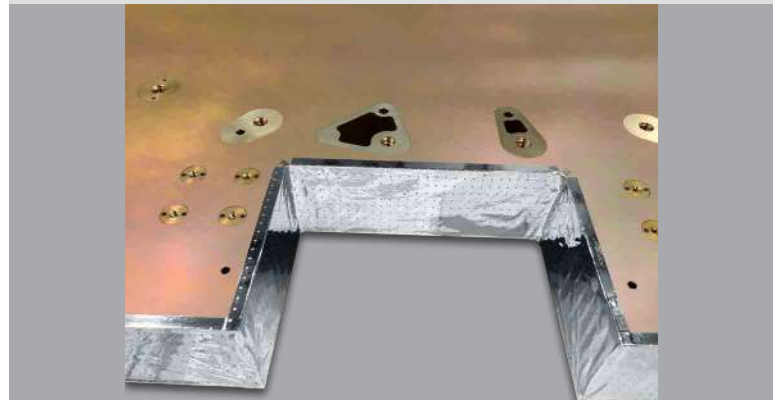
Aluminium Aviation Cargo Floor ready to be installed with:

- Primered surface
- Fully finished
- High mechanical strength
- Corrosion resistant
- Impact resistant



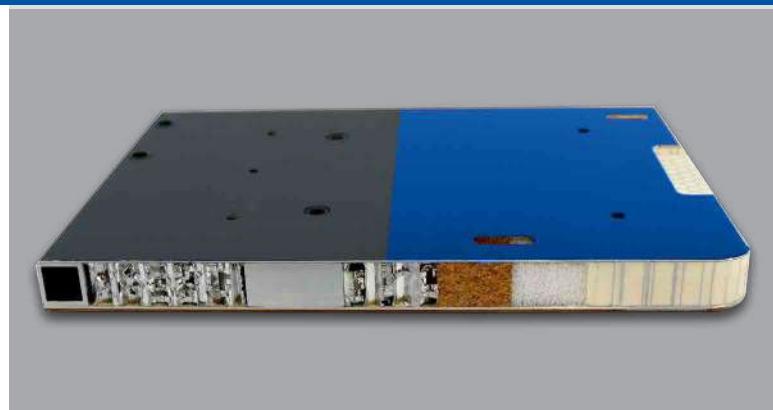
Space Panel

- Structural Aluminium Panel manufacturing (with/without embedded heat pipes)
- Structural Carbon Fibre Reinforced Plastic (CFRP) Panel manufacturing
- Solar Array Substrate Carbon Fibre Reinforced Plastic (CFRP) Panel manufacturing (with/without KAPTON® foil)
- Machining of panels, honeycombs and other parts
- Hot and cold bonded inserts and edge profiles placement
- Finishing (e.g. edge covering, paint application)



Industrial Panel

- Dimensions of up to 3,000 mm x 18,000 mm
- Carefully selected materials and adhesives
- Special adhesive film available for durable service temperature of 180 °C and up to 200 °C for temporary temperature peaks
- CNC machining, thread holes, inserts and inlays
- Edge closure: various potting compounds as well as profiles or tape options can be included
- Surface coatings (e.g. painting, HPL, decorative foil)
- Attachment of additional components (e.g. rollers, vacuum zones)



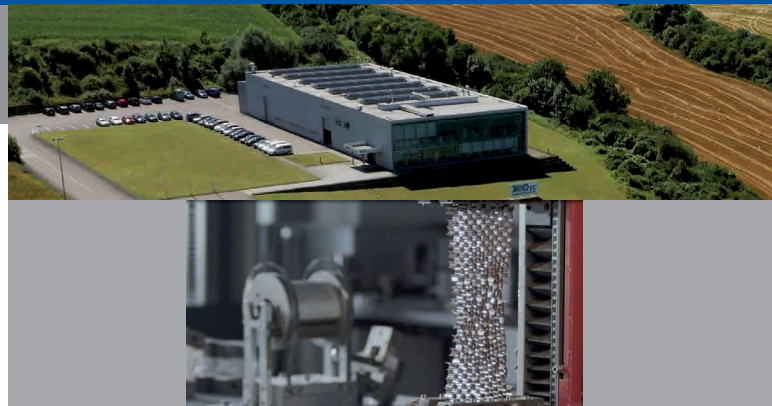
MATERIAL COMBINATION

	SKINS (EXTRACT)	CORE MATERIAL (COMBINABLE)	INSERTS AND ADD-ON-PARTS
Heavy-duty panels with optimized weight and stiffness properties for aircraft, space, defence and industrial applications.	unidirectional Carbon-Prepreg	KEVLAR® Honeycomb	Inserts (metal, ABS) Helicoils Cable ducts Rails and profiles
	Carbon-texture Prepreg	NOMEX® Honeycomb	
	Epoxy Glass Prepreg	Glass-Fiber Honeycomb	
	Phenolic Glass Prepreg	PAA + corrosion protection (CP) Aluminium Honeycomb core in 5052 and 5056	
	Aluminium	Alloy 3003 with zirconium oxide corrosion protection	

Center of Excellence and R&D Facilities

Dedicated Center of Excellence with highly qualified engineering staff and R&D Facilities.

- Product development
- Non destructive and destructive testing
- Prototyping
- Industrialization support
- Mechanical tests and climate chamber tests
- Smoke, toxicities and flammability tests
- Qualification support
- EASA Part 21J DOA Team



Presses (large scale presses)

EC operates a large number of panel presses in different dimensions. Unique are its large scale presses with panel dimensions of up to 18,000 mm in length.



Important Qualifications

Airbus Group	ISO 9001 & SAE AS 9100	Nadcap	Boeing 8-124	Boeing D1-4426	Boeing 5317
EASA 21 Part G	EASA Part 145	EASA 21 Part J	IRIS	DIN 6701	

ECHTERNACH SITE



CULPEPER SITE



BITBURG SITE



WE REINFORCE YOUR IDEAS



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