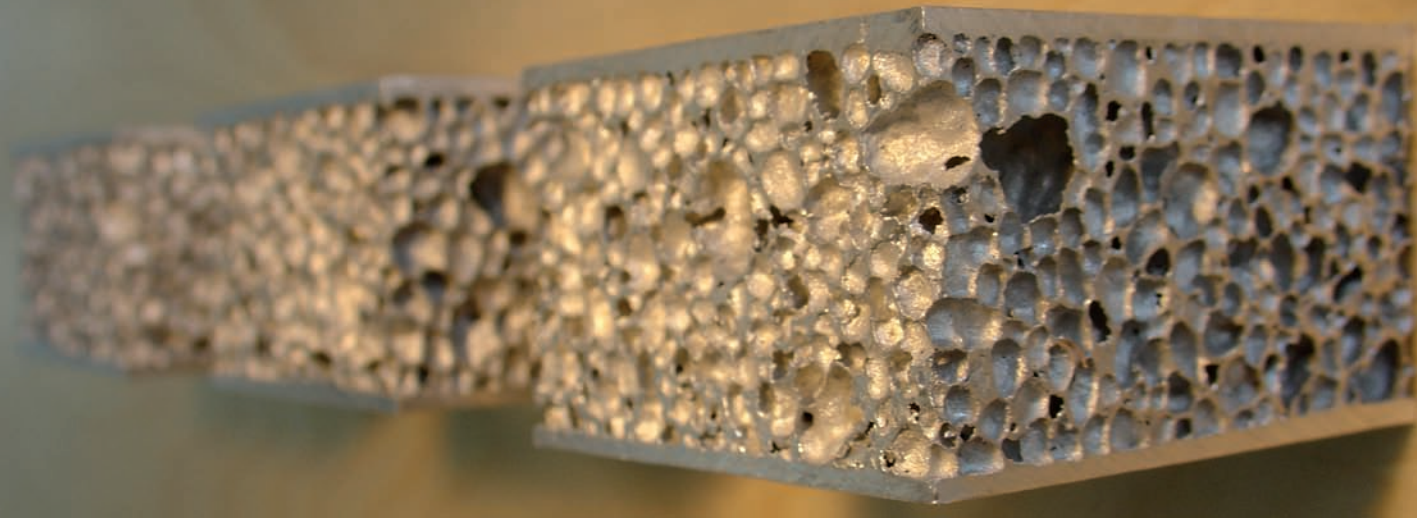


## Aluminium-Foam-Sandwich (AFS)



### Aluminium-Foam-Sandwich ...

... the only sandwich material in the world made of aluminium without any adhesives.

We are leading in the production of AFS and we can offer everything you need for a successful

- conception
- design
- development
- prototypes
- production of parts

### Data:

Panel size:	max. 2500 x 1200 mm
Thickness:	9 - 80 mm
Cover sheet thickness:	0,65 - 10 mm
Flatness tolerance:	1 mm/1000 mm
Thickness tolerance:	± 0,8 mm
Weight:	10,5 kg/m <sup>2</sup> (according to sample panel 25mm/1,2 mm cover sheets)

E modulus foam:	5 GPa
E modulus 1/10/10:	21 GPa
E modulus 2/28/2:	18 GPa
Bending stiffness:	ca. 8% geringer (according to bulk aluminium with same thickness)
Tensile strength:	120 MPa
Compression strength:	depending on core density 4-8 MPa
Thermal expansion:	25*10 <sup>-6</sup> 1/K
Thermal conductivity:	10-15 W/mK

### AFS – Material

Aluminium-Foam-Sandwiches (AFS) are flat structures composed of a foamed aluminium core and aluminium cover sheets.

The cover sheets are metallurgical bonded to the foam core - no adhesives are used. Thus, quite in contrast to conventional sandwich structures, AFS are suitable for thermal joining processes such as welding.

Besides their outstanding suitability for lightweight applications, AFS shows further advantages enabling multitude applicability in technical areas.

They show excellent:

- damage tolerance
- energy absorption behaviour
- acoustic insulation properties
- thermal insulation properties

Mentioned data is according to our standard panel with Al6082 T4 cover sheet alloy and AlMgSi foam core. It is possible to adjust the mechanical properties through variation of core thickness, core density, cover sheet thickness and cover sheet alloy.

### Contact:

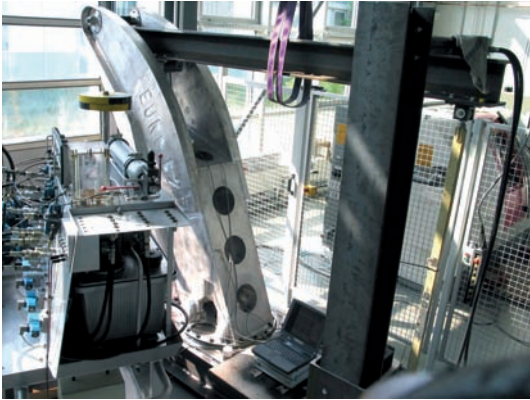
#### Alulight AFS GmbH

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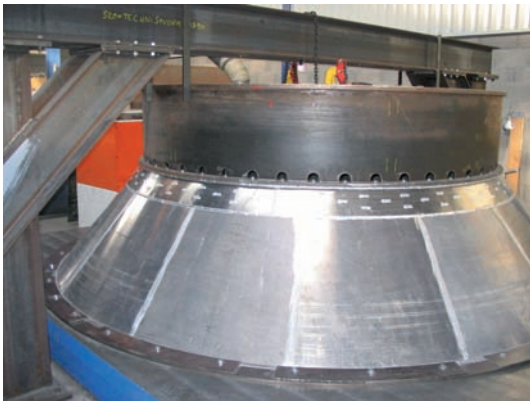
The data in this application brochure correspond with the current status of our knowledge and experience. We do not assume any guaranty for the information given. We reserve the right to alter any product data as a result of technical progress or further developments in the manufacturing process.



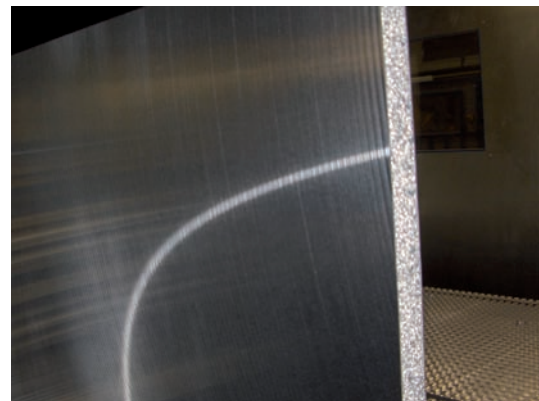
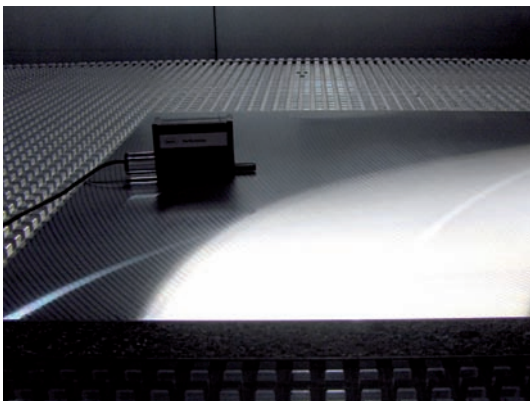
## AFS – In Application



AFS – Telescope arm support for mobile working platform.



Test construction of intersection cone for the Ariane V Rocket



AFS after milling treatment

### Contact:

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