



1



2



3

- 1 *Aluminum foam*
- 2 *Foam filled steel profile*
- 3 *Aluminum foam cylinder*

ALUMINUM FOAM

Aluminum foam

Aluminum foam impresses with its low specific weight and excellent energy absorption behavior. For automotive design, this results in fields of application concerning all stiffness and crash relevant areas.

Aluminum Foam is predestined for its application in fast moving units which are light weight and dynamically stressed within the area of mechanical engineering.

Semifinished products and assemblies

Aluminum foam is often used as shear resistant core in sandwiches or hollow profiles. These semifinished products are manufactured in standard dimensions and then application specific cutted and processed. Large assemblies can be generated from semifinished products by conventional

joining methods, e.g. welding. The direct foaming of a prefabricated form is also possible.

Our offer

We will be pleased to arrange the complete process from development to production of whole assembly groups in aluminum foam design. We support you with conceptual design and construction. With the help of the FE-method we simulate the properties of the parts statically, dynamically and thermally in order to detect and eliminate weak spots already in this early stage of development. The calculation of alternatives and relative comparisons to the original construction complete our offer. The production of assembly groups and their subsequent property analysis are important elements of our portfolio.

Fraunhofer Institute for Machine Tools and Forming Technology IWU

Reichenhainer Straße 88
09126 Chemnitz

Department Lightweight Structures

Dr.-Ing. Thomas Hipke
Phone +49 371 5397-1456
thomas.hipke@iwu.fraunhofer.de

www.iwu.fraunhofer.de