

Plain weave multilayer fabric

Service Offering

- Weave development in the field of weaving and braiding
- Final contour near-load design of complex multi-dimensional woven structures
- Processing of sensitive inorganic materials and organic high-performance and standard materials
- Qualitative and quantitative testing methods for characterization of fibers, textile structures and components
- Sample production

Contact

Prof. Dr. Frank Ficker
Phone +49 9281 409-4540
frank.ficker@isc.fraunhofer.de

Dr. Andreas Todt
Phone +49 921 78510 723
andreas.todt@isc.fraunhofer.de

Fraunhofer Application Center
for Textile Fiber Ceramics TFK
Kulmbacher Straße 76
95213 Münchberg

Fraunhofer Center
for High Temperature Materials and Design HTL
Gottlieb-Keim-Straße 62
95448 Bayreuth
www.htl.fraunhofer.de



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**Center for High Temperature Materials and
Design HTL**

Weaving and Braiding

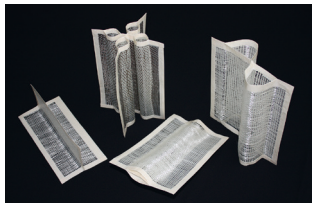
Basalt fiber fabric

Weaving and Braiding

Fraunhofer Center for High Temperature and Materials HTL and its Application Center for Textile Fiber Ceramics TFK are working on textile manufacturing processes for 2D and 3D preforms made of inorganic and, in particular, ceramic materials. Woven and braided structures are the first choice for textile preform development from inorganic materials.

Innovative Applications

- Braids for complex geometries in CMC component reinforcements
- Braids for CMC component reinforcements, e.g. for dental prostheses
- Braids for branched stents
- Braids for textile chains and ladders
- Braids for knotless net constructions
- Braids for cable sheathing
- Tubular, flat, packing, spiral, core, sheathing, branching braids and combinations thereof



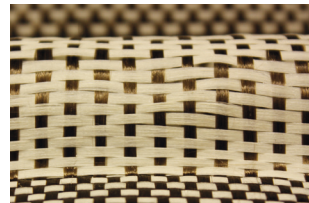
Ceramic semifinished products



Rope braid



Multilayer fabric



Ceramic basalt fabric



Double rapier weaving machine with single thread control

Equipment

In our laboratories, a wide range of equipment is available for a wide variety of textile production processes:

- Double rapier weaving machine with single thread control
- Jacquard weaving machines
- Shaft rapier weaving machine
- Shaft air-jet weaving machine
- Terry weaving machine
- Leno weaving machine
- Ribbon weaving machine
- Semi-automatic laboratory looms
- Miniature variation weaver for particularly small and fine fabrics
- 4 x 4 variation weaver
- 8 x 8 variation weaver
- Radial weaver