

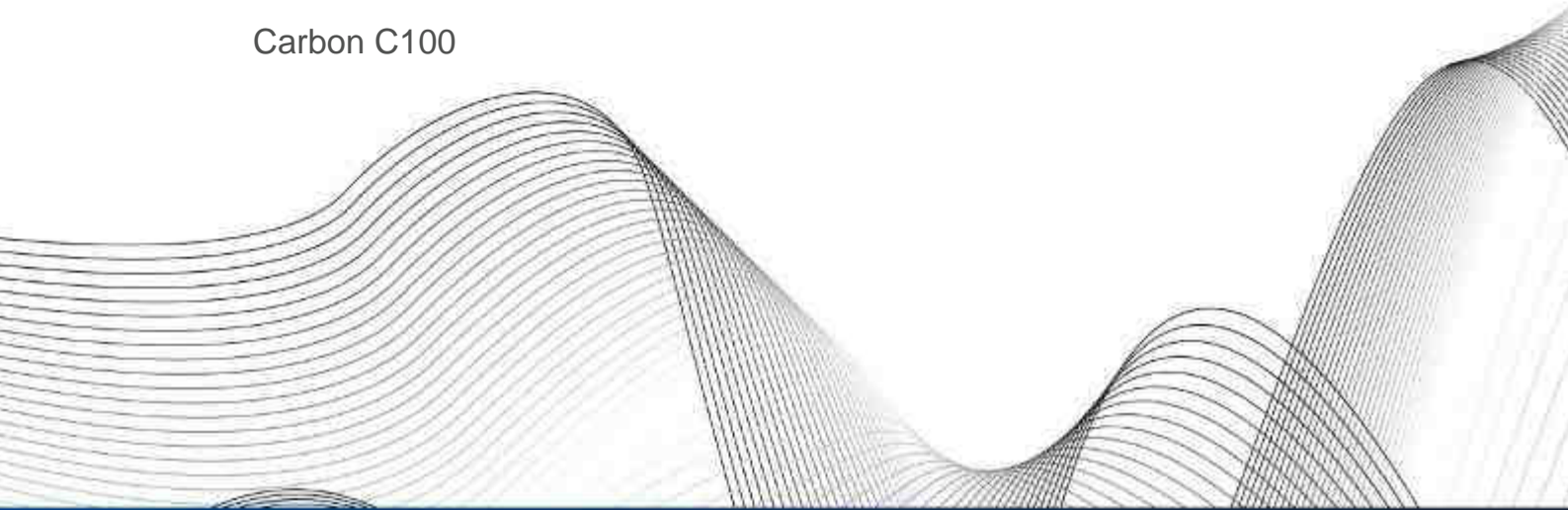


OTTO FUCHS  
Dülken GmbH & Co. KG



Friction Linings

Carbon C100





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## Applications

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The friction linings of Otto Fuchs which are made out of carbon are characterised by excellent wear resistance and good friction properties. Due to the way in which the friction lining is connected to the substrate the design of the friction layer and its surface can be adapted to each single case of application. Carbon linings on synchronisers are suitable for higher mechanical loadings. Low wear rate is observed for friction linings made of carbon over the whole time of service.

Applications:

Synchronisers

Outer rings

Inner rings

Intermediate rings

Lamellar clutches

Devices for gliding and friction applications

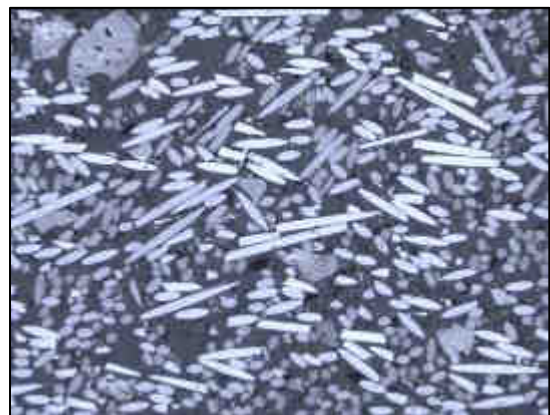


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## Microstructures

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The carbon lining consists of a matrix made of moulded thermosetting material and enhanced with carbon fibres and further fillers. For individual applications variation of the fillers is possible.





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### Physical properties

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#### At room temperature

Density	1.4 to 1.6	g/cm <sup>3</sup>
Surface resistivity	350	Ohm
Volume resistivity	3300	Ohm cm
Thermal conductivity		W/(m*K)
Heat capacity	ca. 1000	J/(kg*K)
Coefficient of thermal expansion	ca. 20	10 <sup>-6</sup> /K
Young's modulus	23 - 26	GPa

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### Mechanical properties

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#### At room temperature

Indentation hardness	150 to 300	N/mm <sup>2</sup>
Tensile strength	70 to 100	MPa
Compressive strength	230	MPa

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### Consignment and dimensions

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The carbon lining is connected to the substrate with positive locking. Brass alloys, steel and other metals are possible materials to be used as a substrate for the carbon lining.

Frames up to a diameter of 110mm can be lined with carbon. Carbon linings of down to 0.5 mm in thickness can be connected to a frame.

Depending on its application the carbon lining is finished. Several devices are available at Otto Fuchs for finishing the carbon lining.

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### Special notes and remarks

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Resistance to chemicals and lubricants has to be considered for each application.

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