

Contacts

Dr. Anna Große

E-mail: anna.grosse@stfi.de

Phone: +49 371 5274-282

Dipl.-Ing. Romy Naumann

E-mail: romy.naumann@stfi.de

Phone: +49 371 5274-186

Dipl.-Ing. (BA) Marcel Hofmann

E-mail: marcel.hofmann@stfi.de

Phone: +49 371 5274-205

CarboBreak

Prerequisites and Mechanisms for the Release of Alveolar Fibrous Carbon Fibre Fragments



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Sächsisches Textilforschungsinstitut e.V. (STFI)
An-Institut der Technischen Universität Chemnitz
Annaberger Straße 240 | 09125 Chemnitz | Germany
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CarboBreak

Objectives

- Investigation of the potential for the release of alveolar carbon fibre (CF) fragments
- Development of materials science expertise on the fracture behaviour of CF
- Clarification of the material requirements of CF for the formation of alveolar fibrous fragments
- Improved understanding of the fracture behaviour of CF and the release behaviour of alveolar fragments under mechanical stress

Approach

- 1 Investigation of the fracture behaviour of selected fibre types (pitch- or polyacrylonitrile (PAN)-based carbon fibres from different strength and elasticity modulus ranges)
- 2 Production of textile semi-finished products from the selected carbon fibres
- 3 Mechanical stress of composites and performance of workplace measurements
- 4 Investigation of the influence of recycling processes on material properties (recovery of carbon fibres and production of composites from rCF semi-finished products)
- 5 Comparative tests on real samples from different manufacturers
- 6 Discussion of the project results with industrial partners, derivation of specific protection measures and their testing in practice
- 7 Elaboration of a protective guideline "Safety by Design and Application Safety"

Project Partners



Associated Partners

