



ECC - Engineered Cramer Composites

Fabrics, NCFs, Unidirectionals



Overview

In 2004 ECC – Engineered Cramer Composites – was founded as a subdivision of C. Cramer GmbH & Co. KG with the mission to focus on the composite market with its sophisticated and tailor made product solutions.

The parent company CCC was founded in 1947 and is Germany's oldest manufacturer of industrial textiles. Among its versatile product portfolio serving distinct markets C. Cramer & Co. manufactures high performance composite fabrics since the year 1980.

Worldwide the company employs 270 people with production sites in Germany and the US. Please find more information on www.ecc-fabrics.com and www.ccc-fabrics.com.



Products: Flexibility & technical Progress

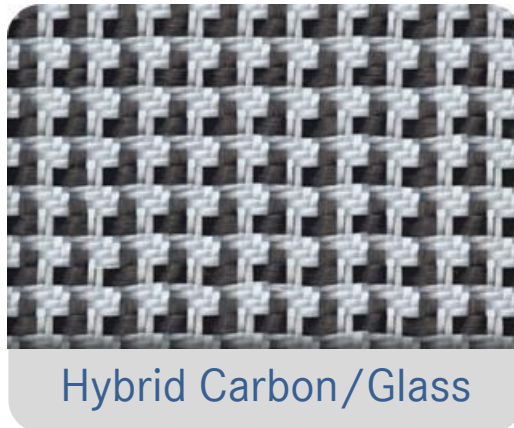
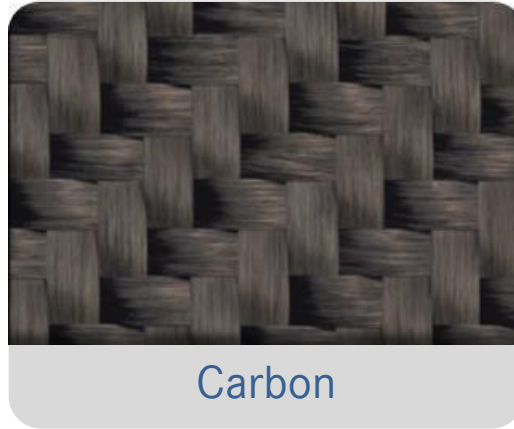
ECC is renowned for its customized, highly flexible and problem solving orientated customer solutions. Highly qualified staff produce approximately 800 different product variants in an advanced manufacturing plant. Thanks to investments in progressive technical facilities, ECC is able to produce small quantities of specially designed products and large quantities of standard products, both of outstanding quality, enabling it to respond to specific customer needs. Its market position is strengthened through the expertise gained in **weaving Carbon, Aramid, Dyneema, Diolen and Hybrid fabrics** over the last three decades.

- ECC offers **finishing of textile structures with thermoplastic coating and powdered duromers** in order to improve cutting and stamping features as well as to produce Preforms.
- Additional refinement options are provided by a **laminating and a powdering machine** in which multilayer systems and other **complex structures** can be manufactured.



Fabrics

» Examples



Non-Crimp Fabrics (NCFs)

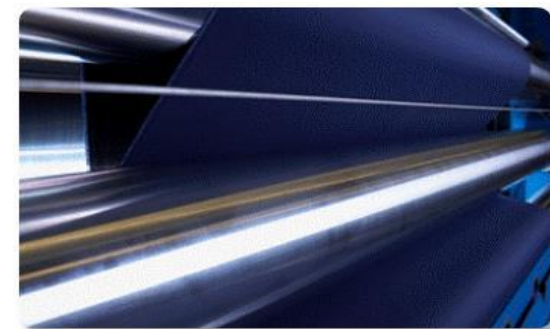
- Biaxial non-crimp fabrics
- Triaxial non-crimp fabrics
- Quadraxial non-crimp fabrics
- Wide variety of weights
- Additional layers available
 - » (Mats, Fabrics, UD´s)

» Examples



Finishing of Composite Fabrics

- Powder coatings - EP & PES
 - » Stabilizing the fabrics for further processing (impregnation, cutting, etc.)
 - » Preform
- Thermoplast Prepregs
 - » Dry Prepregs based on Peek, PA12, PP, PEI, PA6
- One-/two sided laminations
 - » Carbon & Glass Fabrics
 - » Carbon, Glass & PES Mats
 - » Fabrics & TP-Foil



Quality Assurance

- ISO 9001 certified since 1994
- EN 9100 certified since 2010



- Standardized production processes
- Centralized process control and productions management
- High quality standards apply before product delivery
- Documented product test results are delivered with technical datasheets
- Shipment through reliable and established companies