CORDENKA GmbH & Co. KG

Employees
- approx. 650

Branches
- Fiber industry

Key materials
- Cellulose

Key products
- Continuous cellulose fibers, cords, fabrics, chopped fibers

Contact

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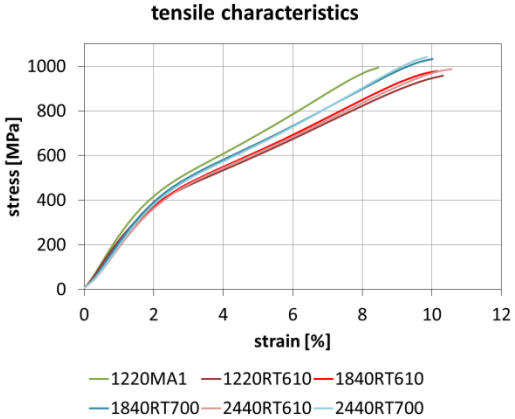

Cellulosic Yarn for Composites

Manufacturing industrial rayon

Rayon is a continuous multifilament fiber CORDENKA has been producing since 1938. Nowadays CORDENKA is producing more than 50 % of the global technical rayon demand.
The CORDENKA spinning plant in Obernburg has an annual capacity of 32,000 metric tons of industrial rayon yarns.

Product properties of CORDENKA® include:
- biodegradability
- low abrasiveness
- high heat ageing and chemical resistance
- high modulus
- no glass transition temperature
- no melting point
- high thermal stability
- high dimensional stability
- low hysteresis

CORDENKA® rayon owes its heat- and stress-resistance to its cellulose origin. Rayon is thermostable and thus hardly affected by heat and stress. It offers lasting dimensional stability and performance.
On the contrary, polyesters and polyamides are petrochemical products. These thermoplastic materials are affected by heat and stress. They exhibit higher shrinkage, higher elongation, and more creep.

Application in reinforced plastics

CORDENKA® reinforced plastics stand out due to their excellent balance between stiffness and stability/resistance on the one hand and impact strength on the other.
The combination of CORDENKA® rayon's elastic modulus (19.5 GPa) and its elongation at break (10 %) leads to a significant energy absorption capacity in the corresponding thermoplastic composite.
Thermoplastic rayon composites offer the potential for lightweight construction and a high degree of crash-resistance.
CORDENKA works together with research and industrial partners to develop those specific areas of application.
In addition, developments are in progress that will allow the application of CORDENKA® in thermoset composites as well.

Available reinforcing fibers

The CORDENKA product range includes CORDENKA® 610F (Super 2) and CORDENKA® 700 (Super 3) filament yarns in different linear densities and make-up.

	linear density [dtex]	filaments	BT [MPa]	EAB [%]	chord-modulus [GPa]
MA1	1220	450	987	8.6	24.5
RT700	1840	1000	1018	9.8	20.7
RT700	2440	1350	1052	9.8	18.7
610F	1220	720	939	10.0	22.6
610F	1840	100	979	10.0	20.0
610F	2440	1350	996	10.3	18.7