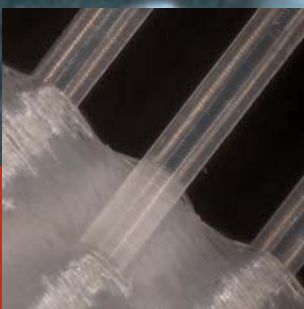
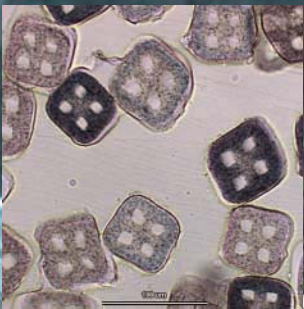


C E N
T E X
B E L

extrusion



technological platforms

Centexbel's comprehensive extrusion platform, including several pilot extrusion lines, is especially equipped to simulate almost all extrusion processes on an industrial scale. The centre's extensive testing facilities allow to characterise both raw materials and finished products.

testing

preparatory tests and processes

- ◆ rheometry
- ◆ thermal analysis
- ◆ structural properties
- ◆ quality assessment



dosing equipment for twin-screw compounder

testing equipment for yarn evaluation

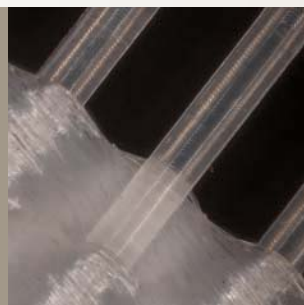
- ◆ standard yarn tests: mechanical properties, crimp
- ◆ dynamic yarn characterisation platform for crimp/friction/hairiness/entanglements
- ◆ ageing tests: QUV, weatherometer
- ◆ hydrophilicity/hydrophobicity
- ◆ electrical conductivity
- ◆ 3D crimp...



polyamide granulates



spinneret



monofilament yarn



cross-section carpet yarns

testing equipment for fabric evaluation including production of knitted fabrics on knitting platform

- ◆ burning behaviour
- ◆ abrasion
- ◆ hydrophilicity...

research and development

◆ polymers

blends
spinnability
newly developed polymers

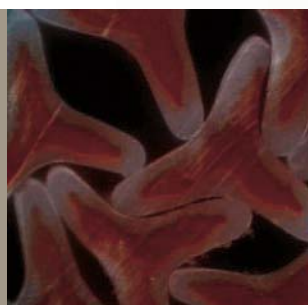
◆ processing

bicomponent extrusion
plasma treatment of yarns
compounding

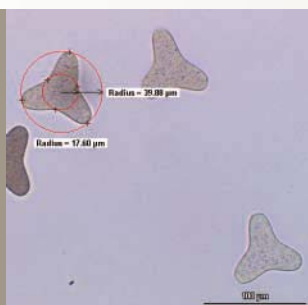
◆ additives

conductivity
nano-additives
hydrophilicity
spin finishes
pigments

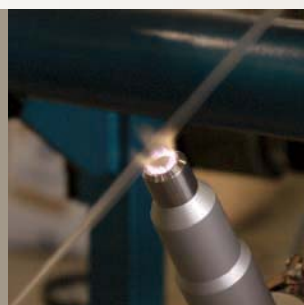
◆ product development and extrusion test runs



trilobal bicomponent yarn



cross section trilobal yarn



online plasma yarn treatment



bicomponent crimp yarn

extrusion application platform

laboratory scale extrusion

drying of moisture sensible materials

- ◆ three-stage vacuum dryer
- ◆ vacuum ovens

pre-testing on a laboratory line

- ◆ multifilament, tape, film
- ◆ new materials : preliminary indication on affinity to spinning
- ◆ limited consumption of raw materials (from 5g to 2000 g)



twin-screw compounder operation

pilot-scale extrusion

twin-screw compounder

- ◆ compound and masterbatch production
- ◆ testing of degradation under thermal processes
- ◆ 3 feeders, vacuum extraction



twin-screw compounder



tape and monofilament extrusion line

bicomponent multifilament extrusion line

tricolour multifilament line

slow-speed lab line

tricolour multifilament line

- ◆ layout: extruder, spinneret, air cooling, two-stage drawing on heated rollers, winder
- ◆ end products : carpet yarns, flat yarns, staple fibre simulation

bicomponent multifilament line

- ◆ layout: 2 extruders, bicomponent spinpack, air cooling, two-stage drawing on heated rollers, winder
- ◆ end products: bicomponent yarns

tape and monofilament extrusion line

- ◆ layout: extruder, spinneret for monofilament or slit die for film, water bath cooling, cutting unit, drawing in oven, winder
- ◆ end products: tapes (film), flat and round monofilaments, synthetic grass, geotextiles, carpet backing, ropes, ..

electrospinning

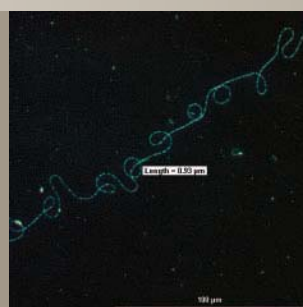
- ◆ laboratory scale equipment
- ◆ end products: nanofibre web



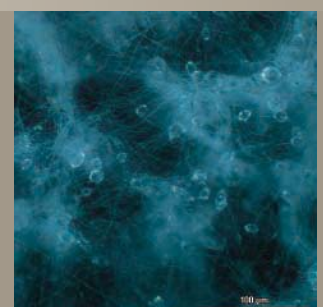
multifilament yarn



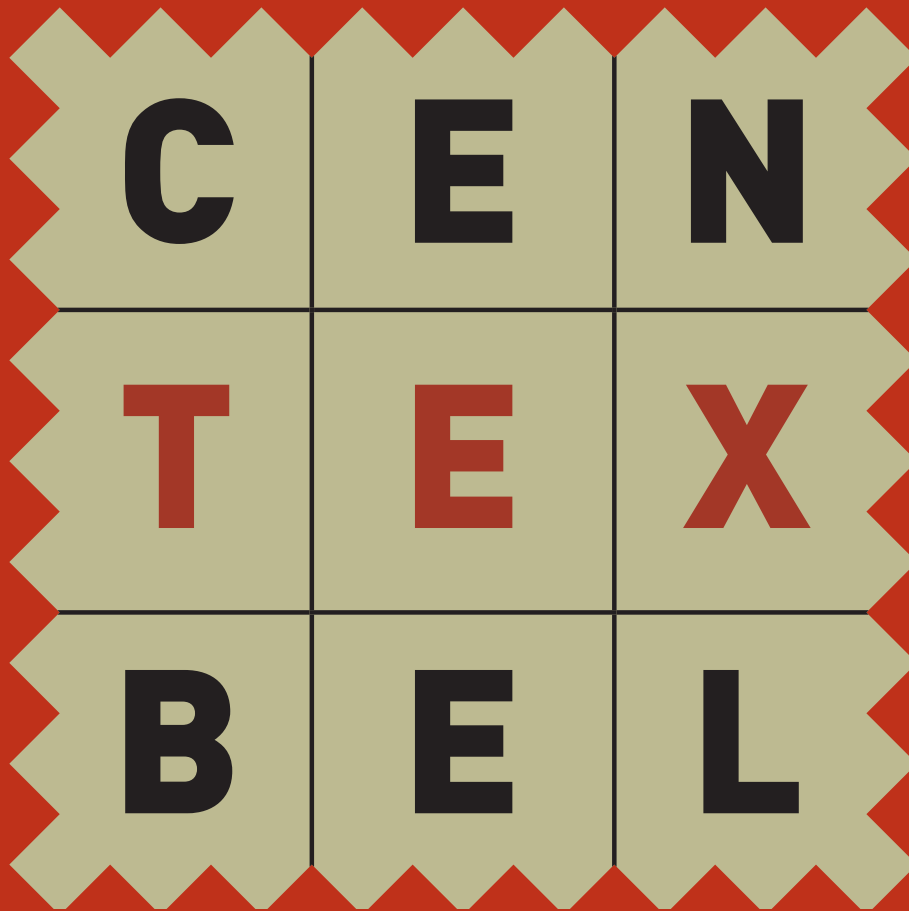
artificial turf



nanofibre



nanofibre web



your partner in extrusion

**LIVING
TOMORROW[®]**
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