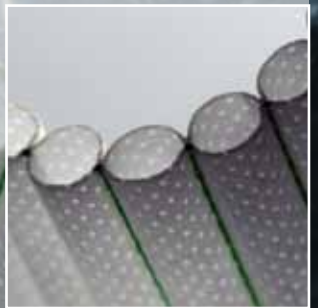
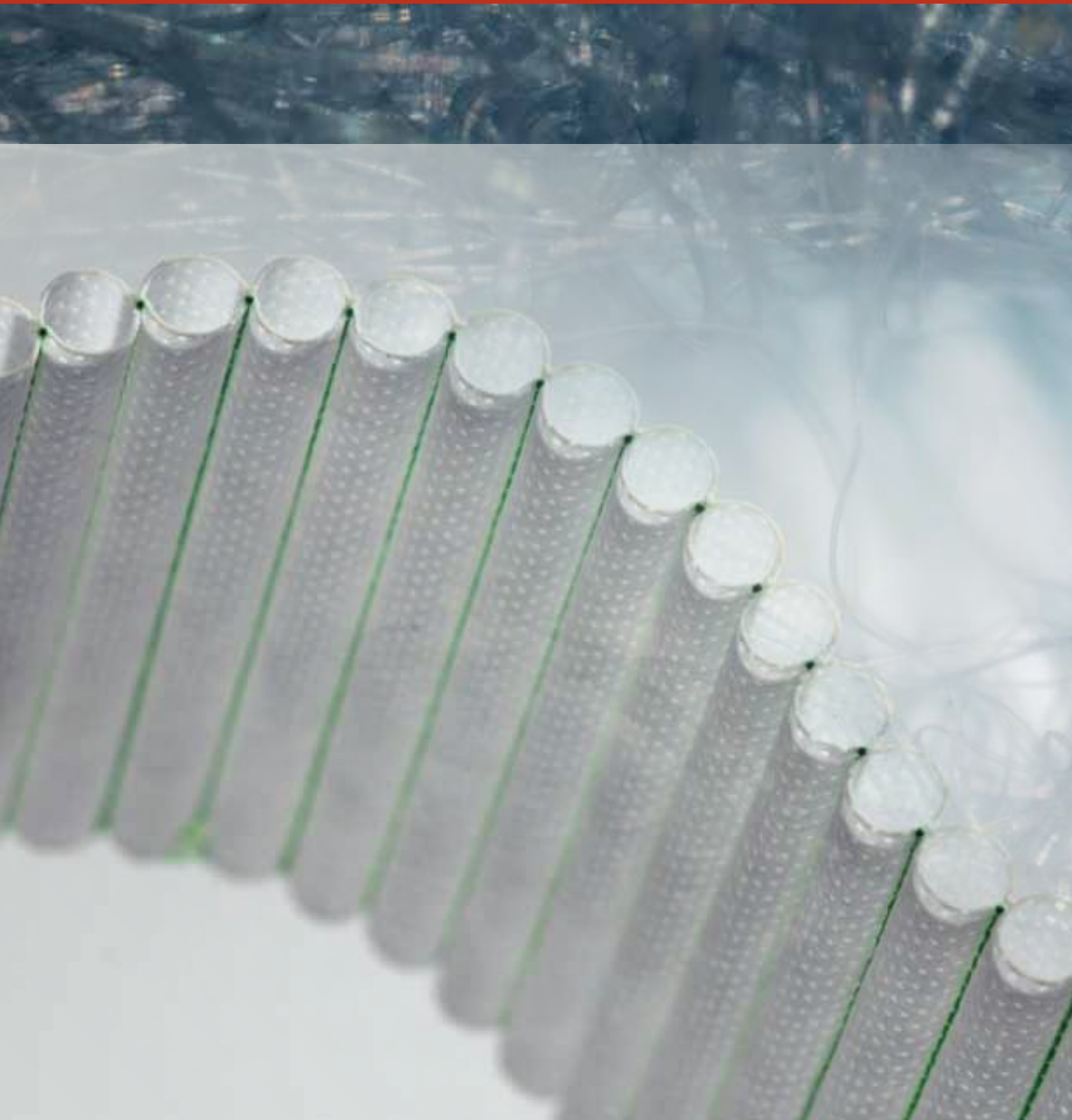


**C E N**  
**T E X**  
**B E L**

nonwovens



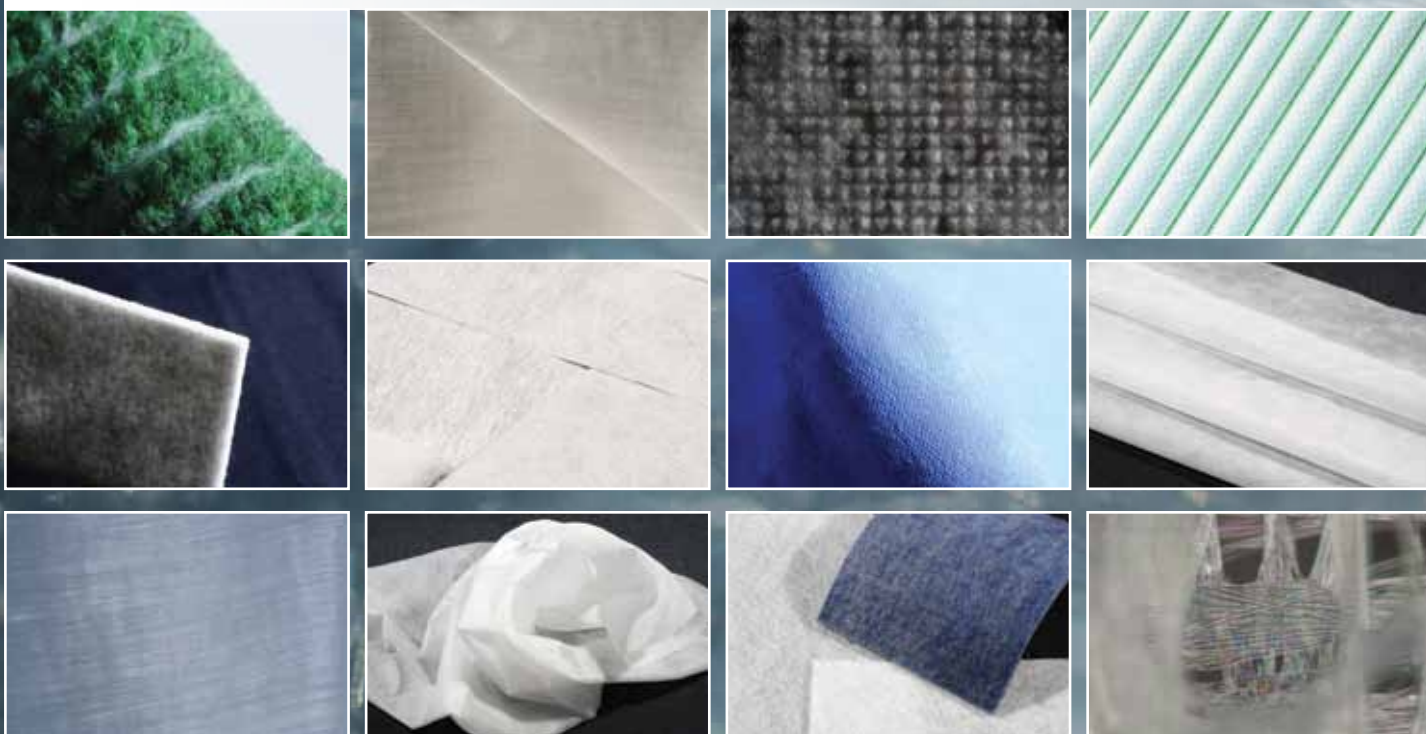
WITH DIVERSE PROPERTIES  
FOR CONSUMER AND INDUSTRIAL APPLICATIONS

Nonwovens include all textile fibre materials that are not produced by conventional textile techniques such as weaving, knitting, tufting, or braiding. Although the production of textile fibres and fibre webs or sheets usually takes place in two separate steps, they may be integrated into one single process.

The (blended) textile fibres in the web are bonded in a mechanical, hydraulic, thermal and/or chemical way. Varying heights in nonwoven structures may be obtained by superposing several nonwoven layers or by needling or spunlacing.

The nonwoven sheets or webs can be functionalised, coated or laminated in the same way as conventional textile fabrics. Non-woven materials are used in various applications including: agriculture, civil engineering, road building, automotive, bedding, clothing, health care, hygiene...

With its 135 collaborators, Centexbel is a major European centre of textile expertise, assisting companies in the development, functionalisation, testing, certification and application... of nonwovens.



## RESEARCH & DEVELOPMENT

Centexbel initiates and promotes both collective research projects with a common industrial interest on a regional, national and European level and private research projects in collaboration with individual companies.

### THE CENTEXBEL RESEARCH PROJECTS ON NONWOVENS FOCUS ON ASPECTS SUCH AS:

- development and characterisation of new fibres for nonwovens
- bicomponent yarn extrusion
- nonwovens for composites (thermosets and thermoplastics)
- functionalisation of nonwovens by impregnation, surface treatment, coating and/or laminating
- incorporation of smart materials and/or electronics in nonwovens
- nonwovens in specific application fields including health & safety, protection, civil engineering and road construction, filtration, isolation ...

## PROTOTYPING

Centexbel's vast infrastructure including an extrusion platform and a textile coating and finishing line is used to develop new textile products and processes. Centexbel has a broad network of cross-sector knowledge centres or industrial member companies to perform certain industrial trial runs in all confidentiality.

## TESTING & CERTIFICATION

- testing of nonwovens or combinations of nonwovens with other (flexible) materials such as films and conventional textiles:
  - ✧ ageing behaviour (QUV, light, temperature, ozone...)
  - ✧ composition (fibres, adhesives, additives, ...)
  - ✧ porosity
  - ✧ physical & mechanical properties
  - ✧ burning behaviour
  - ✧ thermal behaviour
  - ✧ comfort properties  $R_{et}$  en  $R_{ct}$
  - ✧ acoustic properties
  - ✧ electric properties: conductivity, antistatic behaviour ...
- detection & determination of heavy metals, prohibited components ...
- REACH conformity
- microbiology
- hygiene
- Oeko-Tex® certification

## SERVICES

### CONSULTANCY

- development of new types of fibres for nonwovens
- process control during nonwoven production
- functionalisation of nonwovens
- quality control and management
- new applications of nonwovens
- assembling and joining of nonwovens with other materials
- nonwoven recycling



QUV ageing test



electrospinning



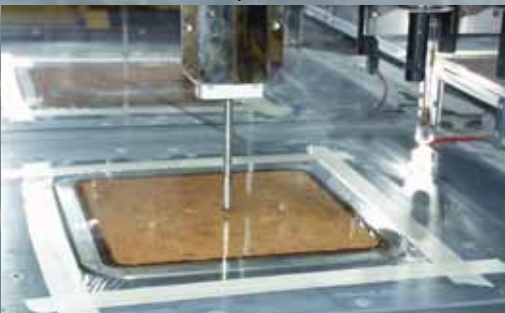
microscopic analysis



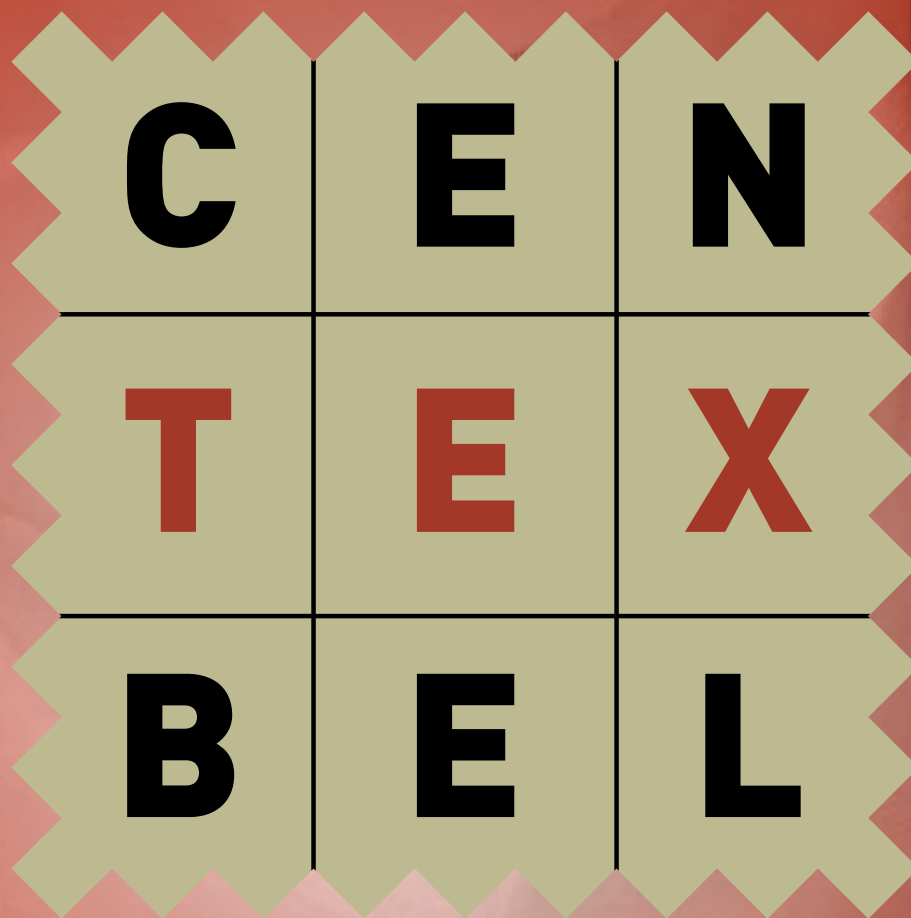
burning behaviour



drape test



skin model : comfort properties



YOUR PARTNER IN NONWOVENS

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