TEXTILE AT RISE

New solutions for a sustainable textile industry
RISE has established a longstanding presence in the textile industry. Consequently, our engagement extends across diverse research domains and services, encompassing everything from the development of raw materials and fibres to the management of products at the end of their lifecycle.

Through collaboration within RISE, we can tackle the complex challenges of our era, turning the green transition into significant opportunities for both businesses and society.
TESTBED FOR TEXTILE FIBRE DEVELOPMENT

Testbed focus areas

• Solution spinning of fibres from bio-based raw materials, such as cellulose, lignin and proteins.

• Melt spinning of various fibre types and material combinations, such as fossil, bio-based and recycled polyester, nylon and polyolefins.

• Development of non-woven materials through thermal bonding, needle-felting, melt blown and solution blown.

• Development of fibres with specific functionality, such as electrical conductivity, piezoelectricity, temperature control, flame resistance, dirt resistance, and antibacterial properties.

Textile fiber development test bed | RISE
Our unique facility offers several services related to textile processing for material recycling, prototyping, and manufacturing of new products from leftover textiles and production waste. Among them are:

- Mechanical recycling, which separates any fibres from their textile construction through shredding.
- Thermomechanical recycling, which handles clean single polymeric product streams by melt processing.
- Chemical recycling, which allows for production of as-new recycled polymers, monomers, and chemicals.

TESTBED FOR TEXTILE RECYCLING

Bringing new life to old textiles

Our unique facility offers several services related to textile processing for material recycling, prototyping, and manufacturing of new products from leftover textiles and production waste. Among them are:

- Mechanical recycling, which separates any fibres from their textile construction through shredding.
- Thermomechanical recycling, which handles clean single polymeric product streams by melt processing.
- Chemical recycling, which allows for production of as-new recycled polymers, monomers, and chemicals.
Society and consumers constantly place higher demands on companies and their products. Furthermore, the REACH regulation requires that your organisation has complete information and control over which chemicals your products contain.

Our testbed offers a wide range of test and analysis services on textile materials. RISE's knowledge in the field is unique. In our laboratories, we can perform tests according to custom standards or develop new methods to measure a specific characteristic.

Making sure that everything is safe and sound
**TESTING & CHEMICAL ANALYSIS**

**Testbed focus areas**

- Assuring the quality of products throughout the production chain, from development and material selection to receiving inspections and complaints.

- Customized training and courses in practice and theory, from a few hours to several days.

- Certificates according to OEKO-TEX®.

- We track and analyze various hazardous chemicals that are relevant to textile and plastic materials, such as carcinogenic and allergenic dyes, perfluorinated substances, phthalates, heavy metals, extractable metals, siloxanes, quinolin, ADCA, and UV stabilizers.

Testing and chemical analysis of textile materials | RISE
Support on chemical legislation to companies

• The Swedish Chemicals Group communicates the latest knowledge in chemical and environmental issues to textile and electronics industry member companies.

• A membership gives access to external monitoring and networks, practical tools, updates on relevant legislation, and news in the area of chemicals in articles and substitution.

The Chemicals Group | RISE
EXPERTISE

Life Cycle Assessment: Improvements for a sustainable future

At RISE, we conduct independent sustainability analyses based on six different methods. One of them is Life Cycle Assessment (LCA): a study of the environmental impact of a product, process, service, or system.

Our LCA experts work within our technical research areas in different parts of RISE, but also in close collaboration across areas. The combination of LCA knowledge and deep technical competence make us unique and creates opportunities for well-founded improvement proposals.

Course in LCA, Life cycle assessment | RISE
Decision support tool for channelling textile waste

Main objectives

• Cover relevant part of textile sector & show how to close loops at product and material level.

• Focus on 3 textile sub-sectors: Garments (collect & sort for re-use and repair), active goods (enable semi-automated repair), PPE (disassemble for remanufacturing).

• Focus on 2 key textile materials: Polyester (thermoplastic cleaning & recycling), and cotton (mix of mechanical & chemical recycling).

Project information

• Financed by: The European Union, Horizon 2020 research and innovation programme.

Open source project with access via: https://www.cisutac.eu/solution-post-consumer-textile-waste
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Searching for the most recent advancements in sustainable textiles and fibre development? Join us on LinkedIn to discover how RISE can be your partner in transforming your business for a sustainable future.

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