



**AHLSTROM
MUNKSJÖ**

High Performance Sterilization Wraps

Reliance® Sterile Barrier System



PROTECTING PATIENTS GLOBALLY

Selecting the most appropriate Sterile Barrier System (SBS) for use in the Central Sterilization Service Department (CSSD) is a challenging responsibility and plays a key role in infection prevention and patient safety.

Ahlstrom-Munksjö single use sterilization wraps help to prevent microorganisms (bacteria, viruses, spores) from easily gaining access to the tray contents, allow sterilization, provide physical protection, maintain sterility up to the point of use and allow aseptic presentation.

Ahlstrom-Munksjö Reliance® Wrap and sterilize your medical devices with confidence

Our Reliance® product range is comprised of various types of fabric, manufactured from 100% cellulose, cellulose + synthetic and 100% synthetic fibers. Our wide range and combination of sterilization wraps enables our customers to select the most appropriate Sterile Barrier System to meet their requirements.

Applications

- Sterilization wraps for terminally sterilized medical devices
- Filter for containers
- Overwrap for single use Custom Procedure Trays (CPT)
- Tray liner for moisture absorption and protection of the tray

Our Technologies



CREPE PAPER
cellulose fibers



WETLAID NONWOVENS
cellulose + synthetic fibers



SMS
synthetic fibers

Benefits and Characteristics

- Facilitate the wrapping of medical instruments and devices
- Allow sterilization due to good penetration and removal of sterilizing agent
- Maintain sterility of medical devices during handling and storage
- Enable aseptic presentation at the point of use



Sterilization Methods

The Sterile Barrier System products are to be used for wrapping medical devices, which can be terminally sterilized by the following methods:



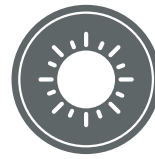
STEAM



EO



FORM



IRRAD



H2O2

We recommend that the end user validates the final packaging system as suitable with the intended sterilization process to comply with international standards as per ISO 11607 part 2.

Registrations and declarations

MDD 93/42/EEC 1193 / 47EC5 2007

Wrapping materials are considered as a Class 1 accessories for medical device and comply with the essential requirements 93/42/EEC directive and therefore CE marked. All products are registered at "Agence Nationale de Sécurité du Médicament" in France.

EN ISO 11607-1

Packaging for terminally sterilized medical devices. Part. 1: Requirements for materials, sterile barrier systems and packaging systems (ISO 11607-1:2017).

EN 868-2

Packaging material for terminally sterilized medical device. Part. 2: Sterilization wrap requirements and test methods EN 868-2: 2017.

Additional information

Latex free

All our products are latex free - including synthetic latex materials or natural rubber materials containing any of the proteins linked to Types I & IV latex allergies.

Traceability

Our production system ensures complete traceability of products via a LOT number printed on each delivered box, providing information relating to the production cycle. All data needed for effective tracking of a single box and identification is contained within the bar code on the external packaging.

Third party certifications

All our products received certification of compliance from:



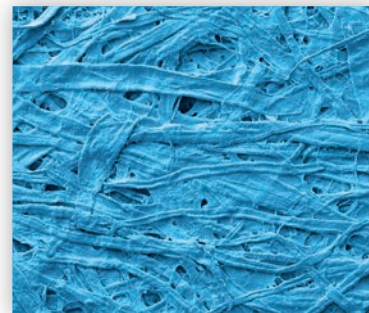
CREPE PAPER

Excellent barrier properties with moisture absorption capacity

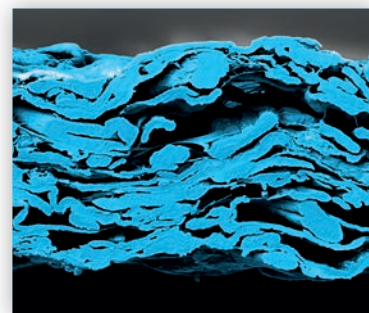
Ahlstrom-Munksjö Reliance® crepe paper is made with more than 97% of cellulosic fibers and wet strength and sizing agents.

Cellulosic fibers create the best-in-class tortuous path for excellent sterility maintenance and bacterial barrier.

It is available in Standard or Sensitive version: with an offline micrexing process, our Sensitive crepe paper is softer with improved drapeability.



Surface



Section

Benefits and Characteristics

- Best in Class bacterial barrier
- Helps to prevent wet-packs
- Cost-effective wrapping solution



STEAM



EO



FORM



IRRAD

Ahlstrom-Munksjö Reliance® Crepe paper range

STERILIZATION WRAP:

Reliance® Crepe

(R310)

60 gsm



Reliance® Crepe Sensitive

(R310S)

60 gsm



TRAY LINER:

Reliance® Crepe Trayliner

(R309)

Light - 80 gsm



Reliance® Crepe Trayliner

(R309)

Medium - 110 gsm



Reliance® Crepe Trayliner Sensitive

(R309S)

Heavy - 140 gsm



OVERWRAP:

Reliance® Overwrap Sensitive

(R307S)

43 gsm



50 gsm



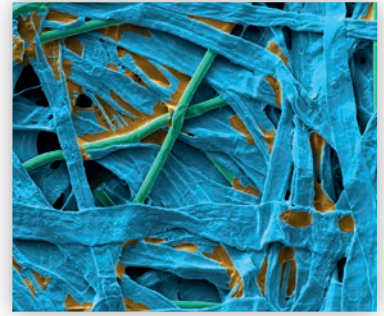
WETLAID NONWOVENS

Softer and stronger cellulose-based material

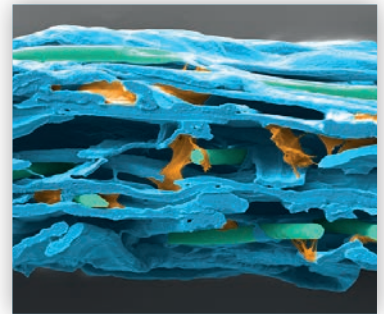
Ahlstrom-Munksjö Reliance® Wetlaid Nonwovens are made with 70% cellulose, 20% synthetic binder and 10% PET fibers.

Cellulosic fibers create the best-in-class tortuous path for excellent sterility maintenance when synthetic binders and PET fibers bring more strength and softness to the product.

Available in two colors and three basis weights, all our wetlaid nonwovens are micrexed for increased drapeability and comfort.



Surface



Section

Benefits and Characteristics

- Excellent bacterial barrier
- Helps to prevent wet-packs
- Soft and strong
- Low lint



STEAM



EO



FORM



IRRAD

Ahlstrom-Munksjö Reliance® Wetlaid range

STERILIZATION WRAP:

Reliance® Dextex 100

(R335)

52 gsm



Reliance® Dextex 200

(R345)

57 gsm



Reliance® Dextex 300

(R360)

67 gsm

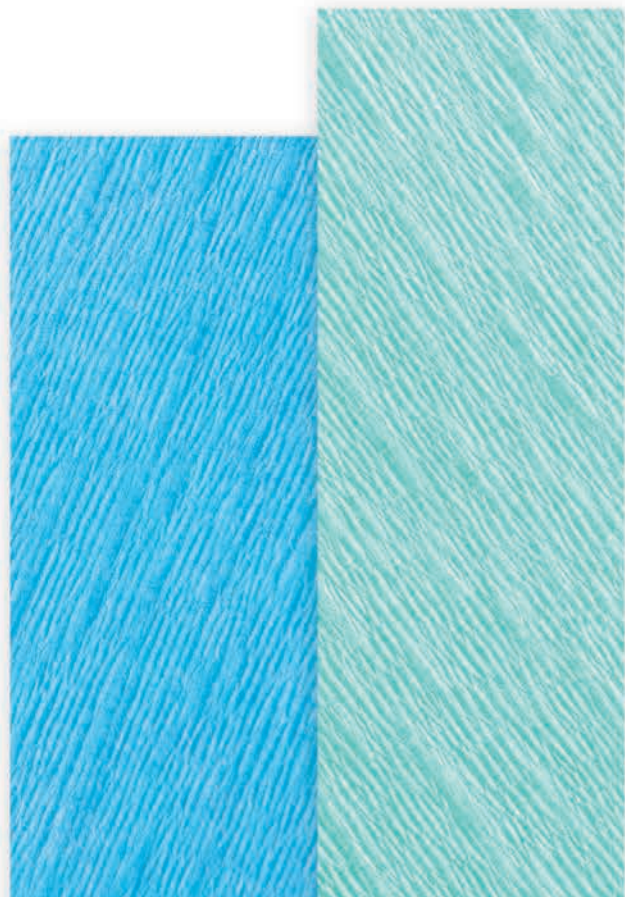


TRAY LINER:

Reliance® Dextex Tray Liner

(R308)

72 gsm



MADE IN USA



Ahlstrom-Munksjö Nonwovens LLC
Windsor Locks, CT - USA

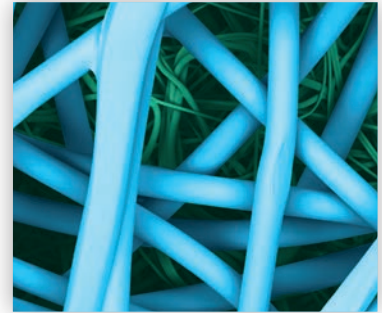
SMS - SPUNBOND MELTBLOWN SPUNBOND

Strong and durable, with low lint and high barrier

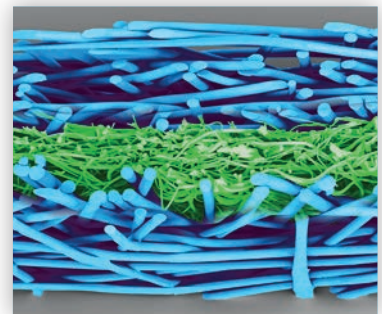
Ahlstrom-Munksjö Reliance® SMS is 100% polypropylene and treated to resist static charge build-up. It does not contain natural fibers (cellulose) or synthetic binder.

The key to the barrier protection of the SMS are the three meltblown layers of microscopic fibers, delivering a tortuous path for a consistent bacteriological barrier to maintain sterility.

It is available in two colors and six different basis weights to satisfy different user requirements.



Surface



Section

Benefits and Characteristics

- Excellent bacterial barrier
- Liquid repellent and antistatic
- High strength to avoid rips, tears or punctures
- Drapeability



STEAM



EO



FORM



H2O2

Ahlstrom-Munksjö Reliance® SMS range

Reliance® SMS 100

(R430)

35 gsm



Reliance® SMS 400

(R460)

60 gsm



Reliance® SMS 200

(R440)

43 gsm



Reliance® SMS 500

(R470)

70 gsm



Reliance® SMS 300

(R450)

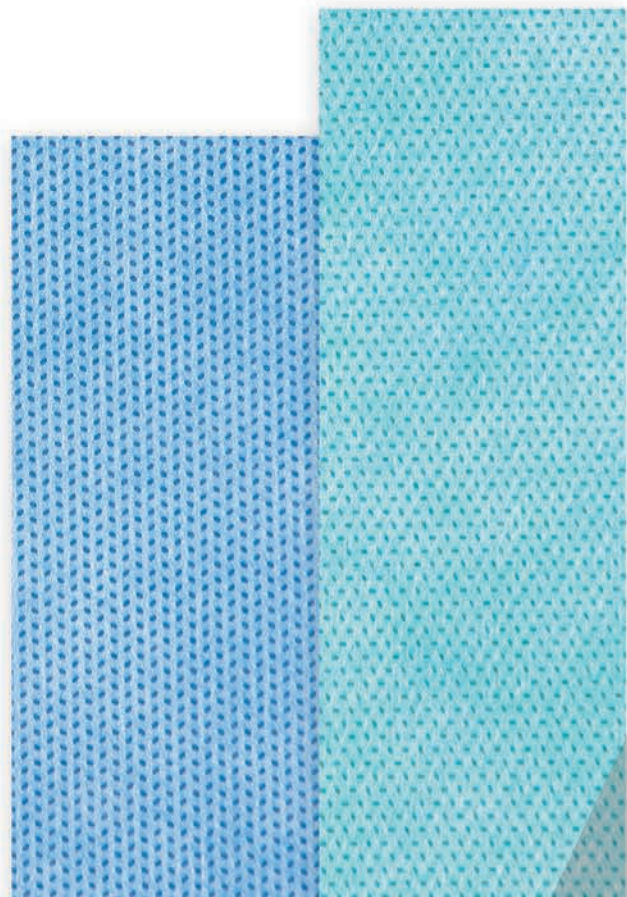
50 gsm



Reliance® SMS 600

(R480)

85 gsm



MADE IN INDIA



Ahlstrom-Munksjö Fibercomposites
Mundra, Gujarat - India

AHLSTROM-MUNKSJÖ RELIANCE® TANDEM

Interleaved sterile barrier system solutions

Ahlstrom-Munksjö Reliance® Tandem combines different technologies to provide the optimal combination for sequential wrapping, increasing efficiency and productivity.

The use of two colors clearly differentiates between the two layers during transport, storage and in the operating room allowing damage to be easily seen.

Benefits and Characteristics

- **Color coding for improved efficiency** - the outer wrap and the inner wrap, which is sterile and suitable to be used in the operating room, have two different colors for easier identification.
- **Simplified stock and purchase processes** - hospitals can save space and time using a single stock of two-colored layers.
- **Increased patient safety** - the superposition of the two colored layers easily allows any damages or punctures to be visualized.

Interleaved colors and technologies: the right combination to your wrapping requirements

Same technology, different colors

Crepe paper, wetlaid and SMS can be interleaved with different colors to ensure the benefits associated to visual differentiation.

Combining different technologies for improved performance

Cellulose, featuring high moisture absorption, can be combined with SMS to offer improved strength. Combining the best of the two worlds, different technologies and grammages, will help achieve the best results.

Ahlstrom-Munksjö Reliance® Tandem range

Crepe + Wetlaid

Tandem

Crepe Sensitive + Dextex 100

(R310S + R335)

Crepe + Wetlaid

60 gsm 52 gsm



Tandem

Crepe Sensitive + Dextex 300

(R310S + R360)

Crepe + Wetlaid

60 gsm 67 gsm



Wetlaid + SMS

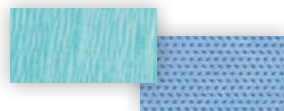
Tandem

Dextex 200 + SMS 300

(R345 + R450)

Wetlaid + SMS

57 gsm 50 gsm



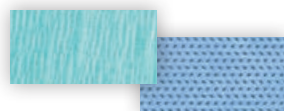
Tandem

Dextex 300 + SMS 300

(R360 + R450)

Wetlaid + SMS

67 gsm 50 gsm



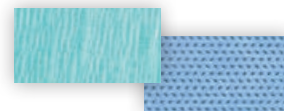
Tandem

Dextex 100 + SMS 200

(R335 + R440)

Wetlaid + SMS

52 gsm 43 gsm



AHLSTROM-MUNKSJÖ RELIANCE® SOLO

Bonded system for simultaneous wrapping

Ahlstrom-Munksjö Reliance® Solo is composed of two bonded sheets of SMS for easy to use, simultaneous wrapping.

Like sequential wrapping, Reliance® Solo creates a tortuous path, delivering aseptic opening at the point of use.

Two colors allow for easy identification of damage from transport/storage and wrong handling.

Benefits and Characteristics

- Simplified wrapping process
- Simultaneous aseptic unwrapping in the operating room
- Proven best barrier to prevent penetration of microorganisms through the bonded layers
- High strength to avoid rips, tears or punctures
- Lotcode printed on every application

Ahlstrom-Munksjö Reliance® Solo range

Reliance® Solo 100

(Solo 833)

SMS

35 + 35 gsm



Reliance® Solo 400

(Solo 866)

SMS

60 + 60 gsm



Reliance® Solo 200

(Solo 844)

SMS

43 + 43 gsm



Reliance® Solo 500

(Solo 877)

SMS

70 + 70 gsm



Reliance® Solo 300

(Solo 855)

SMS

50 + 50 gsm

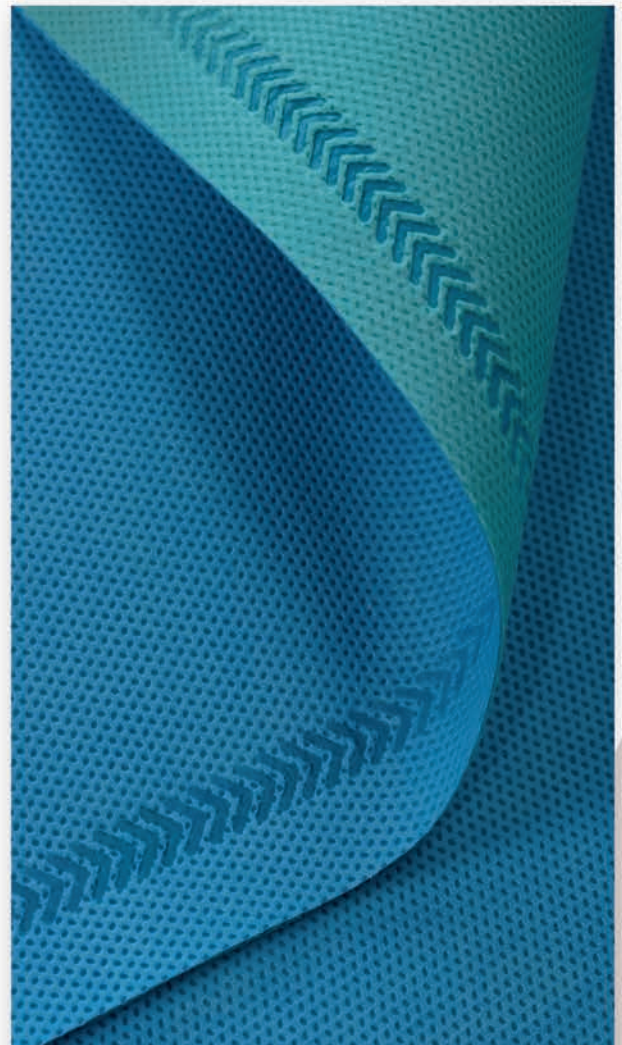


Reliance® Solo 600

(Solo 888)

SMS

85 + 85 gsm



OUR GLOBAL PRESENCE

Manufacturing, converting and servicing: reaching end users worldwide

We manufacture, convert and have representation globally with three manufacturing sites dedicated to the production of fiber-based materials for sterilization wraps.

Ahlstrom-Munksjö has two state-of-the-art fully automated converting lines:

- **Windsor Locks** plant in Connecticut, USA to serve Americas and export markets under FDA requirements
- **Pont Audemer** plant in Normandie, France to serve Europe and export markets according to CE requirements

Our plants comply with the following standards:

Windsor Locks:

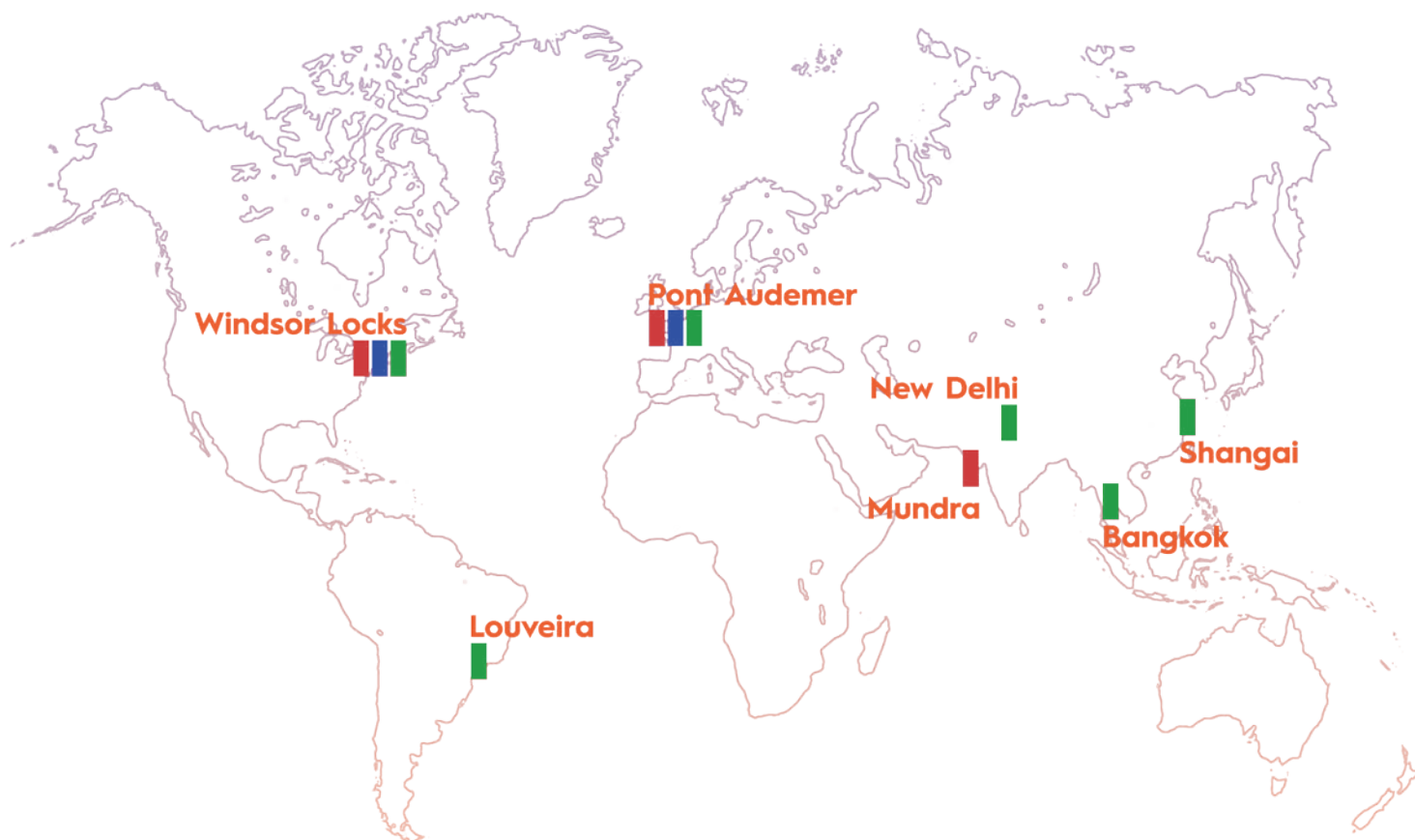
ISO 9001:2015
ISO 14001:2004
PEFC, FSC, SFI
FDA Registered
Site for Medical
Devices

Pont Audemer:

ISO 9001:2015
ISO 14001:2015
OHSAS 18001:2007
ISO 50001:2001
FSC

Mundra:

ISO 9001:2015
ISO 14001:2015
ISO 45001



 Manufacturing  Converting  Sales Offices

HOW TO USE

Prior to use

Ahlstrom-Munksjö Reliance® wrap is intended for single use only.

We provide the material in sheets of your specified sizes, enclosed with a protective sealed bag and supplied in a secure high quality box.

We recommend to store our boxes in a cool, dry place, out of direct sunlight.

Location of use should be clean, dust-free, dry and away from fluorescent or ultraviolet lights sources.

Allow wrapping material to condition to atmospheric temperature and humidity prior to use.

Use within five years of manufacture, check manufacture date on label.

Folding Instructions

Covering all package contents is required for sterility maintenance, and failure to follow this for correct wrapping technique could compromise sterility.

For wrapping techniques, please refer to our Instructions for Use.

Safety instructions and disposal

The product is non-toxic, nonhazardous and considered harmless.

Waste disposal must be in accordance with local regulations. Suitable for incineration. Product is not biodegradable.

The product is combustible in oxygen-rich environments and when a source of ignition is applied to the fabric. Therefore, to avoid fire, the product should be kept away from heat, sparks and open flame. If fire does occur it can be extinguished by normal means.

Precautions

This is a single use product and shall not be re-used.

Do not use sheet if damaged or extraneous matter is detected.

Do not use with sharp instruments. These may damage the wrap and compromise barrier properties.

Sterility Maintenance

Real-time testing supports maintenance of package sterility for 180 days, provided package integrity is maintained.

Reliance® sterilization wraps range has been tested by third party laboratories for Time and Event Related Sterility Maintenance, ensuring six months of sterility maintenance. These tests have been performed to the best of our knowledge of hospital processes, providing end user has validated its sterilization process including forming, sealing and assembly of its packaging system according to ISO 11607-2.

Ahlstrom-Munksjö is a global leader in fiber-based materials, supplying innovative and sustainable solutions to customers worldwide. Our offerings include decor paper, filter media, release liners, abrasive backings, nonwovens, electrotechnical paper, glass fiber materials, food packaging and labeling, tape, medical fiber materials and solutions for diagnostics. Combined annual net sales are about EUR 2.15 billion and we employ 6,000 people. The Ahlstrom-Munksjö share is listed on the Nasdaq Helsinki and Stockholm. The company was formed on April 1, 2017 through the merger of Ahlstrom Corporation and Munksjö Oyj.



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