



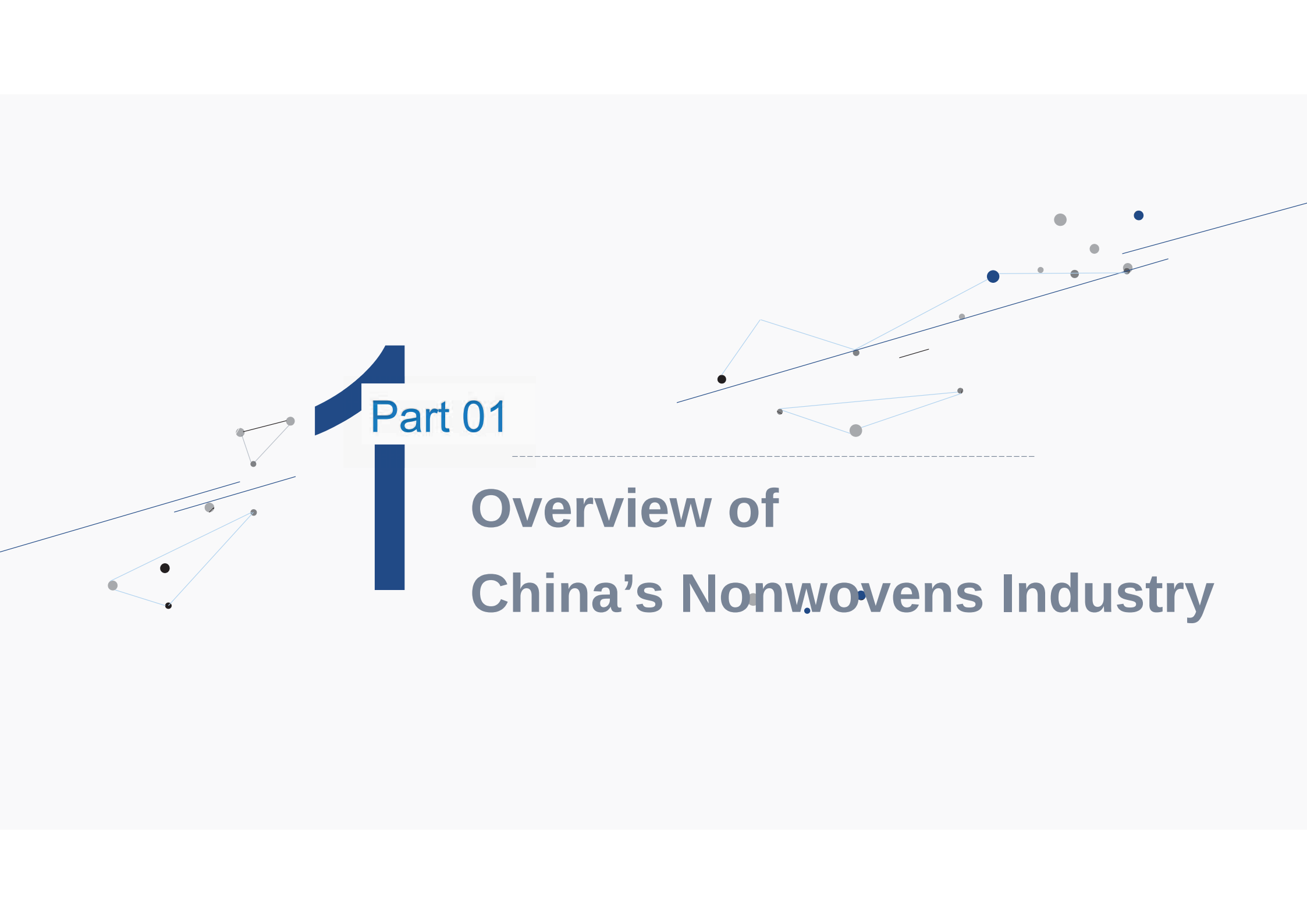
Overview and Green Innovation Development of China's Nonwovens Industry

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China Nonwovens and Industrial Textiles Association
March 29, 2022 Miami



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- 01.** Overview of China's Nonwoven Industry
- 02.** Innovation and Green Development
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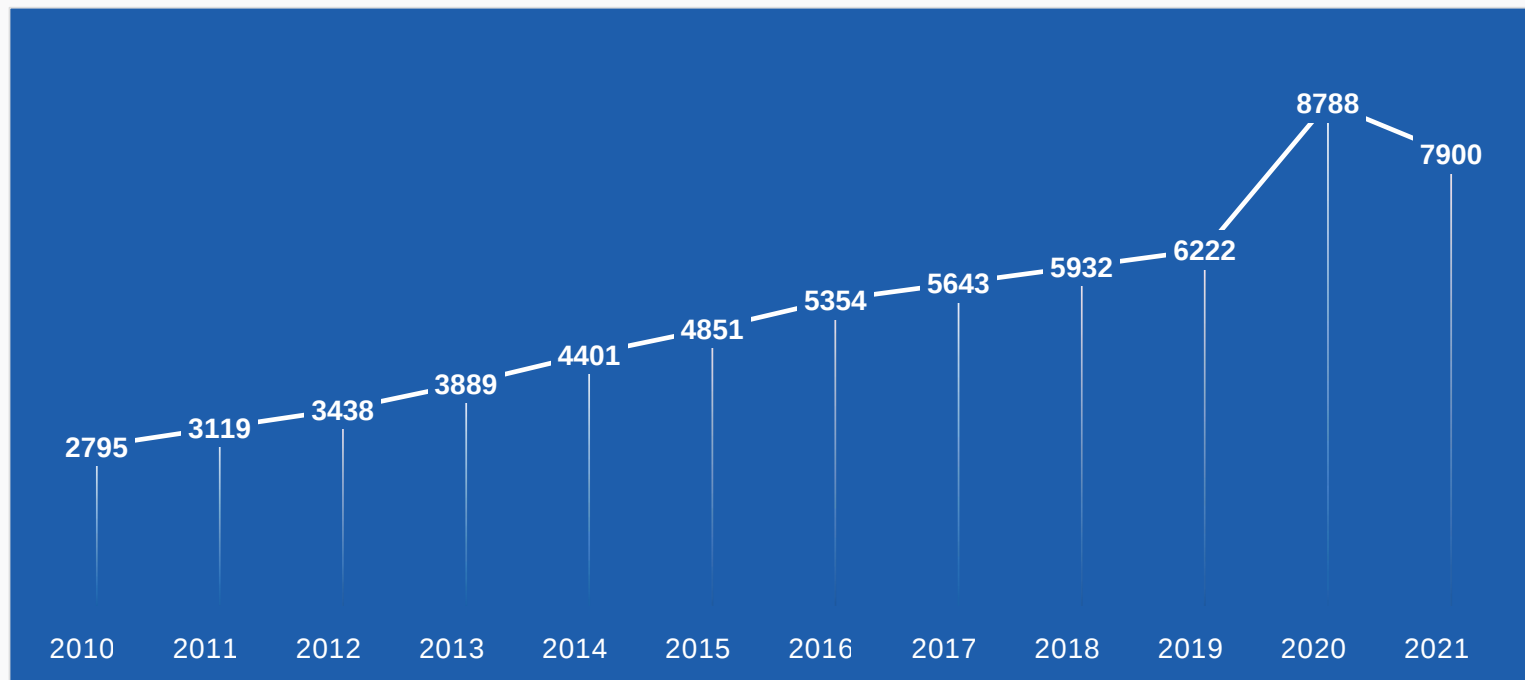
The background features an abstract geometric design consisting of various blue lines and dots of different sizes. Some dots are connected by lines, forming a network-like structure. The design is spread across the slide, with a denser cluster on the right side and more sparse elements on the left.

Part 01

Overview of China's Nonwovens Industry

01 / Production

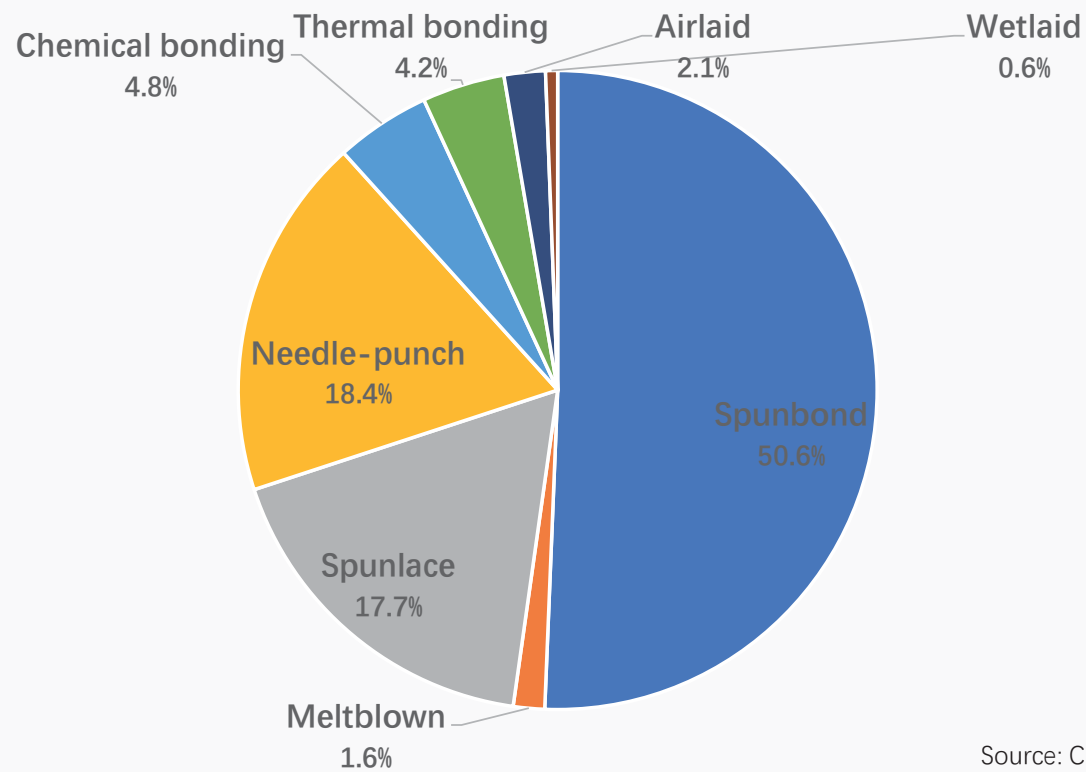
2010-2021 Output of China's Nonwovens
('000 tonnes)



Source: CNITA

01 / Production

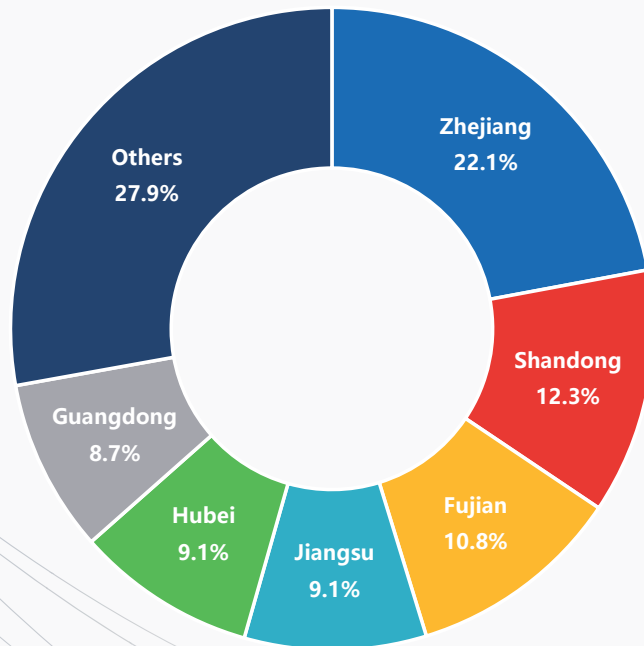
Production by Process in 2021



Source: CNITA

01 / Production

Production by Region in 2021



- 3/4 of nonwovens production from China's eastern coastal areas and central Hubei province

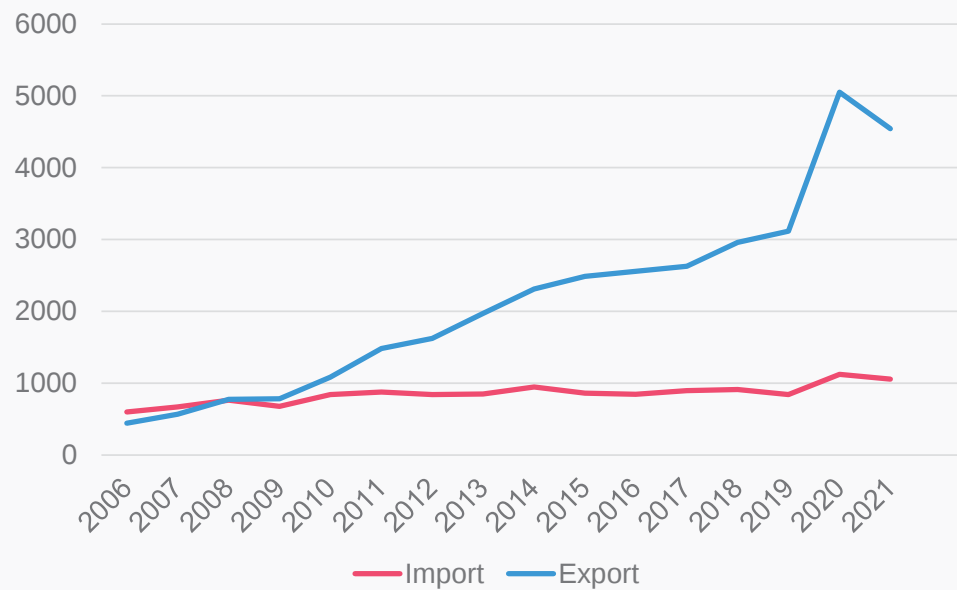
Top 10 Companies of China Nonwovens Industry in 2020/2021



- The output of these 10 companies accounts for about 10% of China's total nonwovens output.

01 / Export & Import

Export & Import of China's Nonwovens
(USD million)



Nonwovens Products Exports in 2021

Products	Value (USD million)	Growth Rate (%)
Nonwovens Protective Clothing	2183	-80.25
Diapers and Sanitary Napkins	2521	11.25
Wipes	629	-35.81

Compiled according to GACC's data

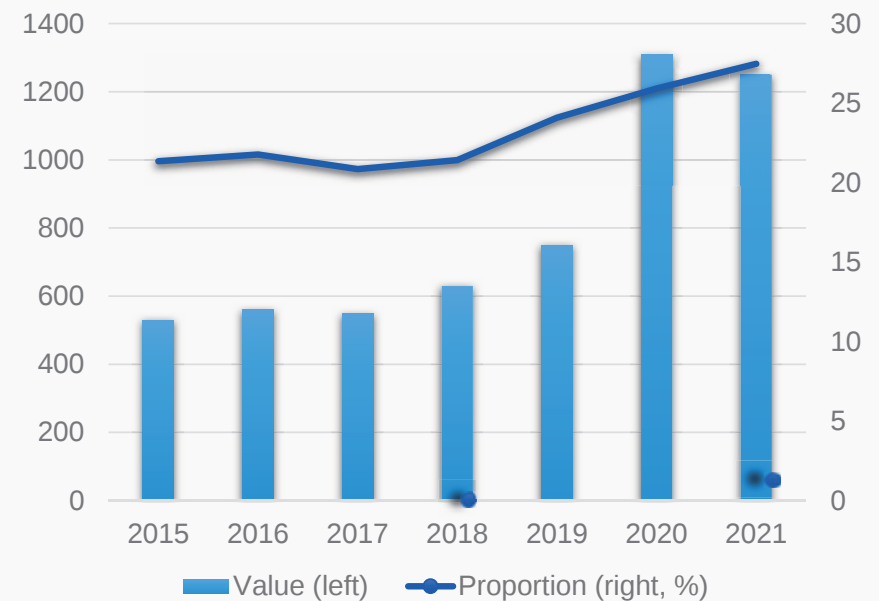
01 / Export & Import

Major Export Countries of China's Nonwovens in 2021

Countries	Value (USD million)	Growth Rate (%)
Vietnam	456	-14.38
USA	394	-10.22
South Korea	390	-46.01
Japan	355	-5.43
Indonesia	199	-0.94
Cambodia	135	0.60
Philippines	132	16.70
Malaysia	127	10.32
Thailand	117	17.86
India	109	16.23

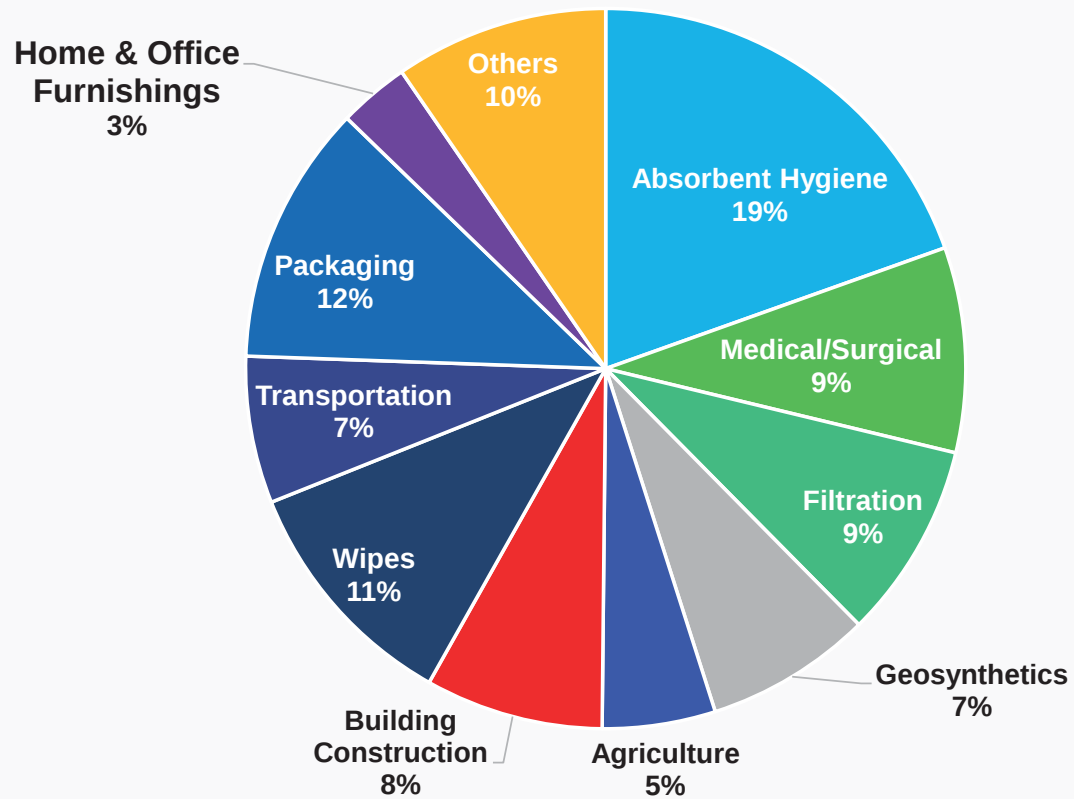
Compiled according to GACC's data

Share of ASEAN in China's Nonwovens Export



Compiled according to GACC's data

01 / China Production Share by End-Use Market



Source: CNITA

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Part 02

Innovation and Green Development

02 / Innovation-Raw materials



Cotton and Wipes Made of
100% Cotton Spunlace



Hemp Fiber and Door Inner Panels
Made of Hemp Fibers



Filter Made of
High-performance Fibers



PLA Particles and Nonwovens
Made of PLA



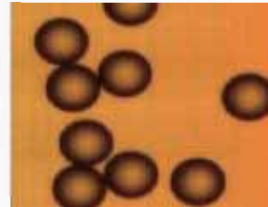
Alginate Fiber



Collagen Fiber



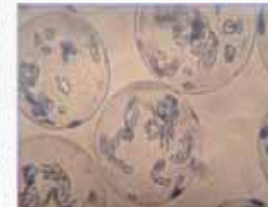
Chitin Fibers



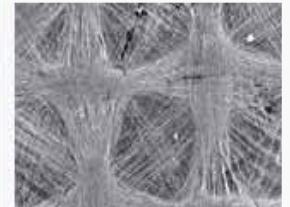
Nanoparticles Or
Microparticles



Hydrogels



Fibrous Scaffolds



Microcapsules

02 / Innovation-Equipment



02 / Innovation-Application



Daxing International Airport

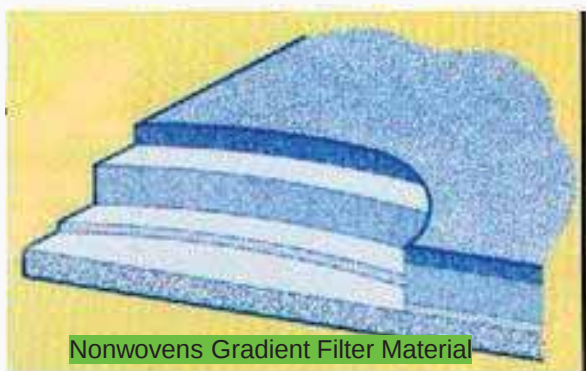


Huoshenshan Hospital



Various Applications of Hemp Fiber Nonwovens

High-strength Coarse Denier PP Filament Needle-Punched Geotextile of Tiandingfeng is Applied to the Construction of Key Projects



Nonwovens Gradient Filter Material



Application of Electrospinning Micro-Nanofiber Nonwovens in Medical and Hygiene

02 / Green Manufacturing



Green Factory



CNITA launched the "Green Factories Plan for Nonwovens and Industrial Textiles"

02 / Nonwovens Green Alliance (NGA)



Sateri

winner
稳健医疗

RUIGUANG

STAD 上海纺织建筑设计研究院

精发股份
JINGFA

MEIDEN
美登·智能纺织

广检集团
GTTC

ATA

HUAHAO
华昊无纺布

UTS
UNITED TEXTILE SERVICES

可靠 COCO
CONFIDANT & CONSIDERATE

Babycare

NBOND
诺邦股份

恒天集团
CHTC

恒安集团
Hengan

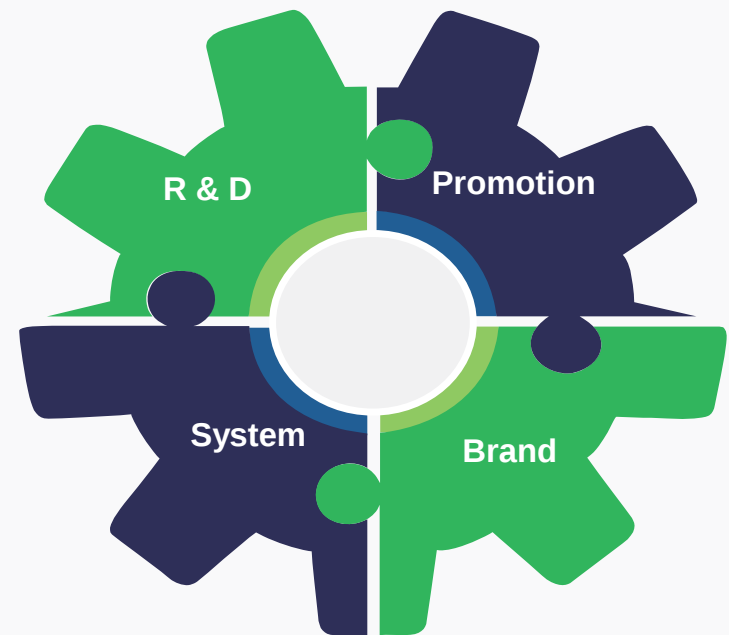
三友集团
Sanyou Group

UNI 优品
QUALITY

欣柔

丝丽雅
GRACE

Some Members of NGA



NGA's Work

02 / Green Certification



T/CNITA 23101-2021 "Spunlace nonwovens and terminal products—Evaluation for biodegradability "



GB/T 40181-2021 "Test method and evaluation for flushability of disposable sanitary nonwoven materials"

02 / Standards



GB 18401-2010 National general safety technical code for textile products



GB 50514-2020 Technical standard for nonwovens factory



GB 31701-2015 Safety technical code for infants and children textile products

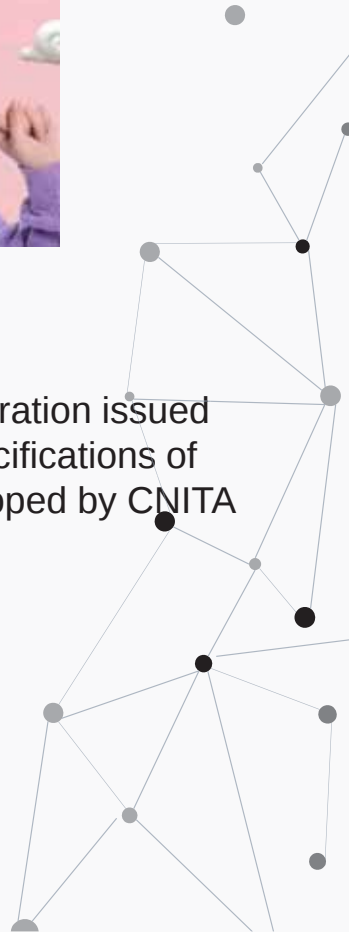


GB 15979-2002 Hygienic standard for disposable sanitary products



National Standardization Administration issued GB/T 38880-2020 "Technical Specifications of Children Mask", which was developed by CNITA and its members.

Setting Up a Factory and Producing Nonwovens and Their Products
In China is Subject to Related Standards



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Part 03

3

Opportunities & Challenges

03 / Opportunity-Policies

The Chinese government attaches great importance to the development of the manufacturing, and ongoing to support the development of the nonwovens industry.

The guidance on high-quality development of the nonwovens industry will be released soon by the Ministry of Industry and Information Technology of China.



03 / Opportunity-Market



China's Strong Domestic Market



Overseas Markets of the USA, Japan,
and the EU



Markets in Countries Along the Belt and
Road

03 / Opportunity-Technology

New Technologies will Bring New Applications and New Markets



Single-use Surgical Kits
for Sterile Operating Rooms

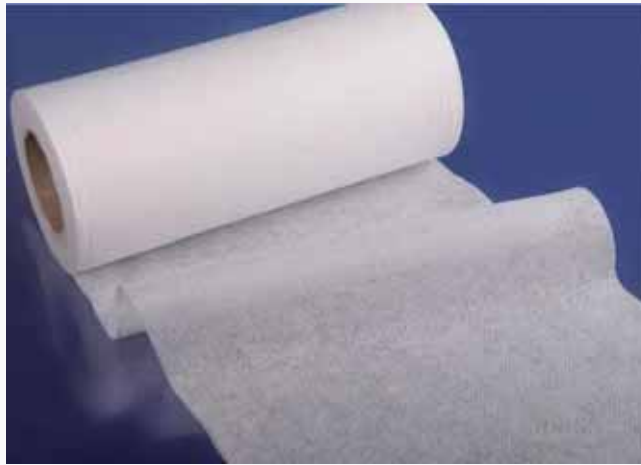


Biodegradable Nonwovens



Pandemic Prevention Storage Bag
for 2022 Beijing Winter Olympics

03 / Challenge-Capacity Expansion and Adjustment



The capacity of spunbond, spunlace and meltblown nonwovens has grown too fast, and the nonwovens industry has experienced structural excess.

03 / Challenge-Environmental Issues



High energy and water consumption in some nonwovens processes.



Environmental issues caused by massive use of disposable products.



Advantages of nonwoven shopping bags?

03 / Challenge-Brand Cultivation



Cultivating nonwovens companies and end-use products brands with global influence will further boost the development of China's nonwovens industry.

The background features an abstract geometric design consisting of various blue lines and dots of different sizes and colors (dark blue, light blue, grey, and black). Some lines form triangles and other polygons, while others are straight or slightly curved. The dots are scattered across the slide, some isolated and some part of the geometric shapes.

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Part 04

Outlook

04 / High-quality and High-performance Nonwovens



- Development of ultra-low gram weight, high-uniformity, high-fluffy, ultra-soft, bicomponent spunbond nonwovens.
- Optimization of electrospinning equipment and production process.
- Realization of Industrialization of flash spinning nonwoven technology.

- Development of cotton spunlace nonwovens and flushable nonwovens.
- Realization of technology industrialization of wood-pulp based meltblown nonwovens and wood-pulp based spunlace nonwovens.
- Development of environmentally friendly nonwovens.



04 / Recycling and Reusing of Waste Textiles



Nonwovens Products Made from Waste Textiles



04 / Main Events



The 16th China International Trade Fair for Technical Textiles and Nonwovens (CNITE)
September 6-8, 2022 Shanghai



The 10th China International Nonwovens Conference
September 6-8, 2022 Shanghai



Asia Wipes Summit 2022
July 2022 Shanghai



The First China Nonwovens and Industrial Textiles
Technology Development Conference
June 2022 Shanghai



Thanks

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