

Asian Textile Business

atb

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- **Milano Unica**

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2020-IV Issue No. 729



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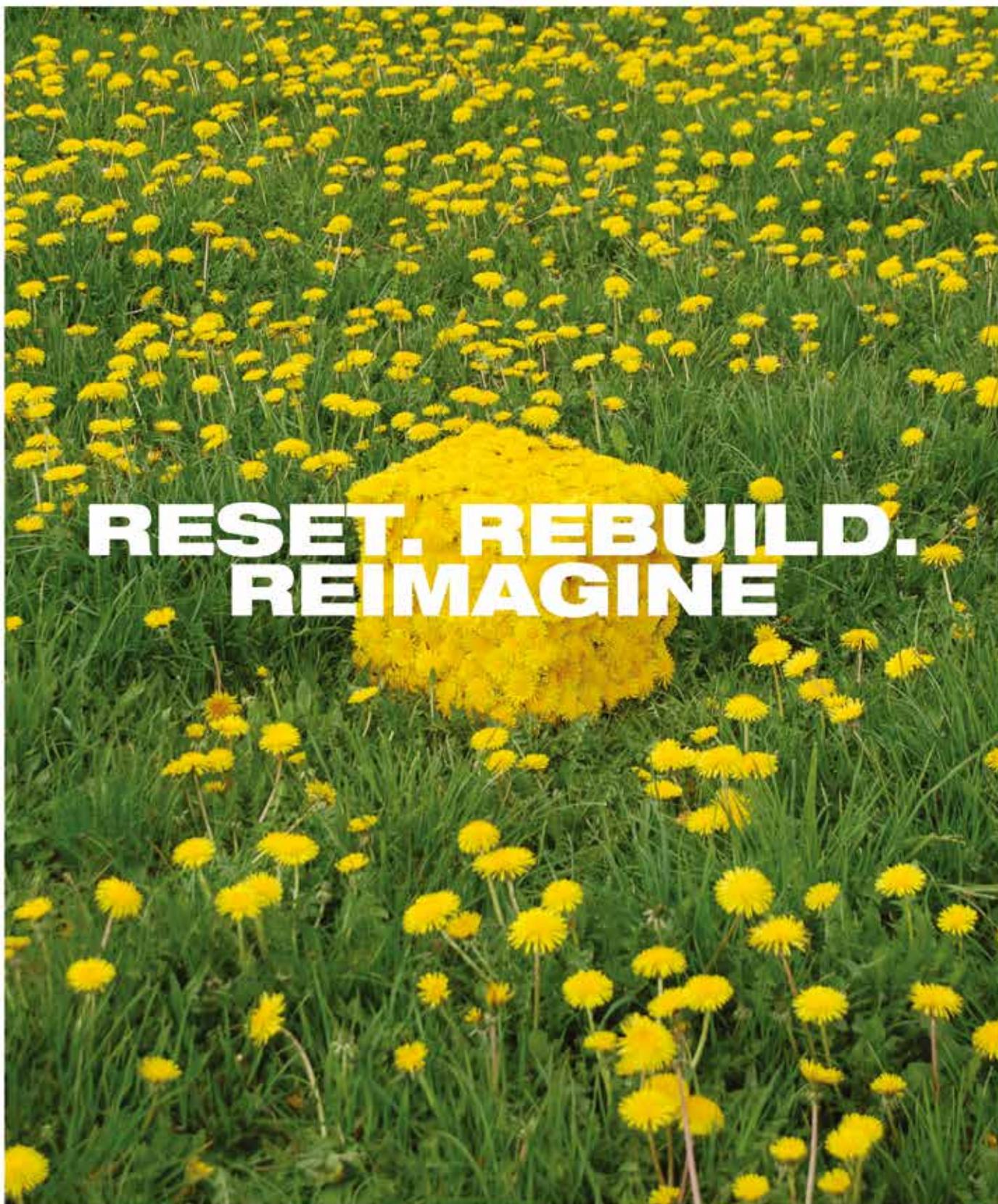
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FABRIC JAPAN F/W 2021-22

Previews of Milano Unica and Première Vision Paris

Milano Unica

(September 8th & 9th)

Milano Unica on September 8th and 9th will be the first trade show reopening the doors of the Fiera Milano Rho exhibition halls.

Exhibitors of the 31st edition number more than two hundred representing the excellence of the production of textiles and accessories.

The “best” on the international textile panorama has once again confirmed its trust in the consolidated trade show, with a substantial balance among the events that make up its backbone: Ideabiella, Moda In and Shirt Avenue.

“An important signal to meet again in person and not virtually and confirm, also through participation, the value of being united to be unique,” commented Milano Unica President Barberis Canonico.

Thanks to the trust and courage demonstrated by its entrepreneurs, Milano Unica will be the torchbearer of the first “open door” event in the industry.

“This investment echoes a sign of positivity, optimism and vitality of ‘Made in Italy’ production and of the industry as a whole.

Première Vision Paris

(September 15th & 16th)

Première Vision Paris, the flagship event dedicated to creative fashion, will be held on September 15th and 16th at the Parc des Expositions de Paris Nord Villepinte in Paris.

The physical edition of the show has been revised and adapted to the current health situation, and will for the first time be bolstered by a complementary Digital Fair taking place over the same dates. The aim of this virtual show, which will be hosted and relayed by the Première Vision Marketplace, is to boost the visibility of what exhibitors offer to a broader target of international buyers.

This event, both physical and digital, aims to mobilize the entire international fashion industry, and above all boost the sector’s recovery.

The show in Villepinte will meet all required government health protocols, and allow exhibitors and visitors to meet again to discover and share the new collections. The creation of multimedia forums will enable visitors to discover the most emblematic and creative products and designs that exhibitors offer.

kuraray



Compliant with IEC 61340 4-9 Groundable Static Control Garment System

■ IEC Standard

Details of Standard	Control Value
IEC 61340 5-1 (general conditions)	$10^5 \leq R[\Omega] < 10^{11}$
IEC 61340 4-9	garment: $R[\Omega] < 10^9$

*Resistance between two points or resistance between any point and groundable connection point

■ Fabric Surface Resistance After Washing

No. of Washings	Fabric Resistance	Surface Resistance Between Sleeves
L25	$2.0 \times 10^5 [\Omega]$	$7.2 \times 10^5 [\Omega]$
L50	$2.6 \times 10^5 [\Omega]$	$8.5 \times 10^5 [\Omega]$
L100	$3.0 \times 10^5 [\Omega]$	$9.0 \times 10^5 [\Omega]$

(22°C/30RH%, 2/2 twill, KC792 double covered yarn)

- (Industrial)
Washing Durability
- Abrasion Resistance
- Performance regardless of
temperature or humidity

- ① Antistatic yarn kneaded with a high concentration of electric conductive carbon
- ① Safety and quick discharge of static by corona discharge

Main applications: workwear, clean room wear, medical supplies, household goods, apparel, industrial products & filters, belts & brushes

Premium Textile Suppliers

Chikuma & Co., Ltd.

Theme for F/W 2021-22: Japanese paper yarn and sustainability

Outstanding Products for F/W 2021-22: Chikuma presents comfort eco classy fabrics considering both environment and fashion.

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Hokkoh Co., Ltd.

Theme for F/W 2021-22: Fusion of Monozukuri by Human Hands and High-Tech

Outstanding Products for F/W 2021-22: (1) Various prints: classic (screen) prints, digital (inkjet) prints, hand-prints, stream prints; (2) Military

design collection; (3) An abundant number of designs

Contact

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Kanemasa Knitting Co., Ltd.

Theme for F/W 2021-22: Unique and exclusive Marudeori collection

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Maeda Co., Ltd.

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Yagi & Co., Ltd.

Theme for F/W 2021-22: Ethical, Comfortable Outerwear

Outstanding Products for F/W 2021-22: Japan Urake, Forethica

Contact

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Kanemasa

- The Majority of Cotton and Synthetic Fibers Are Now Eco-Friendly
- World's Leading High-Gauge Knits with Added Charm

Kanemasa Knitting Co., Ltd., a company in the Wakayama knitting center reputed for its high-gauge computer jacquard fabrics, will further promote the use of eco-friendly raw materials both for cotton and synthetic yarns.

Kanemasa has long been highly appraised for its fine, high-performance high-gauge jacquard jersey fabrics that also have the merits of woven fabrics. Using 46-gauge semi-jacquard, 44-gauge/36-gauge full jacquard, 40-gauge double cylinder and warp insertion models, which are all globally scarce knitting machines, support Kanemasa's development capabilities.

Another strong point is the company's original raw materials, which are also becoming more eco-friendly. Kanemasa has been actively using organic cotton, recycled cotton and polyester, and is also promoting eco-specifications for commodity yarns. Branding is being promoted with original trademarks being registered for eco-friendly cotton yarns as well as fabrics made with these yarns. Importantly, at Première Vision Fabrics F/W 2021-22 this September, the use of eco-friendly materials will be promoted.

As for cotton yarns, Kanemasa has applied for the two trademarks of Suvin Recycle Organic (SRO) and Susuvin. SRO is a bespoke yarn made by blended and spinning recycled Suvin waste cotton and DCH extra-long staple organic cotton. The yarns are spun mainly in 60 and 80

counts, and 20 and 40 counts are also available. These are all compact yarns that are rare in medium yarn counts. Special twists are possible, but standard twist counts are used with an emphasis on versatility. While used differently from Susuvin made of organic Suvin cotton, the company intends to widely use these commodity-like yarns for a wide variety of products, including the replacement of raw materials of commodity items with eco-friendly specifications.

Polyester is largely used for mix-knitting, and is also becoming more eco-friendly. In addition to commodity yarns, yarns made with Invista's Coolmax sweat-absorbing quick-drying fiber are being used, as well as eco-friendly yarns made from recycled polyester. Even with special-type yarns made with frequently used polytrimethylene terephthalate (PTT) fibers including Lycra T400 and Solotex, Kanemasa has also recently begun to replace with eco-friendly yarn varieties.

Furthermore, Kanemasa plans to soon introduce Renu from Itochu Corporation, a chemically recycled polyester made with raw materials from waste clothing, including rare PIN textured types.

Kazuki Hyakkendani, President of Kanemasa, says, "The majority of the raw materials we use now are eco-friendly, with cotton being organic and synthetic fibers being recycled materials. Former fabric items will also be gradually replaced with eco-friendly materials."

FABRIC JAPAN F/W 2021-22

(① Fabric Structure, ② Material, ③ Characteristics)

Women's Fabrics

Maeda



- ① Plain weave
- ② 100% recycled polyester
- ③ Woven with an originally developed combined filament yarn made from recycled materials, this fabric has the six features of drape, good color development, peach-like touch, warmth, fullness and diversity.

Kanemasa



- ↑ ① Bird's eye (875462TCMA)
- ② 54% cotton/46% polyester (eco)
- ③ High-shrinkage eco-polyester and 80/1 organic cotton yarns are knitted on a 46G jacquard knitting machine to produce an iridescent chambray twill expression. The world's first knit with an iridescent expression.

Hokkoh



- ← ① Taffeta
- ② 100% polyester
- ③ Despite its high-density construction, the fabric is soft and supple, and is hand printed as well as digitally printed. The high-density base cloth is made of high-count microfibers, and is finished to have a soft and supple touch. It is a hand flock print, and digital printing is performed only to the flock portion to create an extremely elegant look.

Men's Fabrics

(① Fabric Structure, ② Material, ③ Characteristics)

Kanemasa



- ① Jacquard knit (IP80460FHS) ② 100% cotton
- ③ This fabric is knitted with an 80/1 organic cotton yarn in high density on a 46G knitting machine, and is shrunk to the limit with strong salt shrinking treatment to produce a crushed texture.

Hokkoh



- ① Ripstop ② 100% nylon
- ③ A digital print that pursues softness, luster and lightness. The base cloth is a reproduction of a vintage, nylon double ripstop. A military item that pursues softness, luster and above all lightness. Digital (inkjet) printing creates a stream print-like design with 3D visual effect.

Yagi & Co.



- ① Jersey stitch ② 100% cotton
- ③ This fabric is made with yarns produced from Indian-grown organic cotton involving the PBP Yarn Project. While maintaining its original wet smooth feature, special spinning and twisting techniques create a crisp touch and body.

Fluffy Fabrics

(① Fabric Structure, ② Material, ③ Characteristics)

Hokkoh



- ① Boa knit ② 100% polyester
- ③ A very fluffy boa-brushed print. A leopard pattern is daringly printed on the fluffy boa knitted fabric. The fabric is brushed on both sides to obtain an extremely voluminous finish.

Yagi & Co.



- ① Fleece ② 100% polyester
- ③ This eco-friendly material combines Lenzing Ecovero with recycled polyester. Extremely supple and light, the fabric also retains warmth with no loss of warm air.

Yagi & Co.



- ① Pile fleece ② 100% cotton
- ③ This pile fleece is made with yarns produced from Indian-grown organic cotton involving the PBP Yarn Project. Recommended for beautiful-looking jackets and dresses.

Chikuma

(① Fabric Structure, ② Material, ③ Characteristics)

→ ① Plain weave ② 83% polyester/17% non-classified material ("washi": Japanese paper)
 ③ A rich fabric surface is obtained with the creation of a random stripe pattern by combining washi yarns with slub yarns. Washi yarns are a natural material that is friendly to the environment and people. It is tough yet light, soft, water resistant, moisture absorbent and quick drying. Besides being biodegradable by microorganisms in the soil, this environment-friendly material does not generate any harmful substances when incinerated.



↓ ① Denim ② 51% polyester/27% cotton/22% non-classified material ("washi": Japanese paper) ③ This denim is made with washi yarns, a natural material that is friendly to the environment and people. It is tough yet light, soft, water resistant, moisture absorbent and quick drying. Besides being biodegradable by microorganisms in the soil, this environment-friendly material does not generate any harmful substances when incinerated.



← ① Circular knit ② 89% polyester/11% non-classified material ("washi": Japanese paper) ③ This fabric contains washi yarns, which is made from a plant-origin and eco-friendly materials for sustainable life. Its four-way stretch provides good texture when the garment is worn. This fabric has been made with consideration given to the environment and comfort.



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Clarino

How Green Do You Want It?

Over the past few years, consumers have become more and more aware of the harmful effects that fashion has on the environment. For example, the global textile and clothing industry is responsible for the consumption of billions of cubic meters of water, millions of tons of CO₂ emissions and millions of tons of waste per year. This realization has led to a significant change in the buying habits of end customers and their demands on the fashion industry. In this context the luxury fashion market has decided to make sustainability a priority. Last summer, 32 companies, including companies from the fast fashion and luxury fashion sectors, met and signed a fashion pact, which promises to combat greenhouse gases and emphasizes sustainability in this industry.

This step in a new direction also means that the members of the supply chain must adapt their offers to the new wishes and requirements of the market. The Clarino business of Kuraray Co., Ltd. was perfectly positioned to support the market with its expanding range of greener products. For several years, Clarino has made it their mission to develop products that meet the requests for more sustainable raw materials and play their part in helping save the planet.

For the Clarino business, the change started more than a decade ago. From 2008, the first step towards sustainability was taken when Kuraray developed and commissioned a new CATS (Clarino Advanced Technology System) plant for the waterborne production of manmade, nonwoven microfibers. Clarino TN, the world's first microfiber manufactured entirely without organic solvents, was



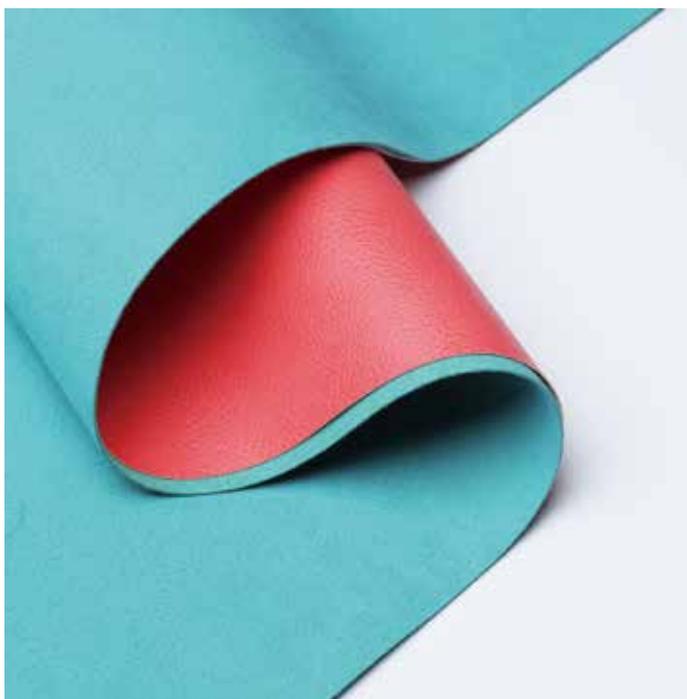
launched in 2009, making Clarino a pioneer in this field. With the aim of minimizing the impact on the environment, Clarino has succeeded in reducing water consumption by 70% and CO₂ emissions by 35%. The CATS plant is also used to manufacture our waterborne products Clarino Suede and Clarino Crust, which are part of the green approach that is at the heart of Kuraray's basic philosophy of developing products through "responsible innovation".

Now, in 2020, Clarino is committed to provide the world a microfiber manufacturing process, which is even cleaner, safer and greener. Since sustainability is the new normal in our society and not a trend, we asked ourselves the question: how green do you want it? The answer might be "it cannot be green enough!".

Our mission is to produce durable, high quality products that go hand in hand with the understanding of sustainability. Clarino wants to abolish wasteful practices and toxic materials and protect our workers and the environment. Therefore, we strive to offer the market sustainable alternatives with innovative design. This year, we are launching our new recycled nylon, which is just the beginning of a wide range of sustainable products. Although development and production cycles are becoming faster, we are the first to produce a highly exclusive material based on 100% recycled nylon fiber.

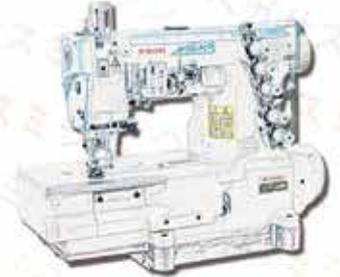
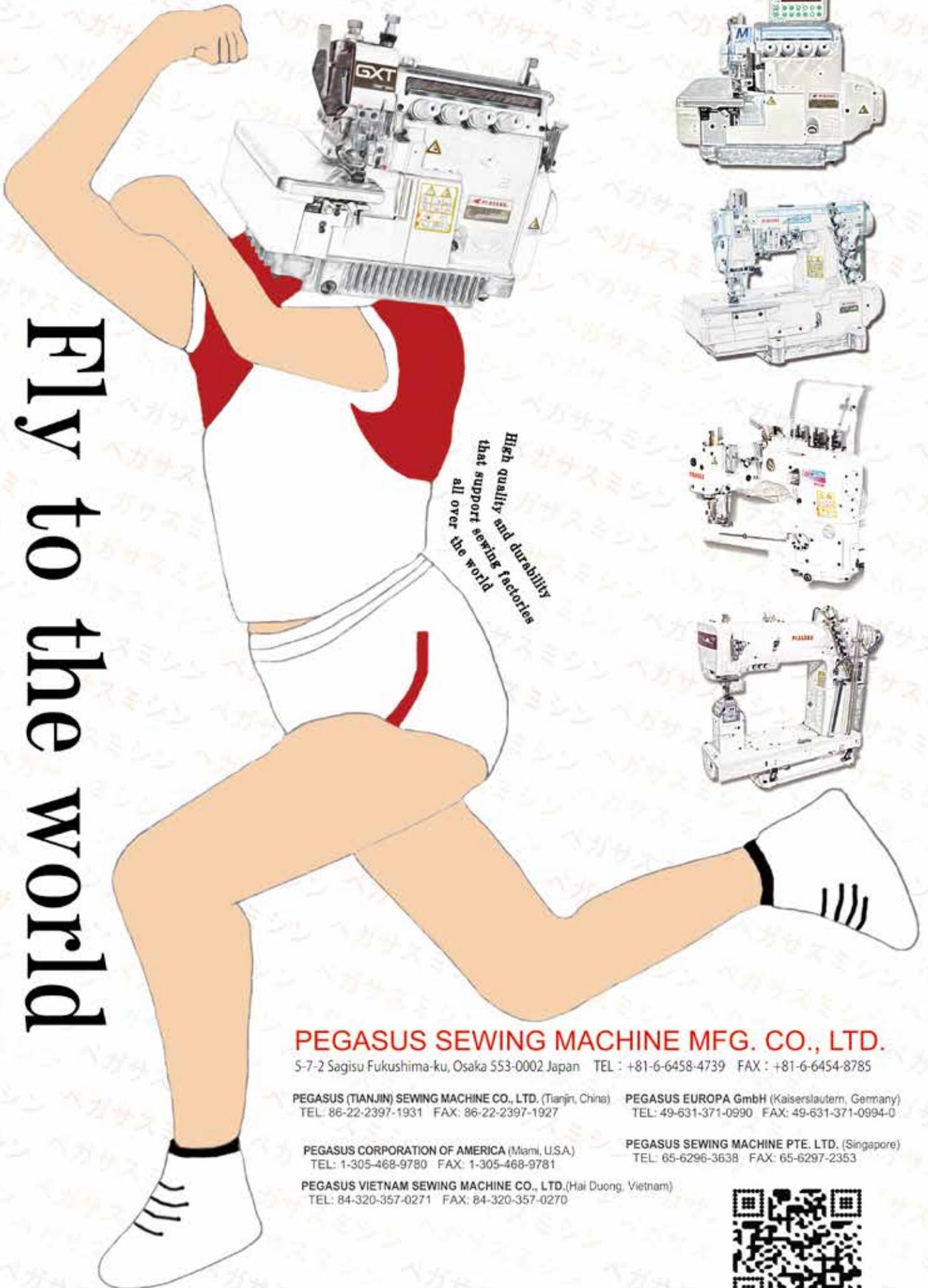
Closely following the introduction of our recycled nylon range, we are not only taking the next step towards a greener future for Clarino, we are already in the development stage of more green products to meet the demands of the market and our customers. The next phase for 2020 and 2021 includes the launch of a range of suede and coated products (water-based of course!) using the optimal blend of post-consumer recycled polyester fibers.

With our numerous production sites in key locations across the world, it is possible for us to respond quickly and flexibly to customer requirements. While embracing the increasing importance of sustainable products, we continue to place great emphasis on maintaining our core values of quality, creativity and versatility. Our mission is to do our part in creating a better world beyond next season, which means more authenticity, transparency and communication. Values that are more important than ever.





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Japanese Apparel Machinery

Coronavirus and U.S.-China Trade Friction Have Impact on Business

Japanese sewing machine makers continue to encounter setbacks this year with production and exports posting decreases compared to the year before. In addition to the continuing trade conflict between China and the U.S., apparel manufacturers are assuming a cautious attitude toward making capital investments, as order quantity continues to be narrowed down with appropriate production volume and review of inventory plans because consumers are more conscious about environmental issues. Furthermore, the coronavirus pandemic has had an impact on sales and business.

According to statistics released from the Japan Sewing Machinery Manufacturers Association (JASMA), based on statistics from the Ministry of Economy, Trade and Industry (METI), the nation's production of household and industrial sewing machines during January-May 2020 fell 33.6% in volume and 39.7% in value year-on-year

Production, Sales & Inventory of Sewing Machines

	January-May 2020			
	No. of Machines	Y-o-Y Change (%)	Million Yen	Y-o-Y Change (%)
Household sewing machines				
Production	16,550	-22.3	739	-24.8
Sales	16,551	-21.9	738	-22.8
Inventory	206	-40.8		
Industrial sewing machines				
Production	22,936	-39.8	6,046	-41.2
Single-needle straight line stitching	1,882	-37.4	194	-29.2
Top stitching	2,886	-29.3	528	-27.7
Others	18,168	-41.5	5,314	-42.6
Sales	38,595	-33.8	7,543	-40.7
Single-needle straight line stitching	1,949	-25.9	193	-26.6
Top stitching	13,831	-30.5	1,144	-39.1
Others	22,815	-36.3	6,206	-41.3
Inventory	9,886	-19.7		
Single-needle straight line stitching	338	-48.1		
Top stitching	5,130	-18.4		
Others	4,418	-17.8		
Total of household & industrial sewing machines				
Production	39,486	-33.6	6,785	-39.7
Sales	55,146	-30.6	8,281	-39.4
Inventory	10,092	-20.3		

Source: JASMA, based on METI statistics

Exports of Sewing Machine by Machine Type

	January-May 2020			
	No. of Machines	Y-o-Y Change (%)	1,000 Yen	Y-o-Y Change (%)
Household sewing machines (A=B+C)				
Household sewing machines (B)	92,278	-15.9	918,929	-23.9
Zigzag stitching (electronic speed adjustment type)	38,644	36.5	176,551	53.7
Zigzag stitching (others)	16,687	-30.4	129,799	0.9
Others	36,947	-35.6	526,335	-38.1
Parts (C)	—	—	86,244	-45.5
Industrial sewing machines (D=E+F+G)				
Automatic type (E)	6,135	-45.4	1,591,125	-72.5
Single-needle straight line stitching (for woven fabrics)	1,828	-7.6	36,190	-84.4
Single-needle straight line stitching (others)	0	—	0	—
Overlock	2,534	18.2	105,069	30.3
Others	1,773	-75.0	1,449,866	-73.5
Other types (F)	28,713	-34.3	4,326,690	-41.3
Single-needle straight line stitching (for woven fabrics)	2,676	-15.0	219,255	-33.2
Single-needle straight line stitching (others)	2,049	-55.6	315,207	-56.8
Overlock	5,180	-11.6	537,775	-31.1
Others	18,808	-37.4	3,254,453	-41.1
Total of automatic and other types (E+F)	34,848	-36.5	5,917,815	-55.0
Parts (G)	—	—	3,203,224	-38.9
Sewing needles (1,000 needles) (H)	45,333	-44.4	429,192	-38.0
Tables & covers (I)	—	—	10,162	-46.0
Total of household and industrial sewing machines (J=A+D)	127,126	-22.8	6,750,500	-52.6
Grand total (H+I+J)	127,126	-22.8	10,479,322	-48.5

Source: JASMA, based on MOF statistics

to 39,486 machines worth 6,785 million yen.

The production of household sewing machines dropped 22.3% and 24.8%, respectively to 16,550 machines valued at 739 million yen.

The production of industrial sewing machines also declined by 39.8% and 41.2%, respectively to 22,936 machines worth 6,046 million yen. Production decreased for all machine types.

Sales of household and industrial sewing machines were down 30.6% and 39.4%, respectively to 55,146 machines valued at 8,281 million yen. Sales of household sewing machines declined by 21.9% and 22.8%, respectively, and those of industrial sewing machines decreased by 33.8% and 40.7%, respectively.

Exports of household and industrial sewing machines during January-May 2020, based on Ministry of Finance (MOF) trade statistics, decreased by 22.8% in volume and 52.6% in value to 127,126 machines worth 6,750.5 million yen. Exports of household sewing machines declined by 15.9% and 23.9%, respectively, and those of industrial sewing machines decreased by 36.5% and 55.0%, respectively.

In exports of household sewing machines, zigzag stitching machines (electronic speed adjustment type) climbed 36.5% and 53.7%, respectively.

As for exports of industrial sewing machines, the automatic overlock type grew by 18.2% and 30.3%, respectively.

By region, exports of household and industrial sewing machines to West Asia rose by 1.3% in value. Exports of household sewing machines to Africa climbed 276.2% in terms of volume. Exports to Oceania sharply increased for the volumes and values of household and industrial sewing machines.

Japanese imports of household and industrial sewing machines during the first five months of this year decreased by 6.6% in quantity to 361,925 machines, and fell 18.3% in value to 3,723.49 million yen. Imports decreased both for household and industrial sewing machines.

Exports of Sewing Machines by Region

	January-May 2020			
	No. of Machines	Y-o-Y Change (%)	1,000 Yen	Y-o-Y Change (%)
East Asia	8,835	-37.0	2,208,982	-52.4
Household sewing machines	0	—	0	—
Industrial sewing machines	8,835	-36.8	2,208,982	-52.4
Southeast & South Asia	24,375	-33.0	1,767,567	-63.4
Household sewing machines	14,368	-22.1	41,126	-27.4
Industrial sewing machines	10,007	-44.2	1,726,441	-63.9
West Asia	74,855	-12.0	400,532	1.3
Household sewing machines	69,166	-11.8	319,096	-0.1
Industrial sewing machines	5,689	-14.7	81,436	7.0
Europe	10,129	-14.8	1,359,332	-31.1
Household sewing machines	4,383	-12.7	221,712	-8.8
Industrial sewing machines	5,746	-16.3	1,137,620	-34.2
North America	5,874	-58.4	852,009	-59.9
Household sewing machines	3,332	-55.1	216,538	-52.5
Industrial sewing machines	2,542	-62.1	635,471	-61.9
Central America	141	-64.7	14,386	-86.3
Household sewing machines	0	—	0	—
Industrial sewing machines	141	-64.7	14,386	-86.3
South America	664	-12.6	78,023	-15.6
Household sewing machines	0	—	0	—
Industrial sewing machines	664	-12.6	78,023	-15.6
Africa	1,603	-5.7	29,959	-52.8
Household sewing machines	459	276.2	3,524	-28.7
Industrial sewing machines	1,144	-27.5	26,435	-54.8
Oceania	650	169.7	39,710	210.9
Household sewing machines	570	159.1	30,689	186.2
Industrial sewing machines	80	281.0	9,021	339.8
World total	127,126	-22.8	6,750,500	-52.6
Household sewing machines	92,278	-15.9	832,685	-23.9
Industrial sewing machines	34,848	-36.5	5,917,815	-55.0

Source: JASMA, based on MOF statistics

Note: Parts excluded.

Imports of Sewing Machines by Machine Type

	January-May 2020			
	No. of Machines	Y-o-Y Change (%)	1,000 Yen	Y-o-Y Change (%)
Household sewing machines (A)	354,296	-2.8	3,399,877	-4.8
Household sewing machines (incl. head portion)	354,296	-2.8	3,125,992	-2.8
Parts	—	—	273,885	-22.8
Industrial sewing machines (B=C+D+E)	7,629	-66.9	2,625,762	-46.0
Automatic type (C)	3,924	-44.6	377,218	-48.8
Single-needle straight line stitching	2,726	-46.7	133,884	-57.3
Overlock	216	-36.1	14,143	-75.8
Others	982	-39.8	229,191	-37.1
Other types (D)	3,705	-76.8	220,278	-63.5
Single-needle straight line stitching	825	-92.0	67,155	-35.8
Overlock	890	-60.1	52,426	-59.0
Others	1,990	-42.5	100,697	-72.9
Total of automatic and other types (C+D)	7,629	-66.9	597,496	-55.4
Parts (E)	—	—	2,028,266	-42.4
Sewing needles (1,000 needles) (F)	118,607	-27.3	325,584	-33.6
Tables and covers (G)	—	—	38,050	-47.0
Total of household and industrial sewing machines (H=A+B)	361,925	-6.6	3,723,488	-18.3
Grand total (H+F+G)	361,925	-6.6	6,389,273	-29.0

Source: JASMA, based on MOF statistics

JUKI

PS-800 Series Pattern Sewers Also Launched in Japanese Market

JUKI Corporation's consolidated net sales during the first half of the current fiscal year (January to June 2020) fell 41.2% compared to the first half of the previous fiscal year to 30,496 million yen. Operating losses during the period amounted to 3,468 million yen, as compared with operating profits of 2,595 million yen in the year before. Net losses total 3,902 million yen.

Sales of household sewing machines increased in the Japanese and European markets because demand grew as people stayed home due to the coronavirus pandemic, while sales of industrial sewing machines sharply decreased in several markets, mainly in Asia. The net sales of the Sewing Machinery & Systems Business segment dropped 45.9% to 18,442 million yen. Endeavors were made to reduce costs through structural reforms, but factors such as decreased sales and reduced factory operation rates resulted in segment losses of 1,801 million yen, as compared with profits of 1,811 million yen in the year before.

The PS-800 series of pattern seamers is already marketed overseas, and JUKI has also recently launched this series in the Japanese market. According to the company, productivity is an issue for garment factories due to the lack of manpower and skilled human resources. JUKI offers a lineup of sewing machines that automate a number of processes according to customer needs, and the PS-800 series is a new type of automatic machine.



JUKI PS-800 series pattern seamer

The dry head of this pattern seamer uses advanced oil-less machine head technology. The machine can sew various materials at a maximum speed of 3,000 stitch/min. The height of the lower dead point of the intermediate presser can be changed steplessly even during sewing through the operation panel, so the machine can be effectively used for sewing multi-layered portions of material. Sewing problems such as stitch skipping and thread breakage are prevented by the intermediate presser which securely clamps the material.

The sewing pattern data format supports DXF, AI, PLT and DST, which are widely used in many garment factories. Therefore, the operation panel can use customer's existing sewing pattern data immediately. As many as 999 sewing patterns can be saved on the large-capacity memory of the operation panel. Editing software is also included with accessories.

Pegasus

Automatic Sewing Machines Contribute to Labor Saving and Higher Product Quality

According to Pegasus Sewing Machine Mfg. Co., Ltd., its consolidated net sales during the first quarter of the current fiscal year (April to June 2020) dropped 25.8% compared to the first quarter of the previous fiscal year to 3,294 million yen. Operating losses during the quarter amounted to 230 million yen, as compared with operating profits of 216 million yen in the year before. Net losses totaled 213 million yen.

Sales of industrial sewing machines decreased by 28.4% to 2,683 million yen with profits in this segment falling 94.0% to 32 million yen.

According to the company, the trade conflict between China and the U.S. and the coronavirus pandemic worsened its sales and business. Apparel manufacturers were reluctant to make capital investments, with the order quantity being narrowed down with the review of production volume and inventory plans because consumers are more conscious about environmental issues and sustainability.

Pegasus offers automatic machines and optional devices that contribute to labor saving and higher product quality.

The M900/AT/DD3A and MX/AT/DD3A series of overedgers comes equipped with an automatic tape/thread chain cutter (AT), automatic presser foot lift (PL) and pneumatic waste collector (LC, equipped only on AT8F model). The operation panel type controller enables frequently used functions, such as setting the machine speed, number of stitches for the AT device and similar functions, to be called up and set immediately. The machine also stops automatically. Two types of AT devices are available: electric type (AT6F) and pneumatic type (AT8F). The original built-in direct-drive motor ensures quality and safety.

Pegasus offers a number of machines that have an original built-in direct-drive motor that assures safety and quality, such as the D222/D232 series of overedgers and D322/D332 series of interlock stitch machines. The unified motor and machine design make setting up of each machine easy. The increased airtightness inside the motor provides additional safety. As there is no coupling, power is conveyed directly to the machine. Energy saving and high power contribute to higher productivity.



Pegasus M900/AT6F/DD3A series

China's Textile Exports Grow Thanks to Face Masks

According to provisional export statistics released from the General Administration of Customs, P.R.C., June 2020 exports of textiles and apparel grew by 17.8% over the same month of last year to US\$29,031.5 million. As in May, face masks, which are included in the category of textiles, contributed to June exports, but the increase in June exports was 8.9 percentage points smaller than the growth in May exports.

June exports of textiles climbed 56.7% to US\$16,156.8 million, but the growth was 22.4 points smaller than in May.

June exports of apparel (including apparel accessories) fell 10.3% to US\$12,874.7 million, thus falling for the fifth consecutive month. The fall in June apparel exports was 14.2 points smaller than May exports.

Textile and apparel exports during January-June 2020 increased by 3.1% year-on-year to US\$125,187.7 million: textiles, US\$74,103.3 million (up 27.8%) and apparel, US\$51,084.4 million (down 19.4%).

Hengli Petrochemical Starts Up 5th PTA Line Utilizing Invista's P8 PTA Technology

Invista's technology and licensing group, Invista Performance Technologies, and Hengli Petrochemical (Dalian) Co., Ltd. announced the successful start-up of Hengli's fifth PTA line.

Utilizing Invista's industry leading P8 PTA technology, the fifth PTA line with a 2.5-million-ton/year capacity successfully started up on June 29, 2020.

Hengli also operates another four PTA lines on the same site on Changxing Island (Dalian), all of which utilize advantaged PTA technology licensed from Invista, with a total capacity of 11.6 million ton/year. This makes Hengli the largest PTA producing site in the world. With integrated facilities and advantaged variable cost performance, Hengli's PTA product is

very competitive in the marketplace.

IPT Vice President Adam Sackett commented, "The successful start-up of Hengli's fifth PTA line yet again highlights the quick ramp-up capability of PTA plants utilizing our technology. Fast project execution, trouble-free and stable operation at low variable cost, enables our licensees to achieve a good return on their PTA investments."

Sateri Joins Fashion Industry Charter for Climate Action

Sateri has signed the Fashion Industry Charter for Climate Action, becoming the first viscose producer in China to support this global fashion agenda.

An initiative convened by the United Nations Framework Convention on Climate Change (UNFCCC), this charter calls on the fashion industry to support the goals of the Paris Agreement in limiting global temperature rise to well below two degrees Celsius above preindustrial levels, by achieving 30% aggregate reduction in greenhouse gas (GHG) emissions by 2030, including the supply chain.

As a signatory of the Charter, Sateri looks forward to participating in relevant Working Groups which bring together stakeholders and experts in the fashion and textile sectors.

Sateri President Allen Zhang says, "Sateri is committed to growing our business as sustainably as we can. Our adoption of the Fashion Charter goals is a bold leap, but we believe that pushing the boundaries is necessary. We are also stepping up on our engagement with industry partners to be part of the collective action to accelerate efforts against climate change."

Indorama Ventures Becomes First Chemical Company TCFD Supporter in Thailand

Indorama Ventures Public Company Limited (IVL) has become a Task Force on Climate-Related Financial

Disclosures (TCFD) Supporter. IVL is the first chemical company in Thailand and the second chemical company in Southeast Asia to become a TCFD supporter by volunteering to comply with TCFD recommendations and supporting their climate change agenda.

Becoming an official supporter cements the company's commitment towards and leadership in sustainability, embedding Environmental, Social and Governance (ESG) factors in its business operations.

The TCFD was created in 2015 by the Financial Stability Board (FSB) to develop consistent climate-related financial risk disclosures for companies, banks, and investors when providing information to stakeholders. TCFD recommendations are globally recognized for climate-related risk management and disclosure from the perspective of financial institutions. IVL also conducts scenario analyses that adopt TCFD recommendations as guidelines for climate change strategy. These sensitivity analyses cover impacts on the company's productions, revenues and EBITDA.

ISPO Shanghai Makes Successful Restart of Business

A total of 17,776 visitors came to ISPO Shanghai 2020 from July 3rd to 5th to learn more about future developments and to experience new products in the segments of Outdoor, Snowsports, Sport Trends, Running, Health & Fitness, Water Sports and Manufacturing & Suppliers.

ISPO Shanghai visitors increased by 14% in number and kept the momentum for the third year in a row. With myriads of people flooding to the exhibition and omni-channel marketing, ISPO Shanghai proved itself as a starting point for the sporting goods industry to recover from the COVID-19 pandemic.

ISPO Shanghai 2020 gained a total of 350 brands to exhibit, and hosted more than 50 industry forums and events.

Spinning Capacity Continues to Decrease

According to the Japan Spinners' Association, its members produced 4,442 480-lb. bales of spun yarn in May 2020, down 35.3% compared to the same month of last year. Of this, the production of cotton yarn dropped 35.3% to 2,750 bales.

Installed spinning spindles numbered 255,000 at the end of May, down 23,000 from the previous month. Japan's spinning capacity has been decreasing, and this has resulted in the reduction of production.

Fast Retailing Reports Sharp Decreases in Sales and Profits

The Fast Retailing Group reported sharp decreases in their consolidated net sales and profits during the first nine months of fiscal 2020 from September 1, 2019 to May 31, 2020.

Net sales fell 15.2% year-on-year to 1,544.9 billion yen, and operating profits dropped 46.4% to 132.3 billion yen. Net profits declined by 42.9% to 90.6 billion yen.

The weak performance was caused primarily by the impact of COVID-19,

Japanese Chain Store Sales

	June 2020 (Million Yen)	Y-o-Y Change (%)*	Jan.-Jun. 2020 (Million Yen)	Y-o-Y Change (%)*
Total sales	1,085,994	3.4	6,161,519	0.4
Groceries	718,155	3.4	4,251,448	5.8
Apparel	79,365	-4.1	356,430	-21.7
Men's wear	15,082	-6.5	64,619	-24.8
Women's wear	18,687	-7.7	90,631	-27.1
Other garments	45,597	-1.7	201,179	-17.9
Household goods	225,204	9.1	1,210,964	-2.9
Daily necessities	78,804	3.2	482,595	2.3
Medicine & cosmetics	30,620	3.9	171,168	-1.2
Furniture & interior goods	73,829	22.3	342,856	-6.9
Home appliances	7,330	10.7	41,318	-8.6
Others	34,620	2.9	173,026	-8.2
Services	2,352	-3.3	13,012	-10.3
Others	60,918	-5.2	329,665	-16.1

Source: Japan Chain Stores Association
*Same-store comparison

which forced the group to either temporarily close or introduce shorter opening hours for many of their stores.

Strong Sales of Children's Wear at Dept. Stores

According to the Japan Department Stores Association, provisional nationwide sales (73 firms, 203 stores) decreased by 19.1% in June 2020 on a same-store basis compared to the same month of last year to 382,947 million yen. The sales decrease

improved 46.5 percentage points from the previous month, and this is seen as a sign indicating that business is picking up.

Apparel sales declined by 18.7% to 110,175 million yen. The decline was 55.4 points smaller than May. Sales of children's wear were strong with the restart of schools. Summer sales also contributed to sales, which in addition to the expansion of online sales, started earlier than usual or held at various locations for a longer period of time. Sales were also vigorous for seasonal products, such as parasols and sandals, and household goods including bedding in response to growing demand for stay home items.

Apparel Sales Remain Slow at Chain Stores

According to the Japan Chain Stores Association (56 firms, 10,806 stores), apparel sales during January-June 2020 fell 21.7% on a same-store basis year-on-year to 356,430 million yen. The stores took measures against the coronavirus pandemic, and this had an impact on apparel sales. In January before the pandemic became serious in Japan, the chain stores suffered from the warm winter, and apparel sales decreased every month of this year's first half.

Total sales during January-June 2020 rose 0.4% year-on-year to 6,161,519 million yen. As a result of stay home demand, sales of groceries increased, and this supported overall sales. It was the first

Japanese Dept. Store Sales, Nationwide

	June 2020 (Million Yen)	Y-o-Y Change (%)*	Jan.-Jun. 2020 (Million Yen)	Y-o-Y Change (%)*
Total sales	382,947	-19.1	1,832,270	-33.9
Apparel (incl. accessories)	110,175	-18.7	519,375	-39.1
Men's wear	24,956	-19.5	112,715	-38.7
Women's wear	69,878	-19.9	319,282	-41.1
Children's wear	7,763	-7.4	51,523	-29.3
Other garments	7,579	-14.9	35,855	-33.4
Miscellaneous articles (incl. shoes, bags, etc.)	50,679	-19.0	233,010	-38.0
Sundries	67,550	-28.4	333,431	-39.9
Cosmetics	31,087	-32.5	160,716	-43.5
Artworks, jewelry, precious metals, etc.	23,735	-29.0	108,358	-38.1
Others	12,729	-14.0	64,356	-32.5
Household goods	15,092	-16.8	76,619	-30.4
Furniture	3,547	-21.7	20,395	-29.4
Home appliances	991	-31.3	5,746	-18.2
Others	10,553	-13.3	50,478	-32.0
Groceries	118,464	-11.9	556,033	-21.9
Dining	6,460	-45.5	36,765	-47.8
Services	3,360	-28.6	18,782	-33.9
Others	11,168	-0.5	58,254	-7.4
Gift certificates	13,373	-3.5	40,262	-27.1

Source: Japan Department Stores Association
*Same-store comparison

time since 2016 that total sales increased year-on-year. However, sales decreased on an all-store basis (unadjusted number of stores).

June apparel sales decreased by 4.1% compared to the same month of last year to 718,155 million yen. Sales were sluggish as people refrained from going out. Women's and men's casual wear items showed some movements, but suits and formal wear were in a stagnant condition. Sales of underwear, pajamas and children's wear were vigorous, while those of swimwear, parasols and headwear were slow.

Total sales in June increased by 3.4%, supported by groceries and household-related items.

Toyobo and 11 Other Firms Launch Company for Recycling Used Plastics

Toyobo Co., Ltd. and eleven other companies forming a plastic value chain have jointly established R Plus Japan, Ltd. as a new company that will facilitate the recycling of used plastics to help solve plastics-associated problems and create a more sustainable society.

Starting operations this June, R Plus Japan is headed by President Tsunehiko Yokoi, and is located in Minato-ku, Tokyo.

The Toyobo Group has provided many products and technologies to help solve social problems since its establishment. The group is determined to create a more sustainable society by developing products and technologies that reduce society's impact on the environment. For example, Toyobo has raised the proportion of recycled resin and plant-derived raw materials in its main plastic products, and has been manufacturing and selling highly functional bioplastics.

Toyobo has long admired the technology U.S. biochemical venture company Anellotech, Inc. developed to produce raw materials for polyester from wood. Since 2017, Toyobo has been involved in a project in which Anellotech, the Suntory Group and other companies inside and outside Japan are developing polyethylene terephthalate (PET) bottles made entirely of plant-derived materials. Application of this groundbreaking technology likely will

pave the way for effectively recycling used plastics and the increased cyclical use of plastics.

R Plus Japan will promote research and development of eco-friendly, effective plastic recycling technology together with Anellotech. The company aims to commercialize this technology in 2027 to help solve common global challenges associated with used plastics. This process will include collaboration across industries, such as with companies that sort collected plastics; producers of monomers, polymers, packaging films and containers; trading companies; and beverage makers.

MMF Production Falls 18.8% in June

According to a provisional report released from the Japan Chemical Fibers Association, the nation's production of manmade fibers in June 2020 fell 18.8% compared to the same month of last year to 54,919 tons. Of this, cellulosic fibers increased by 18.2%, while synthetic fiber dropped 26.6% to 41,004 tons.

June production decreased for the four major synthetic fiber items of nylon filament, acrylic staple fiber, polyester filament and polyester staple fiber.

MMF production during January-June 2020 decreased by 9.0% year-on-year to 378,751 tons. While cellulosic fiber production rose by 6.4%, that of synthetic fibers declined by 13.0%.

Hayashi Crowdfunds Suits That Make Short Fat Men Look Cool

Hayashi Co., Ltd. of Nagoya, Japan crowdfunded high-performance suits that make short fat men look cool on the Makuake crowdfunding website.

According to the company, the suits were planned with hopes of wanting men with a complex of being short and fat

Japan's MMF Production

	June 2020 (Ton)	Y-o-Y Change (%)	Jan.-Jun. 2020 (Ton)	Y-o-Y Change (%)
Cellulosic fibers	13,915	18.2	91,385	6.4
Synthetic fibers	41,004	-26.6	287,366	-13.0
Nylon filament	3,971	-27.7	33,161	-15.0
Acrylic staple fiber	5,864	-45.0	40,803	-28.4
Polyester filament	6,984	-25.3	50,599	-13.5
Polyester staple fiber	5,793	-23.5	39,871	-5.6
Polypropylene filament	3,851	13.4	20,276	-17.4
Polypropylene staple fiber	5,369	0.9	31,167	17.1
Others	9,172	-34.8	71,489	-13.3
MMF total	54,919	-18.8	378,751	-9.0

Source: JCFA (provisional)

regain confidence in their body shape by looking cool.

The fabric used for these suits is Tech-wool, a combination of Merino Wool with a special stretch material, and is manufactured by Nakaden Keori Co., Ltd., a Japanese manufacturer of women's fabrics. In addition to stretch, the fabric has breathability and deodorizing effects. Giving priority to comfort, the jacket is designed to be slightly larger around the shoulders. The armpits are narrowed down to a reasonable extent to create a neat appearance. The slacks are tapered with the thigh portion being large and a sleek line from the knees to the hem for a smart look.

Pads are affixed to the sides of the jacket to prevent sweat stains, and the jacket is unlined at the back so that heat is quickly released to the outside for lowering the temperature inside the jacket. The slacks have a button that can be moved whenever the belly bulges, and the crotch part is reinforced with crotch lining.



A smart look covering the body shape

Japan's Uniform Market

The Market Grows 15% in Last Five Years to Reach 553.8B Yen in 2019

According to *The Sen-i News*, the Japanese-language flagship publication of DAISEN Ltd. and sister publication of *Asian Textile Business (atb)*, the Japanese market for uniforms is estimated to have grown by 4.7% in 2019 compared to the previous year to approximately 553.8 billion yen (based on the shipment value of manufacturers). This means an increase of 15.2% over the five years from 2015. While the apparel market is shrinking in Japan, this estimation indicates the solidness of the uniform market.

The uniform market can be broadly divided into workwear, school uniforms, caregiving/medical wear, office wear and service wear. The estimation is based on surveys made in the Japanese uniform industry every November and interviews on uniform and textile manufacturers, and the increasing market share of major school uniform makers is also taken into consideration.

The market scale grew by about 73 billion yen during the last five years from approximately 480.9 billion yen. Factors for the market growth are considered to be renewal demand in anticipation of the Tokyo Olympics and Paralympics, the creation of new demand for uniforms due to the disappearance of barriers to casual wear, outdoor wear, sportswear, etc., and the acceptance of price increases.

Above all, the progress of workwear

is significant. Its market size increased by 25.4% since 2015 to approximately 255.5 billion yen in 2019. New entries of high-unit-price garments equipped with electric fans were made one after another, and this supported the market expansion from 2017.

Even if you look at companies that achieved high sales growths during the last five years, the companies whose main business is workwear monopolize the top rankings. In addition to the increase in casual wear centering on denims, sales of electric fan wear and rising unit prices thanks to the strength of brands also contributed to market expansion.

The market for school uniforms, which had the next largest scale after workwear, is estimated to have grown by 4.1% over the past five years to about 119.6 billion yen, as major manufacturers became more oligopolistic. Although the market has been shrinking in general due to the decrease in the number of students and consolidation of schools, the branding of school uniforms and physical education wear and the revitalization of uniforms with LGBT taken into consideration have been increasing, and this has led to market growth (although sluggish) during the last few years.

Caregiving/medical wear, which is the next largest after workwear and school uniforms, grew by 8.2% from 2015 to approximately 58.1 billion yen. In recent years, sports brands have been develop-

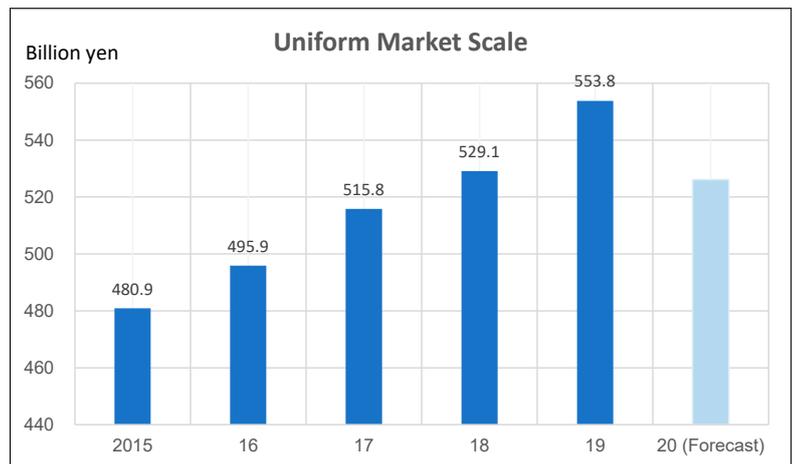
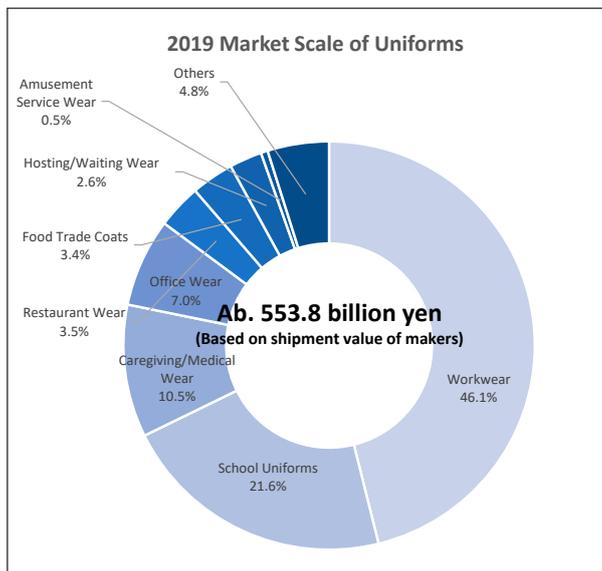
ing the market.

A wave of revival and abolition occurs in office wear every 10 years, and the wave of abolition is currently intensifying. However, moves toward knitwear and high functionality have been increasing, and with such moves the market for office wear grew by 10% since 2015 to about 38.7 billion yen. There was also a fusion with the hosting/waiting service wear, and merchandising incorporating the elements of "hospitality" also promoted market growth.

The service sector includes garments for restaurant and hosting/waiting wear, and both are estimated to have a market scale of 15 billion yen. Hosting/waiting service wear decreased by 8.2% over five years to 155.4 billion yen, but due to the integration with office wear, it cannot be said that it has been decreasing.

Showing a definite decrease are garments for amusement services, down 35.2% compared to 2015 to 4.6 billion yen. The decrease is attributable to factors such as the fact that the number of pachinko parlors at the end of 2019 fell below 10,000 for the first time in 38 years (according to the Metropolitan Police Department).

The market scale is expected to decrease overall in 2020 due to the coronavirus pandemic. However, the decrease is unlikely to be as great as general apparel, but it is possible that the rate of decrease might increase from 2021 or 2022.



Tenax Non-Crimp Fabrics and Tenax Braided Fibers Qualify for Airbus A320neo Spoilers

Teijin Limited announced that its carbon fiber materials Tenax Dry Reinforcements (DR) will be used for the wing spoilers of Airbus A320neo.

The highly automated Resin Transfer Molding (RTM) process developed by Spirit AeroSystems Inc, one of the world's leading manufacturers of aircraft structural components, will incorporate Tenax Dry Reinforcements Non-Crimp Fabrics (DRNF) and Tenax Braided Fibers (DRBF) to form skins and stiffeners while maintaining existing product interfaces, allowing direct replacement of all final spoiler components.

Tenax DRNF and Tenax DRBF have been developed for resin infusion and resin transfer molding processes, which can offer higher productivity and component integration than conventional autoclave molding.

Tenax DRNF is made of bundled carbon fiber filaments which spread out in one direction in multiple layers and different angles, depending on the structural requirements of the final component. The fabrics have excellent fiber orientation that achieves better mechanical properties than conventional woven fabrics, as well as properties equivalent to aerospace-grade thermosetting unidirectional prepreg. Tenax DRBF are applied within the spoiler component structure to act as cavity fillers, and these materials have been qualified individually by Airbus specifically for this application.

The combination of Tenax DRNF and Tenax DRBF reaches the Spirit AeroSystems criteria for aircraft component production, such as effective processability,



A320neo spoiler

productivity and cost efficiency.

A320neo spoiler components will be manufactured at the new high-volume production facility of Spirit AeroSystems in Prestwick, Scotland.

Teijin is intensively accelerating development of mid- to downstream applications for aircraft, such as cost-effective carbon fibers with higher tenacity and higher tensile modulus intermediate materials. The company intends to further strengthen its carbon fiber and intermediate material business as a leading solution provider for aircraft applications, targeting annual sales in this field in excess of US\$900 million by around 2030.

EU Set for 20-Fold Increase in Nonwoven Face Mask Output by November

EU production of face masks, essential for tackling the coronavirus pandemic, is set to increase 20-fold by November this year compared to pre-crisis levels. This means that EU-based producers will be able to make the equivalent of 1.5 billion three-layer masks a month, according to figures released by EDANA, the leading global association serving the nonwovens and related industries.

Pierre Wiertz, EDANA's General Manager, says, "These figures show how EDANA's members in the nonwovens sector have responded in record time to the unprecedented challenge of the COVID-19 pandemic and the call by EU and national authorities to ramp up production of face masks to protect public health."

Teijin Increases Capacity for Carbon Short Fiber

Teijin Carbon Europe GmbH has increased the production capacity of its German produced chopped carbon fiber type Tenax-E HT C604 6 mm by 40%.

The capacity increase was made in response to growing demand among European electronics manufacturers in recent years, as well as to currently increasing needs for compounds for medical devices.

The success of the German chopped product C604 is based on its excellent quality, enabling the production of high-

grade compounds (plastic granulate reinforced with carbon fiber) with superior mechanical properties and good electrical conductivity.

Demand for C604 has increased significantly in recent years. So far, demand of European customers has partly been satisfied by delivering the same product type produced at Teijin's Mishima plant in Japan. With the increased German capacity, Teijin can now react more flexibly to inquiries in the European market.

Other product types of Tenax short fiber (chopped, pelletized or milled) are produced at plants in Japan and the U.S. They are supplied in a variety of sizings to be used, besides thermoplastic materials, with thermosets and in water-based processes.

Toray to Supply Carbon Fiber Composite Materials for Lili-um's All-Electric Air Vehicles

Toray Industries, Inc. has concluded an agreement with Munich-based Lili-um GmbH to supply carbon fiber composite materials for its Lili-um Jet.

Lili-um is developing this all-electric, vertical take-off and landing aircraft to deliver clean, regional air mobility as early as 2025.

Regional air mobility could help reduce traffic congestion, noise and air pollution in crowded cities. Entities around the world are developing airframes and operational systems for air taxi services. Governments are working on regulatory frameworks. Lili-um is spearheading the quest to manufacture air vehicles and develop and commercialize services.

Carbon fiber composite materials are vital to lighten such vehicles as the Lili-um Jet. Toray is deepening ties with Lili-um and other manufacturers while continuing to innovate materials that contribute to progress with these transportation platforms by enhancing performance, conserving energy and lowering costs.

The Lili-um Jet will take up to four passengers and can fly up to 300 kilometers in less than 60 minutes. Carbon fiber composite materials will be used for its fuselage, wings, rotor vanes and other structural components.

Nisshinbo Textile Introduces Innovative Weaving Technology Requiring No Sizing

Nisshinbo Textile Inc. has introduced an innovative weaving technology that requires no sizing.

The company has already applied for a patent, and this technology is expected to be patented in August. The new technology enables high-speed weaving of spun fabrics without the use of sizing agents, leading to energy savings and a reduction of environmental burden during wastewater treatment. This technology will be first introduced at its subsidiary in Indonesia for the production of commodity uniform fabrics, and the items of production will be expanded gradually.

Weaving fabrics at higher speeds increases tension and friction on the warp. Particularly in the weaving of spun yarns, it is important to increase the strength of the warp by applying a sizing agent to prevent yarn breakage and hairiness. However, the sizing process consumes energy, and because the sizing agent is removed in the dyeing and processing stage, the wastewater containing the removed sizing agent was a great burden on the environment.

Research on various non-sizing weaving technologies has been conducted from an early stage, and these technologies have already been put to practical use, but mainly for low-speed weaving. However, these technologies have hardly been applied to high-speed mass-production weaving with shuttleless looms. Nisshinbo Textile, on the other hand, made a total review of the weaving conditions, and made modifications to the equipment, including changes in the reed design, to develop an innovative technology that makes sizing unnecessary and can be used even for high-speed mass-production.

This new technology will be introduced at its Indonesian textile subsidiary, P.T. Nikawa Textile Industry. It will first be applied to the production of commodity polyester/cotton blend fabrics for uniforms, such as 34s/2 twill. The company intends to make further improvements

to this technology with an aim to apply it to fabrics woven with single yarns and pure cotton fabrics. The development of mass-production type of non-sizing weaving technology can save energy by omitting the sizing process, and it reduces the environmental burden of wastewater treatment in the dyeing and processing stage.

In recent years, worldwide demand for sustainability and Sustainable Development Goals (SDGs) has increased, and the reduction of environmental burden in the production process has been in strong demand. Nisshinbo Textile is introducing this new technology as an innovative production process that will reduce environmental impact.

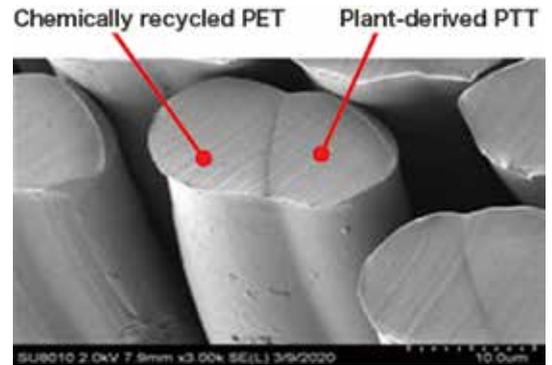
Teijin Frontier Develops High-Stretch Fiber with Plant-Derived & Recycled Materials

Teijin Frontier Co., Ltd. has introduced Solutex Eco-Hybrid, a new high-stretch side-by-side (S/S) conjugated fiber made with an eco-friendly plant-derived polymer and a chemically recycled polyester polymer, each featuring different heat-shrinkage characteristics to enable the formation of coiled crimp yarns.

Representing a new line in Teijin Frontier's polytrimethylene terephthalate (PTT) fiber Solutex family, Solutex Eco-Hybrid has the same features as conventional S/S conjugated fibers made with petroleum-derived raw materials.

The PTT polymer is partly made with plant-derived raw materials, and the PET polymer is made with chemical recycled raw materials, such as used polyester fibers. The range of fineness is extensive from 33 to 330 decitex, and filament yarn processing is possible. Its high stretch and dyeability are equivalent to those of petroleum-derived materials, and the texture is soft.

Extra stretch is achieved with a new technology for conjugating PTT and PET polymers, and the filaments are processed to obtain a crimp structure. Dyeability is achieved with the optimized



Cross section of Solutex Eco-Hybrid

yarn-making conditions.

In recent years, demand has been growing for materials offering functionality and comfort, such as stretch and soft textures. Users are also seeking eco-friendly fabrics made with recycled and plant-derived materials.

Teijin Frontier's existing S/S conjugated fiber comprises a highly stretchable Solutex PTT-fiber polymer made with about 40% plant-based raw materials and PET made of recycled raw materials. The newest version, Solutex Eco-Hybrid solves the problem of achieving a consistent crimp structure in an eco-friendly S/S conjugated fiber made with recycled PET.

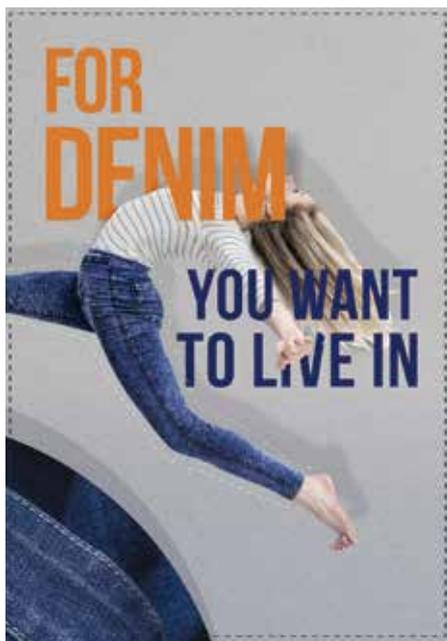
Solutex Eco-Hybrid filament yarns and fabrics are being introduced as featured products for fall/winter 2020 fashion wear, sportswear, uniforms, etc. Annual sales are expected to increase from 500 million yen in 2020 to 1.5 billion yen in 2022 (filament yarn equivalent).

Hyosung Reveals New Creora 3D Max at Kingpins24

To provide denim-lovers with jeans they want to live in, Hyosung has developed new Creora 3D Max spandex, which made its debut at the Kingpins24 virtual denim event that took place in late June.

Hyosung introduced 3D Max spandex to give denim products dual performance features, such as ultra-stretch and excellent recovery that last over time. Jeans made with 3D Max offer a natural look and feel, and allow for add-on details such as eco-friendly finishing and laser treatments.

"In denim, it has traditionally been



difficult to get super stretch with low growth or bagging,” said Mike Simko, Hyosung’s Global Marketing Director -Textiles. “The industry wants more than 50% stretch, but they want it with less than 5% growth. While there is currently a way to achieve these targets, it can be expensive and constraining; therefore, mills and brands have been asking Hyosung for a better solution. We are happy our Creora 3D Max has filled this need.”

At Kingping24, Simko joined Tim Huesmann, Director and shareholder of Panther Denim & Tat Fung, in a moderated discussion on the importance of collaborative developments and how the denim industry can benefit by all working together. Simko also shared more information about Creora 3D Max spandex along with Hyosung’s GRS certified Creora regen spandex made from 100% reclaimed waste, and forthcoming Creora bio-based spandex.

Debs Launches New Elevated & Sustainable Online Fabric Sourcing Portal

Debs has launched a new elevated and sustainable online fabric sourcing portal called Refynd.

Refynd is a concept that gives brands an opportunity for “guilt-free creativity” by creating and coloring high-quality fabrics using materials made from textile

resources that are unused, or planned to be discarded. Refynd also helps the textile industry become more sustainable by preventing these raw materials from being disposed. The brand name is a play on words that express everything it represents: Reduce, Re-use, Refined, and To Find.

Every year, millions of meters of textile raw materials – yarns and greige goods – end up being discarded before they are even dyed or printed. While the world tends to focus on the amount of garments that end up in landfills, they forget the environmental impact of the raw materials that are being thrown away. The overall impression is that many of the raw materials are defective, unattractive, or of poor quality; however, that is rarely the case.

Refynd is an elevated fabric sourcing solution that gives brands the opportunity to produce their own high-quality fabrics by utilizing raw material waste before they are discarded. The selection of materials is carefully curated by Debs’ team of knowledgeable and experienced professionals to give brands a high-quality, customized and economical product offering. On the Refynd portal, brands can search their desired fabrics by browsing detailed categories, add items to a personalized selection list, and easily send their selections online to be followed up by Debs’ knowledgeable and experienced team.

Fabrics on Refynd are created and curated internally by Debs’ experienced development team. The team finds the best match of yarns, weaves and finishes to offer brands an elevated product that is also affordable, giving brands that could not afford to buy high-quality fabrics, an opportunity to do so.

Fabrics are separated into “Make Your Own” and “Ready to Go” categories. Fabrics in the Make Your Own category are in greige (loom) state, giving brands the ability to develop their own colors or prints at a lead-time of 30-45 days.

Fabrics in the Ready to Go category are already dyed or printed and are ready for immediate shipment.

The team at Debs helps create a personalized experience to take your needs “off-line”, making the development and purchasing process no different than usual. They will take care of your fabric selection, proto-sampling, color and print development, bulk production and delivery to any destination in the world.

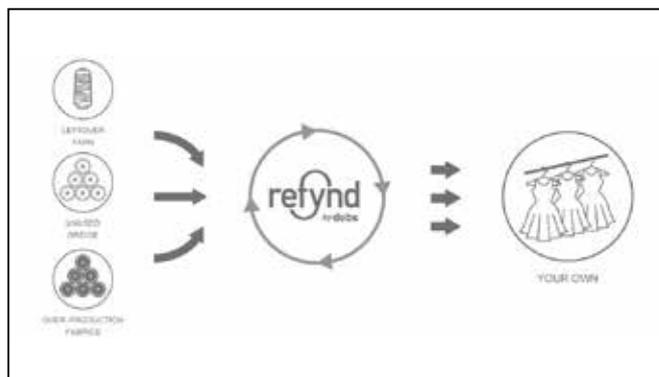
Refynd is unique from other sites because:

- It offers guaranteed and reliable quality and service because it is not a platform and all production is handled by Debs.
- It gives customers the ability to customize their colors and prints.
- Fabrics are elevated and do not just cover basics.
- Quantities are available in larger volumes for medium- to large-sized brands.
- Servicing is personalized as it is an “off-line business”.

Debs has been in the textile industry for over 100 years. With a strong passion towards sustainability, the company recognizes it must do its part to help the industry do better.

Debs strives to become a leader in sustainable textiles by combining sustainable raw materials with environmentally friendly dyeing and finishing methods. The company also takes a look at process change technologies to find better ways of producing textiles, thus reducing the ecological footprint.

Debs is committed to sustainably manufacture 25% of its products by 2020 and to increase this amount by at least 5% per year, with the goal of achieving 50% sustainability of products by 2025.



FY2019-20 Business Performance of Japanese Companies
MMF & Textile Makers
Struggling Fiber & Textile Business

According to the consolidated business results of Japanese fiber producers during the fiscal year ending on March 31, 2020, the spread of the coronavirus in the latter half of the fiscal year resulted in decreases in net sales and operating profits for four of the producers.

Toyobo Co., Ltd. turned its net losses in the previous fiscal year to net profits thanks to insurance income totaling 10.6 billion yen from a fire accident last year. Unitika Ltd. posted net losses due to extraordinary losses amounting to nearly 5 billion yen. Because the coronavirus made it difficult to give an outlook of business in the current fiscal year, four of the

producers excluding Toray Industries, Inc. and Teijin Limited postponed the announcement of their full-year business outlook.

Toray's Fibers and Textiles segment posted a decrease in sales and a drop in segment profits, as sales and profits decreased both domestically and overseas. The shipment of goods in Japan remained flat for apparel and industrial applications, while the sales of materials for uniforms grew in Japan, along with those for sports applications in the U.S. and Europe.

The Carbon Fiber Composite Materials segment increased its profits by more than 80%. Demand for aircraft applications and the performance of industrial applications in environment- and energy-related sectors, such as compressed natural gas tanks and wind turbine blades,

remained robust, and demand for sports applications showed a recovery. The improvement of supply-demand balance also helped the prices of general-purpose products to recover.

Asahi Kasei Corporation achieved its second largest sales in history thanks to increased sales in the Home and Health Care segments. The Material segment posted a decrease in sales and a drop in profits due to the slowdown of business in China and the automotive market. Although the consolidation of Sage Automotive Interiors, Inc., which was acquired in 2018, made a positive contribution, the Performance Products segment suffered a sharp decline in profits due to lower operation rates, shipment decreases and deteriorated terms of trade for synthetic rubber,

Consolidated Business of Fiber & Textile Companies, April 1, 2019 to March 31, 2020

(million yen)

	Net Sales	Y-o-Y Change (%)	Operating Profits	Y-o-Y Change (%)	Net Profits	Y-o-Y Change (%)
MMF & textile producers						
Toray	2,214,633	-7.3	131,186	-7.3	55,725	-29.8
Asahi Kasei	2,151,646	-0.9	177,264	-15.4	103,931	-29.5
Teijin	853,746	-3.9	56,205	-6.3	25,252	-44.0
Kaneka	601,514	-3.1	26,014	-27.8	14,003	-37.0
Toyobo	339,607	0.9	22,794	4.9	13,774	—
Unitika	119,537	-7.4	5,467	-32.9	-2,158	—
Kuraray ⁽¹⁾	575,807	-4.5	54,173	-17.7	-1,956	—
Cotton spinners & textile makers						
Daiwabo Holdings	944,053	20.2	32,841	44.6	21,178	26.2
Kurabo	142,926	-9.0	4,541	-19.5	3,731	-19.7
Shikibo	38,037	-6.8	1,958	-18.6	961	—
Fujibo Holdings	38,701	4.3	4,079	7.9	2,269	-10.6
Omikenshi	9,026	-7.4	-207	—	-2,367	—
Nitto Boseki	85,722	4.2	8,160	-0.5	5,771	-27.7
Nisshinbo Holdings ⁽²⁾	509,660	—	6,284	—	-6,604	—
Textile dyers & processors						
Seiren	120,258	-2.0	10,502	-0.8	8,551	3.9
Komatsu Matere	36,525	-6.5	1,612	-25.5	1,375	-35.5
Sakai Ovex	27,561	1.1	2,123	4.9	2,313	3.8
Tokai Senko	14,010	-3.4	617	-17.9	-551	—
Sotoh	11,219	-0.1	193	-19.1	-97	—
Soko Seiren	2,778	-17.7	-245	—	-130	—

Note: (1) Kuraray's business performance is for the period from January to December 2019.

(2) Nisshinbo Holdings figures for the period from January to December 2019 due to December settlement.

No year-on-year comparison is shown because the previous fiscal year was an irregular settlement due to a change in fiscal period.

* Mitsubishi Chemical Holdings is not listed due to different accounting standards.

along with a decrease in shipments of fiber products and engineering plastics, as well as an increase in fixed costs in each of these businesses.

Teijin reported a sharp decrease in net profits, mainly due to recording one-time expenses associated with the transfer of subsidiaries in its Films business, and an impairment related to a subsidiary in the Polyester Fibers & Trading and Retail Business Group. In Materials business, the sales volume of aramid fiber decreased due to a decline in automotive demand, but the product mix and pricing efforts contributed positively to profits.

In the Polyester Fibers & Trading and Retail Business Group, domestic

production of sportswear textiles and sales of men's heavy clothing struggled, because of stagnant market conditions in Japan, and globally mainly due to trade friction between the U.S. and China and unseasonable weather. In Industrial Textiles and Materials, sales of automotive materials were affected by sluggish automobile sales in Europe and China. However, sales remained favorable for infrastructure reinforcement materials, and polyester staple fiber for application in water treatment filters and synthetic leather.

Toyobo suffered setbacks in the segments of Industrial Materials and Textiles and Trading. Meanwhile, the

segments of Films and Functional Polymers and Health Care sharply increased their profits, which resulted in a slight increase in overall net sales and an increase in operating profits. The airbag fabric business of the Industrial Materials segment faced challenges as a fire slowed down production. In the high-performance fiber business, sales of IZANAS ultra-high strength polyethylene fiber grew primarily for use in ropes, and sales of Zylon PBO fiber also expanded for use in bicycle tires, etc. In the Textiles and Trading segment, sales of those fabrics to the Middle East improved, and sales of materials for business uniforms also grew steadily.

Unitika's gross profit margin

Fiber & Textile-Related Segments

(million yen)

	Segment	Net Sales	Y-o-Y Change (%)	Segment Profits	Y-o-Y Change (%)
Fiber producers					
Toray	Fibers & Textiles	883,100	-9.4	60,700	-16.7
	Carbon Fiber Composite Materials	236,900	9.7	21,000	81.6
Asahi Kasei	Performance Products	436,100	-4.5	33,700	-28.9
Teijin ⁽¹⁾	Materials	633,800	-5.6	21,300	-9.3
	Of which Polyester Fibers & Trading and Retail	306,300	-3.8	—	—
Kaneka	Quality of Life Solutions Unit	154,837	-1.2	14,189	-6.0
Toyobo	Industrial Materials	65,400	-1.6	1,000	-61.5
	Textiles & Trading	61,300	-5.1	600	-33.3
Unitika	Fibers & Textiles	49,894	-5.6	-589	—
Kuraray ⁽²⁾	Fibers & Textiles	50,816	7.4	5,654	-9.9
	Trading	128,139	-5.8	4,224	0.2
Cotton textile makers					
Daiwabo Holdings	Fibers & Textiles	71,670	-4.6	3,737	-7.0
Kurabo	Textiles	51,555	-13.7	-1,701	—
Shikibo	Textiles	20,321	-10.4	-272	—
Fujiho Holdings	Textiles	9,753	-15.6	162	-74.4
Omikenshi	Fibers & Textiles	7,022	-10.9	-402	—
Nitto Boseki	Textiles	3,616	-25.6	-221	—
Nisshinbo Holdings ⁽³⁾	Textiles	49,505	—	1,036	—
Textile dyers & processors					
Seiren	Automotive Interior	69,766	-5.6	6,278	-1.9
	High Fashion	24,681	-2.9	1,101	4.6
Komatsu Matere	Textiles	35,906	-6.5	1,594	-23.1
Sakai Ovex	Dyeing & Processing	12,220	-0.8	924	6.2
	Textile Sales	8,933	4.5	459	3.7
Tokai Senko	Dyeing & Processing	10,542	-4.5	442	-32.8
	Textile Product Sales	500	-17.6	15	—
Sotoh	Dyeing & Processing	7,009	-4.2	-153	—
	Textiles	3,683	8.8	-65	—
Soko Seiren	Textiles	2,439	-14.5	-291	—

Note: (1) The segment profits of Polyester Fibers & Trading and Retail Group in Teijin's Materials Business are not announced.

(2) Kuraray's business performance is for the period from January to December 2019.

(3) Nisshinbo Holdings figures for the period from January to December 2019 due to December settlement.

* Mitsubishi Chemical Holdings is not listed due to different accounting standards.

improved, but operating profits declined due to lower sales as well as higher selling, general and administrative expenses. As for its Fibers and Textiles business, business was stagnant in materials for sportswear, women's wear and beddings as well as polyester staple fibers, resulting in segment losses. In its nonwovens business, business was sluggish both for spunbonded and spunlaced fabrics.

Kuraray Co., Ltd., whose fiscal year ends in December, announced its business results for January-March 2020. Net sales decreased by 3.3% compared to the first quarter of the previous fiscal year to 136,927 million yen, and operating profits dropped 18.2% to 11,971 million yen, but net profits increased by 10.2% to 6,705 million yen, with the disappearance of the impairment losses of 3.3 billion yen in the previous fiscal year.

Cotton Spinners & Textile Makers **Severely Slumping Textile Business**

According to the consolidated business performance of Japanese cotton textile manufacturers during the fiscal year ending on March 31, 2020, Daiwabo Holdings Co., Ltd. achieved record high figures on a corporate-wide basis thanks to robust IT infrastructure distribution business. Fujibo Holdings, Inc. also increased its net sales and profits up to the ordinary profit stage driven by its Polishing Pad and Chemical Industrial Products businesses. However, the textile business of all of the manufacturers posted sales decreases, and four of them had operating losses, making the slump of business even worse. During the fourth quarter of the fiscal year (January-March 2020), the stagnation of economic activities caused by the spread of coronavirus was also a blow to business.

The Fibers and Textiles business of Daiwabo Holdings posted decreases

in sales and profits, but the decreases can be said to have been relatively slighter. In the synthetic fiber/rayon division, sales for application in cosmetics were sluggish, but those for disinfectant- and antiperspirant-related products increased. In industrial materials, functional materials such as for buildings were strong, but tents and heavyweight cloths were stagnant. Apparel business suffered from a decline in inbound demand and a warm winter.

Despite the fact that the Textiles business of Fujibo Holdings maintained profitability, sales and profits fell significantly. Although its main innerwear business showed an expansion of online sales, business was affected by the reduction of apparel sales areas at department stores and mass merchandisers and intensifying competition with private brands. In the sales of yarns and fabrics, the company made efforts to withdraw from products having low profitability. The impact of the coronavirus toward the end of the fiscal year also made the slump in demand even worse.

At Kurabo Industries Ltd., the Textiles segment posted an increase in operating losses. Yarns for application in uniforms and casual wear suffered from weak market conditions. Its subsidiaries in Thailand and China suffered from stagnant orders due to foreign exchange factors, etc.

The Textiles business of Shikibo Ltd. also increased its operating losses. The sales of fabrics for Middle East traditional garments were favorable thanks to a recovery of market conditions, and sales of yarns produced in Vietnam and Indonesia were also firm. However, uniform fabrics suffered from an increase in distribution inventories. Sales of knitted products also suffered from the sluggish sales of business partners. Business from February was hit by delays in overseas production and a drop in demand caused by the coronavirus.

At Omikenshi Co., Ltd., the

Textiles business fell into the red. The company was slow in passing on the increases in material and fuel costs, and sales also declined due to the slumping apparel market.

The Textiles business of Nittobo Boseki Co., Ltd. also posted operating losses, but the losses were smaller than the previous fiscal year. In its main interlining business, profitability improved due to the sale of its Chinese subsidiary and the transfer of production to Japan.

Overall, as the slump in their textile business became more serious, the companies are compelled to undertake drastic reforms in the current fiscal year. In addition, the impact of the economic downturn caused by the coronavirus is expected to appear in full scale and make the business environment even more severe. The companies will be required to steer their business through these difficulties in the current fiscal year.

Dyers & Processors **Only One Company Increases Sales**

The consolidated business performance of Japanese dyeing and processing companies during the fiscal year ending on March 31, 2020 was affected by the coronavirus pandemic in addition to sluggish apparel consumption due to a warm winter and slumping automobile market caused by trade friction between the U.S. and China. Net sales decreased for five companies. Net profits declined for four companies, among which Tokai Senko K.K., Sotoh Corporation and Soko Seiren Co., Ltd. fell into the red.

Seiren Co., Ltd. reported decreases in operating and ordinary profits, but its net profits reached an all-time high thanks to decreases in extraordinary losses and tax-related expenditures compared to the previous fiscal year.

The Automotive Interior segment posted decreases in sales and profits in Japan, and a decrease in sales but

an increase in profits overseas. The overseas environment was severe as the number of automobiles sold decreased in several Asian countries. However, the Mexican plant, which the company worked on expanding its production capacity in the previous year, turned profitable from the first quarter. In the High Fashion segment, sales and profits declined, and attention was focused on the Viscotecs system, which manufactures sophisticated products without stocks, and differentiated sportswear materials were also vigorous.

Komatsu Matere Co., Ltd. posted its first decrease in net sales in three fiscal years, and the first decrease in operating profits in six fiscal years. The coronavirus affected its sales by 2,000 million yen and operating profits by 600 million yen, as the company voluntarily suspended business for two weeks to prevent the spread of infection.

In its Textiles segment, sales of apparel fabrics decreased by 2.1% from the previous fiscal year. Although sales of fabrics for traditional garments were strong, overseas sales of sportswear and uniform fabrics decreased. Sales of fashion fabrics were firm in the Japanese market and toward European luxury brands, but decreased for the European upper middle zone. Sales of industrial materials declined by 4.6%; building materials grew and medical care and welfare applications were almost as planned, but sales of vehicle and home-related materials declined.

Sakai Ovex Co., Ltd. reported a sales increase; although its Dyeing and Processing business posted a sales decrease, sales of textiles increased, and business in control equipment also expanded. Operating profits increased thanks to lower manufacturing costs. Ordinary profits declined due to a decrease in investment income with the equity method, but net profits exceeded the previous fiscal year.

The Dyeing and Processing

business was strong for sportswear and automotive-related materials, but was weak for uniforms and overseas women's wear. The Textile Sales segment achieved increases in sales and profits. In textiles, applications in uniforms were strong. In apparel, main OEM operations toward mass merchandisers were severe, so the company made efforts to develop ODM operations and new sales channels.

Tokai Senko reported that its net sales decreased for the fourth consecutive fiscal year and a decline in profits for the third consecutive fiscal year. The decrease in profits was mainly attributable to the decrease in sales and profits at the main unit in Japan and dyeing subsidiary in Indonesia. The Thai dyeing subsidiary achieved higher sales and reduced losses.

In its Dyeing and Processing business, the company endeavored for the revision of processing charges, improvement of trading conditions, development of new products and cost reductions, but sales and profits decreased as worsening market conditions reduced orders along with the impact of the coronavirus. As orders for the processing of knitted goods continued to decrease, impairment losses of 670 million yen were recorded for the fixed assets of the Gifu plant, and early retirement was promoted with the consolidation of knitted fabric printing business in Hamamatsu.

Sotoh reported a slight decrease in net sales, and profits decreased in all stages. Its Dyeing and Processing business was greatly affected by the warm winter, and sales from dyeing and processing woven fabrics decreased by 4.5% compared to the previous fiscal year to 3,735 million yen, and those for knitted fabrics declined by 3.7% to 3,273 million yen. The Textiles segment succeeded in reducing its losses by increasing sales. New businesses contributed to its business performance, despite a decrease in orders due to the

adjustment of inventories of fall/winter goods and higher material costs.

Soko Seiren reduced its operating losses and ordinary losses, but net profits amounted to 130 million yen, as compared with net profits of 290 million yen in the previous fiscal year. Its Textiles business posted a sales decrease, but segment losses were reduced. In apparel applications, composite products and synthetic fiber outerwear were strong, and in industrial materials, high-performance textile product-related business was also vigorous. Vehicle material-related business posted a decrease in sales due to the transfer of its Mexican subsidiary.

Trading Firms Decreases in Textile & Apparel Sales

The textile and apparel business of Japanese trading firms during the fiscal year ending in March 2020 remarkably differed from their strong business performance in the previous fiscal year, with sales decreasing for all firms except for Toyobo STC Co., Ltd.

The trading firms also suffered in terms of profits as a whole. In addition to slumping retail sales of apparel, the hike of consumption taxes last fall made matters even worse. In some cases, the spreading coronavirus caused delays in deliveries.

Itochu Corporation, the largest among these trading firms, reported declines in net sales and profits, as its business deteriorated due to poor sales in apparel-related businesses caused by the warm winter and coronavirus. Business in textile materials were also sluggish.

Nippon Steel Trading Corporation reported that the sales environment of its Textiles business remained harsh, with a change in the scope of consolidation due to the sales of shares of subsidiaries, the hike of consumption taxes, record

Fiscal Business Performance

warm weather temperatures and coronavirus. Meanwhile, profits increased owing primarily to the improvement of losses as a result of strengthening small-lot quick-delivery production operations.

Yagi & Co., Ltd. maintained about the same performance in overall business as well as in its textile and apparel businesses, with net sales declining slightly by 0.4%. Its business in textile materials and fabrics continued to suffer. Cotton yarns considerably suffered as operations decreased in several fabric production districts. In synthetic fiber yarns, sales of textured yarns and yarn reserves were favorable, but high value-added yarns suffered from production delays. Sales of finished products remained strong centering on workwear-related products, which pushed up overall sales.

Chori Co., Ltd. posted a 4.7% decrease in net sales, but gross trading profits increased by 1.2% and operating profits by 16.1%, thanks to profit improvement efforts made in its product OEM business. As domestic consumption showed no recovery, the Japanese market remained in a generally stagnant condition. Meanwhile, the sector of overseas materials was bullish, and the domestic apparel sector improved its profitability.

Tamurakoma & Co., Ltd. reported that its apparel material business made strenuous efforts and posted a sales decrease of only 0.3%, but apparel sales decreased by 6.6%. However, the sales of materials for beddings and interior goods decreased by 7.6%, and sales of finished bedding and interior products declined by 5.6%. Sales of

materials for household goods also decreased by 3%, along with sales of finished household goods by 9%.

Sankyo Seiko Co., Ltd. posted a sharp decrease in net sales, and business fell into the red, as the company promoted a withdrawal from unprofitable stores in Hong Kong and Japan.

Toray International, Inc. reported that the slowdown of the global economy and the spread of coronavirus resulted in a double-digit decrease in operating profits. Sales of apparel materials and apparel decreased by 6.6% to 297,580 million yen. Sales of fibers, textiles and apparel decreased, while those of industrial materials and general merchandise increased by 9.6% to 57.1 billion yen. In industrial materials, automotive applications were dull, but trade in cotton was

Textile & Apparel Business of Trading Firms, April 1, 2019 to March 31, 2020

(million yen)

	Net Sales	Y-o-Y Change (%)	Gross Trading Profits	Y-o-Y Change (%)	Operating Profits	Y-o-Y Change (%)	Net Profits	Y-o-Y Change (%)
General trading houses & specialty trading firms (consolidated)								
Itochu (IFRS) ¹	537,445	-9.5	107,462	-9.6	12,483	-50.1	9,082	-69.5
Teijin Frontier ^{2,4}	306,300	-3.8	—	—	—	—	—	—
Toyota Tsusho ⁴	192,300	-16.9	17,626	3.7	—	—	—	—
Nippon Steel ³	130,048	-13.8	18,616	-13.2	4,695	6.0	—	—
Yagi	118,475	-0.4	18,190	13.1	2,348	-21.9	1,009	-39.3
Chori ⁴	114,500	-4.7	15,000	1.2	4,300	16.1	—	—
GSI Creos	89,782	-18.2	—	—	529	-44.2	—	—
Tamurakoma ⁵	84,099	-5.5	—	—	—	—	—	—
Sumitomo	66,806	-8.4	12,069	-6.9	1,796	-6.1	2,601	-37.3
Sankyo Seiko ⁶	21,131	-16.3	—	—	-263	—	—	—
Maker-affiliated trading firms (non-consolidated)								
Toray International	599,359	-9.6	—	—	12,422	-11.6	11,186	-6.4
Textiles & apparel ⁷	297,580	-6.6	—	—	—	—	—	—
Kuraray Trading ⁸	129,324	-6.0	—	—	3,829	1.4	2,836	3.0
Textiles & apparel	45,392	-0.8	—	—	1,809	5.6	—	—
Asahi Kasei Advance ⁹	120,900	-4.1	—	—	1,600	-14.4	—	—
Textiles & apparel	56,300	-5.1	—	—	800	-26.9	—	—
Toyobo STC	84,863	0.5	—	—	1,698	3.2	—	—
Textiles & apparel	28,076	-1.7	—	—	—	—	—	—
Unitika Trading ⁹	36,200	-7.0	—	—	100	-85.0	50	91.0

Notes:

- The sales of Itochu are earnings from external customers.
- The net sales of Teijin Frontier are Teijin Group's fiber and products converting business.
- The operating profits of Nippon Steel are ordinary profits.
- The net sales of Teijin Frontier and Toyota Tsusho and the figures of Chori were announced in the unit of 100 million yen.
- Tamurakoma's figures are the total of apparel, livingware and lifestyle-related businesses.
- Sankyo Seiko's figures are total of fashion- and textile-related businesses.
- The net sales of textiles and apparel of Toray International are the total of apparel materials, industrial materials, general merchandise and apparel.
- Kuraray Trading's figures are for the period from January to December 2019.
- The business performance of Asahi Kasei Advance and Unitika Trading were announced in the unit of 100 million yen.

bullish. Sales of apparel materials decreased by 7.2% to 66 billion yen. Fibers for apparel applications suffered from stagnant Japanese market conditions. Sales of apparel dropped 10.7% to 174.4 billion yen, as the dull sales situation of customers resulted in a decrease in incoming orders.

Teijin Frontier Co., Ltd. reported that its industrial textile business was vigorous, while apparel textile business suffered setbacks, as global business was impacted by U.S.-China trade friction and other factors. In apparel textile business, the global economic slowdown affected Japanese production of sportswear fabrics. Business in winter garments and men's suits suffered from the hike of Japanese consumption taxes from October 2019 and unseasonable weather. In industrial textiles, business was favorable for infrastructure-related materials with new construction and extensions of expressways.

Asahi Kasei Advance Corporation reported poor business in the segments of Apparel Materials & Products, Plastics Materials & Products and Chemicals, and their sales and profits decreased compared to the previous fiscal year. Sales increased for sportswear and industrial materials, but were stagnant for innerwear, outerwear and linings. Its subsidiaries in Thailand and Shanghai posted sales of 5.8 billion yen and operating profits of 200 million yen. Both sales and profits decreased in China and Thailand.

Kuraray Trading Co., Ltd. reported that net sales decreased as the business segment of Resin and Chemical Products suffered setbacks, while the Apparel, Textile and Yarn segment secured profits with operating profits reaching the same level as the previous fiscal year. Apparel posted a sales increase, and profits remained about the same as the previous fiscal year. Industrial textiles marked a decrease in sales

but an increase in profits. While the sales of yarns were about the same, Mintval water-soluble filaments moved vigorously for application in towels and denims, achieving a 50% increase in sales. In industrial textiles, product sales of household materials were bullish. Meanwhile, sales of Clarino artificial leather were sluggish as application in shoes encountered difficulties.

Toyobo STC Co., Ltd. reported that its Fibers and Textiles business segment posted a sales decrease. The Uniform Business Department enjoyed active corporate bespoke orders, and the Textile Department reported that the sales volume of thobe fabrics turned upward with a recovery of market conditions. The Sports Apparel Department was affected by the transfer of some of its product business to related subsidiaries. The Inner Wear Textile Department posted a sales decrease as sales to private label apparel specialty stores suffered setbacks.

Unitika Trading Co., Ltd. reported that its Textile and Apparel business segment succeeded in expanding sales of Terramac bio-based materials, but sportswear and women's wear suffered setbacks. Exports of denims were also at a low level. Favorable uniform business also began to worsen. Apparel production adjustments centering on workwear applications had an impact on business. Sales of agricultural materials and films were also stagnant.

Sporting Goods Makers Goldwin Rises to Fourth Place in Sales

According to the consolidated business performance of major Japanese sporting goods makers for the fiscal year ending in March 2020, Goldwin Inc. reported unprecedented business results, while the spread of the coronavirus had a remarkable impact on their business in the latter half of the fiscal year, with five of the companies reporting declines in profits.

Mizuno Corporation reported decreases in sales and operating profits for its business in Japan, while its business in Europe posted a slight sales increase and an increase in profits. Business in the Americas achieved an increase in sales and a sharp increase in profits, while business in Asia and Oceania suffered decreases in sales and profits. In Japan, sports facility service business and work category were brisk, while sports goods sales suffered setbacks. In the Americas, operating profits increased to 810 million yen from 150 million yen in the previous fiscal year.

Descente Ltd. reported that its major business operations in Korea suffered a 19.8% (14.2 billion yen) decrease in sales year-on-year. With extraordinary losses of over 1.8 billion yen, it was the first net losses since the fiscal year ending in March 2002. Sales in China (excluding Hong Kong, Taiwan and Macao) increased significantly by 5.8 billion yen, driven by the 80% sales increase in Descente

Consolidated Business of Sporting Goods Makers, April 1, 2019 to March 31, 2020

(million yen)

	Net Sales	Y-o-Y Change (%)	Operating Profits	Y-o-Y Change (%)	Net Profits	Y-o-Y Change (%)
Mizuno	169,742	-4.7	6,263	-17.8	4,625	-23.0
Descente	124,561	-12.6	379	-95.2	-2,481	—
Globeride	97,899	15.3	17,480	47.4	10,770	16.5
Goldwin	88,258	0.5	3,613	-5.4	1,123	-62.0
Yonex	61,967	1.4	2,421	-2.5	1,652	-4.1
Zett	41,854	-1.2	334	-40.4	209	-70.6
Asics ⁽¹⁾	378,250	-2.2	10,634	1.1	7,097	—
SSK ⁽²⁾	52,742	0.7	535	-48.4	678	-19.0

Note: (1) Asics is consolidated figures for the period from January to December 2019.

(2) SSK is non-consolidated figures for fiscal year ending July 2019.

Fiscal Business Performance

brand products in local currency and vigorous business operations in China.

Goldwin Inc. reported its outdoor business including The North Face brand maintained a double-digit growth, and accounted for 79.6% of total sales. In athletic wear, poor business in the Ellesse brand were covered by booming sales of Canterbury garments thanks to the Rugby World Cup. In fiscal 2018, Goldwin ranked fifth in the industry with sales of 84,934 million yen, following Globberide, Inc. with sales of 87,811 million yen, but in fiscal 2019, Goldwin overtook Globberide to rise to fourth as its sales rose 15.3% to 97,899 million yen.

Globberide drastically reduced its net profits as the previous fiscal year included a 1.7-billion-yen gain on sales of investment securities. By region, Japan and Europe posted decreases both in sales and profits, while the Americas achieved increases in sales and profits, and Asia and Oceania ended the fiscal year with an increase in sales but a decrease in profits.

Yonex Co., Ltd. posted a decline in operating profits due to an increase in SG&A expenses from upfront investments. By region, Japan marked a slight decrease in sales but profits decreased drastically, while North America and Europe had operating losses. Asia performed well, achieving a 59.1% increase in sales.

Zett Corporation reported a slight decrease in wholesale sales, a sharp sales decrease in manufacturing

operations and a slight increase in retail sales. Although the gross profit margin improved 0.1 percentage point, an increase in SG&A expenses resulted in a decrease in operating profits.

Asics Corporation, whose fiscal year ends in December, announced its results for the January-March 2020 period. According to the company, its first-quarter sales dropped 13.5% to 85,341 million yen with operating, ordinary and net losses.

Interior Suppliers Sales & Profits Increase for All Three Companies

The consolidated financial results of three listed Japanese interior supplies companies for the fiscal year ending in March 2020 indicated increases both in sales and profits for all three of them.

The construction industry, which is closely related to the interior supplies business, has been strong since the beginning of this year, and this contributed to their business performance, although the effects of the coronavirus had an impact on the domestic economy.

While the number of new housing starts has been declining, business involving large-scale redevelopment projects mainly in urban areas and non-residential facilities, such as accommodation facilities, has remained firm.

Maintaining this momentum during January-March 2020, the coronavirus had a minor impact on their business, thanks to the firmness

of the construction industry.

Sangetsu Corporation reported that its Interior Business gained higher sales and profits. Sales increased for wallcoverings (up 5.3% year-on-year), flooring materials (up 3.7%), and fabrics including curtains and upholstery (up 1.8%). Segment profits were 54.2% higher. Earnings were boosted by the effects of price increases for wallpaper, flooring and curtains by 15-20% from the orders received from October 1, 2018.

However, net profits decreased by 60.0%. The performance of Koroseal Interior Products Holdings, Inc., a U.S. subsidiary that manufactures and sells wallpaper, fell short of expectations and recorded impairment losses exceeding 5.9 billion yen on goodwill and intangible assets.

Toli Corporation reported that its Product Business achieved increased sales and profits. Sales were up 4.6%, with PVC flooring, carpets, curtains and wallcoverings all surpassing the previous fiscal year. Segment profits increased by 15.4% thanks to efforts to reduce manufacturing costs. Meanwhile, overseas sales were down 8.4% on a non-consolidated basis due to sluggish sales of carpet tiles to China and ASEAN.

According to Toso Co., Ltd., its interior decoration-related business achieved increased sales and profits. The acquisition of properties centering on lodging facilities boosted its business results. Efforts to reduce cost and improve productivity contributed to the increase in profits.

Consolidated Business of Interior Suppliers, April 1, 2019 to March 31, 2020

(million yen)

	Net Sales	Y-o-Y Change (%)	Operating Profits	Y-o-Y Change (%)	Net Profits	Y-o-Y Change (%)	Core Business			
							Net Sales	Y-o-Y Change (%)	Segment Profits	Y-o-Y Change (%)
Sangetsu	161,265	0.5	9,268	57.2	1,432	-60.0	125,381 ⁽¹⁾	5.2	9,518 ⁽¹⁾	54.2
Toli	94,701	4.8	2,382	19.7	2,059	53.1	33,141 ⁽²⁾	5.4	1,651 ⁽²⁾	15.5
Toso	22,687	0.2	900	30.9	583	31.0	22,332 ⁽³⁾	0.3	891 ⁽³⁾	31.9
Suminoe Textile	70,889	-3.9	1,226	-38.7	268	11.0	24,756 ⁽¹⁾	-0.1	191 ⁽¹⁾	—
Lilycolor	8,575	-7.2	-10	—	-28	—	7,009 ⁽¹⁾	-3.4	48 ⁽¹⁾	-74.0

Notes: Suminoe Textile is consolidated figures for the period from June 2019 to February 2020.

Lilycolor is non-consolidated figures for the period from January to March 2020.

(1) Interior product-related business

(2) Product business

(3) Interior decoration-related business

Going Even Greener

Gama Recycle Is Set to Take Global Recycling to the Next Level

Business growth and environmentalism rarely go hand in hand. For some, the two ideas are diametrically opposed, forcing companies to take an either/or approach. One of the global recycling pioneers, Gama Recycle, however, has spent the last two decades spinning other people's waste materials into a new kind of gold – regenerated yarns and fibers. Oerlikon Manmade Fibers had the opportunity to discuss with Zafer Kaplan, founder of Gama Recycle, the current state-of-the-art in recycling, and catch a glimpse of how the company is planning to ramp up production with an upcoming staple fiber plant from Oerlikon Neumag.



Gama Recycle founder Zafer Kaplan has been establishing sustainable processes for more than twenty years

Gama Recycle both recycles textiles and uses R-PET bottle flakes in production. How did this develop, and why did you commit yourself to recycling?

Kaplan: We have been in business since 1997. From the very beginning, we have been producing recycled items. We gained a reputation for recycling textiles, as well as some plastics, so five years ago we even changed our name to Gama Recycle. To be honest, it was both environmentally and financially relevant at the time. There were huge amounts of plastics and textiles waiting to be reused. One of the most complicated aspects, though, was actually collecting all the materials.

What special considerations are required to produce regenerated yarns and fibers?

Kaplan: In the beginning, producing regenerated fibers and yarns was not a high priority for most people. Most countries and companies were not particularly sensitive to environmental issues. A lot of the cutting waste from the garment and textile industries was simply thrown away as trash or sent to be incinerated. It was not valuable to actually take care of these leftover materials.

As a result, we developed some ideas to turn these 'unusable' materials into regenerated fibers and yarns for several industrial use cases. We already have 18 patents for recycled products, machines and equipment, with 10 more currently under review. Today, most garment makers have started to sort and sell their leftover cutting materials, instead of simply throwing them into the garbage.

This is a huge improvement, because there were also only a few machinery manufacturers on the market when we started recycling textiles, and most of the time we had to convert or modify our machines to make it suitable for recycling processes. Today, many companies are focusing on recycling machinery, and this has helped encourage a lot of growth in the whole industry as well.

What do you recycle, and which polymers are these materials made of?

Kaplan: We recycle pre-consumer cuttings or industrial waste as well as postconsumer garments, PET bottles, PET trays and other PET-based packaging materials or consumer products. We also have several patents for recycling used or worn garments into recycled cotton and polyester fibers.

In what condition do you purchase your raw materials, and which steps of the process do you handle internally?

Kaplan: Sourcing is the most crucial and complicated part of our work. We purchase waste (raw materials) from all over the world. We have several standards for raw materials, but unfortunately sometimes this does not

match up with the specifications of what you actually buy.

You will also use a staple fiber plant from Oerlikon Neumag in your production. What makes this plant technology so interesting for your process?

Kaplan: Recycled fibers have huge market potentials. End-users are looking for environment-friendly products, but they won't compromise on the quality of the products they buy. This is why we prefer to use the Neumag fiber line. We are able to control the whole process in a very efficient way, with a consistently high quality of fibers as well as less production waste.

The preparation of recycling materials is a bit more complex. It seems that producing yarns and fibers from recycled materials is really profitable compared to virgin materials. Or was your decision motivated more by idealism?

Kaplan: Yes, it is more profitable in most of cases, but also riskier and more complicated as well. You need a lot of knowhow and experience, good machinery and equipment; otherwise, it will be a huge loss. While we do run a business, we are of course proud to do our part for sustainability and the environment by extending natural resources for future generations.

For example, we have developed a new patented fiber called Curpocel that is made of rPET polymer. Its touch, drape, stretch, recovery, etc. are not comparable to any other synthetic fiber. It is almost like cellulosic fibers such as modal or lyocell. We sell it as a fabric which is created with recycling processes. We even offer to buy cutting waste from our customers, as well as postconsumer garments. That is how we take sustainability into consideration. We believe this will help other people to follow suit.

Italian Textile Machinery Posts Sharp Decline in Q1

The order intake for Italian textile machinery registered a sharp drop in the first quarter of this year, as the COVID-19 pandemic had a heavy impact on the sector. The situation of orders is expected to be more negative in the second quarter.

The index of order intake for textile machines, as drawn up by ACIMIT (the Association of Italian Textile Machinery Manufacturers), fell 31% for the period from January to March 2020 compared to the same quarter of 2019. The index value stood at 72.2 basis points (2015 = 100).

The order intake was negative both for foreign markets and Italy. Orders for foreign markets dropped 26% compared to the first quarter of 2019, while those for the domestic market fell 57%.

ACIMIT President Alessandro Zucchi says, "The orders index sank compared to 2019, a year already negative. Indeed in 2019, the Italian textile machinery industry observed a decrease both in production (down 13%) and exports (down 14%) compared to the previous year."

Following a difficult year, the Italian textile machinery industry had to face the COVID-19 pandemic, which led to a slowdown in the main markets of China, Turkey and India during the first month of 2020.

Fujian Billion Kicks Off Industrial Yarn Production

From the end of this year, the southern Chinese yarn manufacturer, Fujian Billion Polymerization Technology Industrial Co., Ltd. will be producing industrial yarns using systems supplied by Oerlikon Barmag.



The new Oerlikon Barmag systems at Fujian Billion will also be used to manufacture yarns for the automotive sector

With this, the company, which is considered to be the largest polyester yarn manufacturer in southern China, is now also entering the industrial yarn market.

With 124 positions and a capacity of around 250,000 ton/year, this project is the largest single industrial yarn order placed with Oerlikon Barmag to date. And with this order, Fujian Billion instantly positions itself as one of the ten largest industrial yarn producers in China.

"The systems at Fujian Billion come with our latest draw unit design, which has been optimized for use with Oerlikon Barmag automation solutions," comments Roy Dolmans, Head of Development for the Industrial Yarn Process. As a result, the newcomer in the industrial yarn sector is now superbly equipped for the future.

Located in Fujian Province, Fujian Billion will be predominantly manufacturing high-tenacity (HT) and low-shrinkage (LS) yarns from the end of this year. These sophisticated yarns will be used both in the automotive, geotextile and safety sectors (HT yarns) and for the manufacture of coated industrial textiles, such as truck tarpaulins and tents (LS yarns).

Founded in Jinjiang, Quanzhou in 2003, Fujian Billion is one of the top 500 privately owned enterprises in China. The yarn manufacturer annually produces around 2.8 million tons of filament yarns and ethylene-propylene side-by-side (ES) fibers.

Oerlikon Nonwoven Sells First Meltblown Plant to Australia

Queensland company OZ Health Plus has purchased a plant from the Swiss-based technology company Oerlikon for producing

spunbonded fabrics and meltblown nonwovens. It will be Australia's first manufacturing plant for producing critical fine plastic materials used in most protective face masks.

Oerlikon's Germany-based business unit, Oerlikon Non-

woven will supply specialized machinery for the plant, which is scheduled to commence operations next April, with a second stage planned for late 2021.

The plant can produce meltblown fabrics for 500 million masks per year, along with other medical and non-medical grade products, filtration products, sanitary items, antiseptic wipes and more.

The new OZ Health Plus plant will take up 15,000 square meters of manufacturing space, and will employ 100 full-time roles once the second stage of the project is complete.

Stoll Now a Member of Karl Mayer Group

The merger of Karl Mayer and Stoll was officially completed on July 1st.

With roughly 1,000 employees, Stoll will continue its activities within the Karl Mayer Group as an autonomous business unit. The brand will be carried on independently, and represents Karl Mayer's expertise in the field of flat knitting technology. Karl Mayer also relies on Stoll's proven management. The previous CEO, Andreas Schellhammer, will become President of the Stoll business unit.

Machine developments can completely use new technological principles and also optimization of details, such as concerning operation. For the development of new textiles, customers can rely on broad, cross-sector expertise, and can benefit from the group's entire textile-technological knowhow in the fields of warp knitting and flat knitting with an even increased application-oriented focus. The customer contact persons remain the same.

One of the main aims in production is to increase value addition for greater knowhow protection, flexibility and rapid delivery. Components from their own production will be used groupwide, if possible, and the manufacture of the Stoll machines in China will be integrated into Karl Mayer's location in Changzhou. With a surface area of 90,000 square meters and modern factory halls, the Chinese plant offers the perfect conditions for continuing Stoll's high-quality production.

Kingsway Expanding Capacity with Oerlikon Barmag Systems

Chinese industrial yarn manufacturer Zhejiang Kingsway High-Tech Fiber Co., Ltd. is expanding its production capacities by a further 40,000 ton/year with five Oerlikon Barmag lines.

Kingsway is already successfully manufacturing special high-quality yarns, exclusively deploying Oerlikon Barmag industrial yarn systems.

The 21 new spinning positions will be used to manufacture a broad product range. In addition to super-low-shrinkage (SLS) and high-tenacity (HT) yarns, the business also plans to produce automotive yarns for seat belts and airbags. This flexibility is made possible as a result of the Oerlikon Barmag systems' configuration. The new systems are expected to commence manufacturing next year.

New Projects for WeftMaster Falcon-i in China and Taiwan

Loepfe Brothers Ltd. is increasing its backing of the electronics industry. The latest projects in China and Taiwan underline the importance of reliable quality control of demanding technical fabrics. Loepfe's unique WeftMaster Falcon-i will be integrated into two of the world's largest manufacturing lines of printed circuit boards (PCBs).

One of the world's largest manufacturers of PCBs and other technical glass fabrics, operating several plants in China and Taiwan, occasionally experienced the tiniest unevenness on the surface of its PCB boards. Particular defects originated from exactly that woven glass fabric, eventually caused by minute filamentation of the yarn and the slightest fluff accumulation during the weaving process. By using Falcon-i optical sensors to monitor the weft insertion during the weaving process, such tiny yet costly defects could easily and reliably be eliminated.

In order to detect even the tiniest yarn irregularities, Falcon-i offers extensive sensitivity levels, allowing customers to fine-tune the ratio of machine stoppages caused by necessary quality control stops. Any manufacturer of demanding technical fabrics and composite textiles used in

applications such as PCB manufacturing, automotive, architecture, filtration, aeronautics, medical and the carbon industry can highly benefit from this type of versatile quality monitoring sensor. The implementation of Falcon-i optical yarn defect sensors in the quality control of any running yarn throughout the manufacturing process of fabrics is simple and easy.

Monforts Denim Mills Move Hemp into the Mainstream

At the second Kingpins24 virtual denim show, the sustainable benefits of hemp fiber were referenced by many Monforts machine-using customers who are now including this fiber in their collections, including AGI Denim, Artistic Milliners, Black Peony, Calik, Cone Denim, Naveena Denim Mills (NDM) and Orta.

"Hemp is an easy to grow fiber which requires no irrigation, no fertilizers, no herbicides and no chemicals," says Allan Little, Director of Product Development for Cone Denim, which has recently launched its Sweet Leaf collection featuring the fiber. "Significantly, it also uses fifty percent or even less water than cotton in cultivation."

"It can also bring some new aesthetics to denim too," he adds. "Hemp has a unique color and adds a different cast to our indigo, the drape and texture of the fabrics are different, and it even adds a bit of a unique hand, so combined with its sustainable credentials we are proud to be bringing the Sweet Leaf collection to the market."

Cone is currently sourcing its hemp from France, but with much of its manufacturing now in Mexico, and with the introduction of the U.S. Farm Bill in 2018 which legalized the growing of legal hemp, the company is exploring the possibility of investing in the U.S. supply chain.

"With U.S. hemp we're really at the R&D phase," Little emphasizes. "It's a

unique crop, so coming up with the right stalk to provide the right fiber is challenging. We've experimented with different types of seeds and various methods of decortication."

Decortication, he explains, is the mechanical removal of the outside layer of the hemp stalk to reach the useable fiber on the inside. A second process, cottonization, is necessary to make the fiber suitable for spinning, because compared to cotton, hemp is longer, stiffer and less flexible.

At the end of 2019, NDM, headquartered in Karachi, introduced fabrics featuring up to 51% hemp content in blends with Tencel and recycled polyester, and this year has developed the first 100% hemp denims.

Monforts has a dominant position in the field of denim finishing with its well proven Montex stenters. The company has been enjoying further recent success with its Eco Line concept based on two key technology advances – the Eco Applicator and the Thermo Stretch.

The latest Monforts innovation for denim is the CYD yarn-dyeing system, which is based on the effective and established dyeing process for denim fabrics that is now being applied for yarn dyeing.

Andritz to Supply Spunlace Line to Eruslu Nonwoven Group, Turkey

Andritz has received an order from the Eruslu Nonwoven Group for a complete neXline spunlace line to be installed at its plant located in Gaziantep, Turkey.



Cone Denim Sweet Leaf jeans (photo courtesy of Cone)

The line has a production capacity of 18,000 ton/year, and is scheduled for installation and start-up at the beginning of 2021.

This new spunlace eXcelle line will be able to process a wide range of fibers including polyester, viscose, lyocell and bleached cotton, with grammages from 30 up to 75 gsm. It will produce high-quality wet wipes for cosmetics applications, fem care, baby diapers, dust wipes, hair dressing towels, medical bandages, gauzes and many other products. The new line will enable Eruslu to diversify its product portfolio into new technical applications.

Andritz will deliver a complete line from web forming to drying, including: one complete set of Laroche opening and blending machinery; two inline high-speed TT cards; one JetlaceEssentiel unit, which is the benchmark for hydroentanglement processes, including an Andritz full filtration unit; one neXdry double drum through-air dryer; and one neXecodry S1 system for energy saving.

COVID-19 Hits Rieter's H1 Business

Rieter reported that the COVID-19 pandemic led to a market situation where demand for the goods and services of all of its three business groups decreased drastically during January-June 2020.

The business group of Machines & Systems was affected by the deferral by customers of investments and scheduled deliveries. Demand for wear & tear and spare parts sharply declined due to the suspension of production at many spinning mills around the world. This is reflected in the low order intake and sales of the business groups of Components and After Sales. This exceptional market situation gave rise to losses in all three business groups in the first half of 2020.

The group' order intake during January-June 2020 fell 34% from the year before to CHF 250.7 million. The order intake for Business Group Machines & Systems declined by 34% to CHF 129.2 million.

Sales dropped 39% to CHF 254.9 million. The sales of Machines & Systems sharply decreased by 46% to CHF 119.9 million, due to the low order intake in the

first three quarters of the previous year and deferred deliveries. The sales of Components declined by 29% to CHF 87.7 million, and by 34% for After Sales to CHF 47.3 million.

With the exception of Turkey, sales in other regions were affected by the COVID-19 pandemic. January-June 2020 sales in India decreased by 73% to CHF 17.7 million due to lockdowns, along with those in China by 49% to CHF 37.0 million, and Asian countries excluding China, India and Turkey by 47% to CHF 87.4 million. Sales in North and South Americas declined by 44% to CHF 30.9 million, together with sales in Africa by 20% to CHF 7.2 million. Meanwhile, sales in Europe rose 2% to CHF 23.6 million. With sales of CHF 51.1 million, Turkey showed a significant improvement from the previous year's extremely low level of CHF 24.5 million, which is also associated with the innovations that Rieter presented at ITMA 2019 in Barcelona.

Already implemented cost cutting measures contributed to a reduction in Selling, General and Administrative (SG&A) expenses of around CHF 10 million. Nevertheless, the lower volumes resulted in losses of CHF 55.0 million (before restructuring charges: CHF 46.9 million) at the EBIT level, and net losses of CHF 54.4 million.

Tsudakoma Reports Losses in Fiscal H1

Tsudakoma Corp. reported that its consolidated net sales during the first half of the current fiscal year (December 2019 to May 2020) fell 43.2% compared to the year before to 11,548 million yen. Operating losses amounted to 1,530 million yen, as compared with operating profits of 640 million yen in the year before. Net losses totaled 1,850 million yen, as compared with net profits of 451 million yen during the six months between December 2018 and May 2019.

Textile machinery sales dropped 44.2% to 8,951 million yen, with segment losses of 862 million yen, as compared with segment profits of 807 million yen in the year before.

According to the company, the first

quarter showed some signs of improvement as the first-stage agreement on the reduction of additional tariffs between the U.S. and China had a favorable impact, such as the conclusion of contracts with new customers in China. However, the spread of the new coronavirus made it difficult to continue business negotiations, including the main markets of China and India as well as other markets.

China moved to lift restrictions on travelling from April, and consumption in the Chinese market were said to have been recovering, but new capital investments were low, as exports of textiles and apparel to the U.S. and Europe lacked a recovery.

Ernesto Maurer Elected President of Cematex

Ernesto Maurer has been elected President of Cematex, the European Committee of Textile Machinery Manufacturers.

His four-year term of office will cover three major events in the pivotal ITMA series of textile technology exhibitions scheduled for Europe and Asia.

Maurer has been President of the Swiss Textile Machinery Association since 2015, serving during the same period as a member of the Cematex Board of Directors and its 1st Vice-President for the past four years.

Also elected were 1st Vice-President Mikael Åremann (TMAS, Sweden) and 2nd Vice-President Charles Bauduin (Symatex, Belgium).



New CEMATEX President
Ernesto Maurer

Monforts

GtA Gains Sustainable Leadership with New Monforts Montex Wide-Width Lines

Following the successful commissioning of two new Monforts Montex wide-width stenter lines and additional environmental management equipment at its plant in Germany, GtA – Society for Textile Equipment GmbH – is aiming to be the first textile finishing company to become entirely CO₂-neutral in the manufacture of all of its products by 2025.

GtA is a partner company to Germany's large-format digital printing fabric leader, Georg and Otto Friedrich GmbH, which has this year been able to considerably expand its portfolio due to the new Monforts lines.

Headquartered in Gross-Zimmern, close to Frankfurt, Georg and Otto Friedrich and its partners in Germany have an annual production of 37 million square meters of warp knits for a range of end-use applications, including garments, automotive interiors and technical textiles, but increasingly with a concentration on digital printing substrates.

The GtA plant in Neresheim, Baden-Württemberg, was established in 2015. The purpose-built plant on a greenfield site was initially equipped with a fully automated 72-meter-long Monforts installation comprising a washing machine integrated with a 3.6-meter-wide, seven-chamber Montex stenter. The line quickly went from single to double shift production and then to 24/7 operation to meet demand.

Expanded Widths

Building on the success of this installation, GtA has now installed two more Montex stenter lines – both in expanded working widths of 5.6 meters and purpose-built at Montex GmbH in Austria.

A six-chamber Montex unit is combined with a washing machine to guarantee the purity of the substrates, while a five-chamber line is integrated with a wide-width coating machine. This new coating capability at GtA has led to a number of new additions to the Georg and Otto Friedrich DecoTex range for digital printing, including wide-width fabrics with flame-retardant, antimicrobial and non-slip finishes.

The new Montex stenter lines benefit from all of the latest innovations from Monforts, including the Smart Sensor system for optimized maintenance planning of key mechanical wear

components on the stenters. A comprehensive overview of the condition of all parts at any time is now available for operators within the highly intuitive Qualitex visualization software.

With Qualitex, all article-specific settings can be stored, and the formulations for thousands of treatment processes called up again at any time. Individual operators can also personalize their dashboards with the most important machine functions and process parameters.

Environmental Commitment

GtA is run by a seasoned team of textile professionals led by Managing Director Andreas Niess.

"We have received excellent service from Monforts from the outset, and we were happy to place the order for these two new lines as part of our ongoing cooperation," he says. "With all of the latest Monforts advances in technology, we are fully in control of all production and quality parameters with these lines, as part of our significant commitment to innovative environmental technology."

The GtA plant, which operates in near-cleanroom conditions, has also been equipped with proprietary technology to fully exploit the Monforts air-to-air heat recovery systems that are now standard with Montex stenters.

"Around 30% of our investment volume at the site goes to energy-saving measures, and we are sure that this commitment is worthwhile," Niess says. "As an example, our integrated heat recovery system fully exploits the waste heat from the process exhaust air and the burner exhaust gases of the Monforts stenters, allowing us to achieve an exhaust air temperature of between 30°C to 34°C, compared to what would conventionally be between 140°C to 160°C. Another focus has been on exhaust air purification technology and here too, the latest technology has been installed with integrated heat recovery elements."

This, he adds, saves 52% of the energy that would normally be used – equating to 5,800,000 kWh per year. The necessary audits for energy-efficient companies are also carried out annually.

In addition, GtA has purpose-designed the automatic chemical mixing and dosing systems that feed the paddlers for the key treatments that are carried out on the fabrics through the stenters.

The company is going further, however, in its pursuit of clean production and raw materials.

"We want to be an asset and not a burden on our immediate environment and therefore do not use any additives containing solvents," Niess says. "We were the first to use fully halogen-free flame-retardant chemistry, and we use bio-based, finely ground alumina products for the washing process instead of surfactants. PES polyester yarns made from recycled material are also increasingly used, and the latest additions to our raw materials portfolio, the RC-Ocean products, are made from recycled sea plastic.



The five-chamber Monforts line is integrated with a wide-width coating machine

Devan Adds Multivitamin Blend to R-Vital Range for Immunity-Boosting Properties

Devan is launching a new blend in addition to its R-Vital range of active ingredients. The new 'multivitamin' blend consists of vitamin C, vitamin E and ginger, and is developed for immunity-boosting properties.

The new multivitamin blend is part of the R-Vital range, which is a fabric treatment that enables textile manufacturers to boost their textiles with a range of microencapsulated active ingredients. The technology was first launched at Heimtextil in 2018 with active ingredients including Q10, thyme oil, aloe vera and more. The fabric treatment is based on microencapsulation. Active ingredients are encapsulated and applied to the fabric. The treated textiles touch our skin, and the friction causes the microcapsules to break. Then, the active ingredients are absorbed by our skin and transported throughout the body.

Since its launch in 2018, Devan has continuously added new ingredients such as CBD, avocado and echinacea. The company has added a multivitamin blend in response to the COVID-19 pandemic. The blend contains vitamin C, vitamin E and ginger, and is designed for immunity-boosting properties.

A recent study found that dietary supplements such as vitamin C are effective in helping the immune system fight off COVID-19.

Soorty Selects Archroma Technologies for New Denim Collection

As part of its active engagement in the fight against COVID-19, Archroma announced a collaboration with Soorty for the development of the Pakistan-based denim manufacturer's new collection combining eco-advanced colors with hygiene and protection technologies.

The collection will include some of the most advanced of Archroma's technologies, innovations and systems for coloration, hygiene and protection:

- An aniline-free indigo system, Pure Indigo Flow, based on the new Denisol Pure Indigo developed by Archroma to preserve the health of denim workers and aquatic life;
- A water-saving dyeing technology, Advanced Denim, based on innovative dyeing processes used with sulfur-based Diresul RDT blue specialties; and
- An antibacterial treatment based on Sanitized technology and designed to keep the garment odor-free, fresh and germ-free.

The denim collection will be introduced by Soorty under the brand SmartCare+, and will include denim fabric, garments and, coming soon, masks.

Sanitized TecCenter Receives IAC Certification

To ensure responsible use of biocides and international comparability, test methods and test results for antimicrobial treated products must be transparent, useful and comparable. This is precisely why

Sanitized AG, a specialist for antimicrobial material protection and hygiene function in textiles and polymers, had its in-house Microbiology Laboratory in the Sanitized TecCenter certified by IAC, the International Antimicrobial Council. This non-profit, U.S.-based institute aims to increase safety for antimicrobial treated products and for consumers.

Textile and polymer product manufacturers value the assistance that the in-house Sanitized TecCenter provides them with developing and optimizing their products. It supervises technical application aspects, and conducts microbiological tests and analytics, all from a single source. Sanitized provides specific assistance with the textile manufacturer's R&D work, particularly for the demanding challenge of developing the best possible odor-management for textiles. Now the TecCenter has been certified by the IAC, and is a designated "International Antimicrobial Council Certified Laboratory".

Thanks to the IAC Certification, Sanitized now offers innovation expertise according to international standards that are also recognized and valued in the U.S. and Asia.

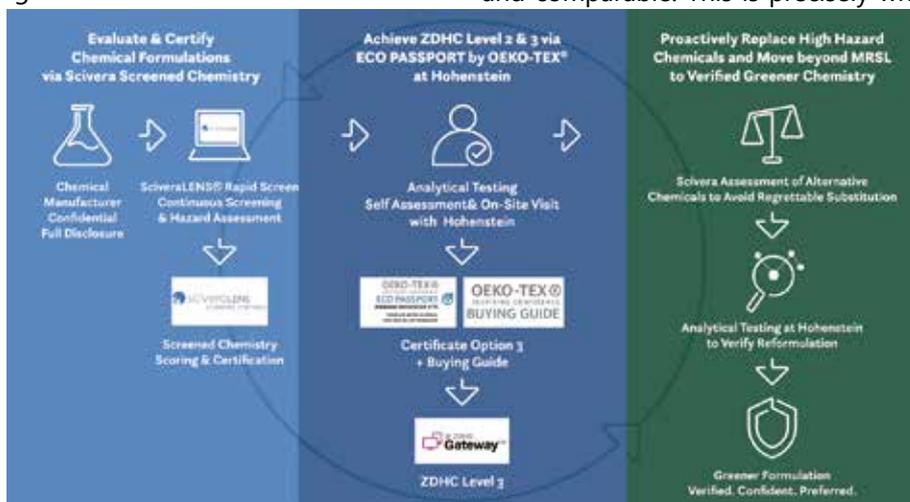
Hohenstein and Scivera Collaborate for Verified, Greener Chemical Formulations

Hohenstein and Scivera have streamlined the process for chemical suppliers to assess and validate preferred chemicals and to proactively improve formulations to ZDHC MRSL conformance level 3 and beyond for apparel, footwear and home textiles.

The collaboration integrates software, certification and analytical testing to enable suppliers to improve and verify greener formulations. Brands taking action to move beyond MRSL compliance, including Levi Strauss & Co., will benefit from meeting ZDHC goals along with verified greener chemistries they can trust.

"Progressive brands and chemical suppliers are showing strong leadership that will positively impact our industry, consumer safety and the environment," John Frazier, Senior Technical Director at Hohenstein, said. "This is a systems approach to achieve then move beyond MRSL compliance to verified, greener chemistry."

Engaging with Hohenstein or Scivera



The Hohenstein-Scivera collaboration uses two powerful systems for best-in-class verification of preferred chemicals with a pathway to move beyond MRSL compliance toward true zero discharge of hazardous chemicals

as their lead service provider, chemical suppliers can take advantage of the streamlined process to meet greener chemistry requirements for a growing number of brands. Formulations certified with Screened Chemistry through Scivera and conforming to ZDHC MRSL level 3 through Eco Passport by Oeko-Tex with Hohenstein can go beyond level 3 by assessing and verifying greener attributes.

"Greener chemistry means formulating and using chemistries that have verified, preferred characteristics to create safer conditions for workers, consumers and the environment. When applied together, the powerful tools offered by Hohenstein and Scivera remove barriers, enable continuous improvement and make greener chemistry attainable," says Scivera President Joe Rinkevich.

Archroma Starts Production of Hand Sanitizers

As part of its active engagement in the fight against COVID-19, Archroma has started bulk production of a new range of hand sanitizers at its Landhi site in Pakistan this May.

The new Kieralon HS range was developed by the R&D team at the Archroma Center of Excellence in Karachi, in line with World Health Organization (WHO) recommendations.

Sanitizers are currently in high demand in Pakistan, such as at hospitals, isolation centers, medical institutes and other healthcare environments, due to the COVID-19 outbreak. The use of sanitizers has also been made mandatory in all factories, offices and public places, driving the demand even higher.

The Kieralon HS range is being produced in different grades and concentrations to eliminate a broad range of germs, bacteria and viruses, to cater for various healthcare and hygiene requirements. They also include emollients and display non-stick and quick drying effect, for skin comfort.

Bureau Veritas Announces Accreditation Extension for Sri Lanka Face Mask Testing Lab

Bureau Veritas, a leading testing, inspection and certification provider for the consumer goods and healthcare industry, announced its Katubedda, Sri Lanka labo-

ratory has obtained ISO/IEC 17025 accreditation for new scope related to medical/surgical face masks.

The new accreditation enables face mask buyers and suppliers worldwide to test medical masks, including full EU market entry scope, in one location.

With market estimates putting the annual growth of face masks over 20% every year, the need for additional trusted full-service laboratories continues to grow. With this latest development, Sri Lanka is the first full-service medical mask lab in the Bureau Veritas network. In addition to this capability, Sri Lanka is also one of 10-plus Bureau Veritas laboratories worldwide that can test fashion masks against regulatory and performance requirements.

Newly accredited capability includes packages for the EU Market - EN 14683:2019 Type I/II and Type IIR with the following accredited tests:

- Bacterial Filtration Efficiency (BFE%): EN 14683:2019/ASTM F2101
- Differential Pressure: EN 14683:2019/ASTM F2101
- Microbial Cleanliness: ISO 11737-1
- Splash Resistance: ASTM F1862/ISO 22609
- Flammability: 16 CFR 1610
- Antimicrobial Efficacy Study: ISO 20743:2013/AATCC TM100/ASTM E2149 - 13a/ASTM E3160 - 18/JIS L 1902
- Shelf Life Study: ASTM F1980-16

Revised AATCC Test Methods and Procedures Available

AATCC research committees work year-round to develop and update standards. The results are published twice per year, in the AATCC Technical Manual each January and in the Mid-Year Supplement each June.

The 2020 Mid-Year Supplement is now available and includes nine revised test methods, one editorially revised test method, and one revised monograph for a total of eleven approved standards since publication of the 2020 AATCC Technical Manual.

These documents are available only as downloadable PDFs for 2020. The 2020 Mid-Year Supplement will be discontinued at the end of 2020, and all standards contained therein will appear in the 2021 AATCC Technical Manual.

The following AATCC test methods

and procedures have been revised since publication of the 2020 AATCC Technical Manual. In accordance with AATCC M13, Rules of Procedure for AATCC Test Method and Technology Committees, all technical changes are unanimously approved by the responsible research committee and the Technical Committee on Research (TCR) before publication.

- AATCC TM16.3-2020 Test Method for Colorfastness to Light: Xenon-Arc; Revised to update Options 1, 2 & 3 flow charts.
- AATCC TM26-2020 Test Method for Ageing of Sulfur-Dyed Textiles: Accelerated; Revised to clarify and align with prescribed AATCC style guidelines.
- AATCC TM94-2020 Test Method for Finishes in Textiles: Identification; Revised to update the spectra, edit the text in existing sections, and to add new sections for clarity.
- AATCC TM97-2020 Test Method for Extractable Content of Textiles; Revised to clarify safety requirements.
- AATCC TM112-2020 Test Method for Formaldehyde Release from Fabric, Determination of Sealed Jar Method; Revised to update multiple sections for clarity and alignment to style guidelines.
- AATCC TM133-2020 Test Method for Colorfastness to Heat: Hot Pressing; Revised to align with prescribed AATCC style guidelines.
- AATCC TM169-2020 Test Method for Weather Resistance of Textiles: Xenon Lamp Exposure; Revised to add references standards, added Appendix B, and various editorial changes.
- AATCC TM183-2020 Test Method for Transmittance or Blocking of Erythemally Weighted Ultraviolet Radiation through Fabrics; Revised to add references to verification fabric and UPF compilation, and to align format with AATCC style guidelines.
- AATCC TM195-2017(e3) Test Method for Extractable Content of Textiles; Editorially Revised to reference LP1 and LP2 instead of M6 which has been removed
- AATCC TM206-2020 Test Method for Free and Hydrolyzed Formaldehyde: Water Extraction; Revised to update multiple sections for clarity.
- AATCC M12-2020 Style Guide for Test Methods and Procedures; Revised to include Designation and History sections, along with various updates and clarifications.

Show & Conference Schedule (As of August 18, 2020)

Date	Event (Location)	Website
Textiles & Apparel		
2020		
Sep. 1 & 2	Main in France Première Vision (Paris)	https://www.madeinfrancepremierevision.com/en/
Sep. 1-3	Spinexpo (Shanghai)	http://www.spinexpo.com/shanghai/
Sep. 8 & 9	Milano Unica (Milan)	https://www.milanounica.it/en
Sep. 15 & 16	Première Vision Paris (Paris)	www.premierevision.com
Sep. 23-25	Intertextile Shanghai Apparel Fabrics (Shanghai)	www.intertextileapparel.com
Oct. 1-3	Intertext Tunisia (Sousse)	www.intertexttunisia.com
Nov. 16-18	Int'l Apparel & Textile Fair (Dubai)	http://internationalappareltextilefair.com
Nov. 24 & 25	Denim Première Vision (Berlin)	https://www.denimpremierevision.com
Dec. 8 & 9	VIEW Premium Selection (Munich)	www.viewmunich.com
Dec. 9 & 10	Blossom Première Vision (Paris)	www.blossompremierevision.com
2021		
Jan. 19 & 20	Première Vision New York (New York)	https://www.premierevision-newyork.com
Jan. 22-26	Maison & Objet Paris (Paris)	https://www.maison-objet.com/en/paris
Jan. 23-25	Salon Int'l de la Lingerie Paris (Paris)	https://saloninternationaldelalingerie.com/
Jan. 23-25	Interfilère (Paris)	https://january.interfilere-paris.com/
Jan. 26-28	Munich Fabric Start/Keyhouse (Munich)	www.munichfabricstart.com
Jan. 26 & 27	Blue Zone (Munich)	https://www.munichfabricstart.com/bluezone-en.html
Jan. 27-29	Outdoor + Snow Show (Denver)	www.outdoorretailer.com
Jan. 31-Feb. 3	ISPO Munich (Munich)	http://munich.ispo.com
Feb. 1-4	Texworld, Texworld Denim Paris (Paris)	https://texworld-paris.fr.messefrankfurt.com
Feb. 1-4	Avantex (Paris)	https://avantex-paris.fr.messefrankfurt.com
Feb. 1-4	Apparel Sourcing, Shawls&Scarves (Paris)	https://apparel-sourcing-paris.fr.messefrankfurt.com
Feb. 1-4	Leatherworld (Paris)	https://leatherworld-paris.fr.messefrankfurt.com
Feb. 2-4	Première Vision Paris (Paris)	www.premierevision.com
Mar. 2 & 3	Dornbirn GFC Asia (Taegu, Korea)	http://eng.dornbirngfc-asia.com/
May 26 & 27	Denim Première Vision (Milan)	https://www.denimpremierevision.com
Jun. 20-23	OutDoor by ISPO (Munich)	www.ispo.com
Jul. 6-8	Première Vision Paris (Paris)	www.premierevision.com
Jul. 6-8	Milano Unica (Milan)	https://www.milanounica.it/en
Sep. 15-17	Dornbirn GFC (Dornbirn)	http://www.dornbirn-gfc.com/en/
Oct. 26-29	A+A (Düsseldorf)	https://www.aplusa-online.com/
Interior, Home Textiles & Furnishings		
2021		
Jan. 12-15	Heimtextil (Frankfurt)	www.heimtextil.messefrankfurt.com
Jan. 15-18	Domotex (Hannover)	https://www.domotex.de
Apr. 13-18	Salone del Mobile.Milano (Milan)	www.salonemilano.it
Sep. 14-16	Heimtextil Russia (Moscow)	www.heimtextil.ru
Technical Textiles & Nonwovens		
2020		
Sep. 2-4	Cinte Techtextil China (Shanghai)	www.techtextilchina.com
Nov. 11-13	ANDTEX (Bangkok)	www.andtex.com/andtex/2020/en
2021		
Feb. 18 & 19	World Congress on Textile Coating (Berlin)	https://www.technical-textiles.online/WCTC/
Feb. 23-25	Filtech (Cologne)	https://filtech.de/
May 4-7	Techtextil (Frankfurt)	www.techtextil.messefrankfurt.com
Jul. 22-24	ANEX, SINCE (Shanghai)	https://asianonwovens.org/ , https://en.since-expo.com/
Aug. 15-17	Techtextil North America (Raleigh)	www.techtextilna.com
Sep. 1-3	Techtextil India (Mumbai)	https://techtextil-india.in.messefrankfurt.com
Sep. 7-10	Index (Geneva)	https://www.indexnonwovens.com/en/
Textile & Apparel Machinery		
2020		
Sep. 2-5	Textech Bangladesh (Dhaka)	https://bd.cems-textech.com/
Sep. 24-26	KTM (Kahramanmaraş, Turkey)	http://ktmfair.com/en/
Nov. 4-7	Textech Morocco (Casablanca)	https://ma.cems-textech.com/
Dec. 17-19	HanoiTex (Hanoi)	http://vhanoitex.com/en/
Dec. 17-19	Gartex Texprocess India (Delhi-NCR)	https://www.gartexindia.com/
Dec. 18-21	MTG (Yangon)	https://www.chanchao.com.tw/MTG/
2021		
Mar. 19-21	Gartex Texprocess India (Mumbai)	https://www.gartexindia.com/
Mar. 30-Apr. 1	Indo Intertex (Jakarta)	https://indointertex.com/
Apr. 7-10	SaigonTex (Hochiminh)	http://sgntex.com/en/
May 4-7	Texprocess (Frankfurt)	www.texprocess.messefrankfurt.com
Jun. 12-16	ITMA ASIA+CITME 2020 (Shanghai)	www.itmaasia.com
Jun. 22-26	ITM (Istanbul)	www.itm2021.com
Jul. 7-10	GFT (Bangkok)	https://www.gftexpo.com
Nov. 23-26	ShanghaiTex (Shanghai)	www.shanghaitex.cn
Dec. 8-13	INDIA ITME (Delhi NCR)	https://itme2021.india-itme.com

U.S.A. Textile & Apparel Imports From Major Asian Countries & Regions

	January-June 2020					January-June 2020			
	1,000 SME	Y-o-Y Change (%)	US\$,1,000	Y-o-Y Change (%)		1,000 SME	Y-o-Y Change (%)	US\$,1,000	Y-o-Y Change (%)
World total	26,853,643	-19.74	38,616,400	-27.82	Sri Lanka	167,402	-18.08	695,446	-23.67
Apparel	9,663,963	-27.74	27,882,109	-30.37	Apparel	164,564	-17.75	693,179	-23.56
Textiles	17,189,680	-14.30	10,734,291	-20.23	Textiles	2,839	-33.59	2,267	-46.15
Yarns	1,478,353	-20.11	556,765	-19.79	Yarns	17	163.90	28	81.70
Fabrics	5,959,199	-7.61	2,660,744	-15.88	Fabrics	757	34.56	599	-75.56
Made-ups & misc.	9,752,129	-17.06	7,516,782	-21.70	Made-ups & misc.	2,064	-44.29	1,641	-6.01
China	10,830,791	-26.65	9,602,917	-43.17	Thailand	292,559	-4.69	484,732	-10.99
Apparel	3,064,128	-38.25	5,768,157	-49.09	Apparel	117,845	-20.87	381,563	-14.46
Textiles	7,766,663	-20.78	3,834,760	-31.10	Textiles	174,714	10.56	103,169	4.71
Yarns	245,223	-20.12	64,008	-26.55	Yarns	43,187	113.93	13,676	48.96
Fabrics	1,533,348	-19.14	573,131	-24.51	Fabrics	53,556	-3.65	31,036	6.74
Made-ups & misc.	5,988,092	-21.22	3,197,621	-32.24	Made-ups & misc.	77,971	-5.21	58,457	-3.00
Vietnam	2,296,560	-15.27	6,054,009	-11.13	Korea	909,205	-16.11	404,155	-18.59
Apparel	1,725,765	-13.20	5,656,941	-11.12	Apparel	19,829	-16.25	65,478	-26.56
Textiles	570,794	-20.96	397,068	-11.23	Textiles	889,376	-16.10	338,677	-16.85
Yarns	32,571	3.35	10,077	-3.72	Yarns	298,055	-32.03	47,573	-29.73
Fabrics	377,375	-30.72	95,251	-35.37	Fabrics	553,453	-6.40	244,204	-17.81
Made-ups & misc.	160,848	10.21	291,740	0.79	Made-ups & misc.	37,868	25.08	46,900	10.35
India	2,486,556	-19.07	3,071,814	-27.21	Philippines	96,889	-37.29	288,759	-35.00
Apparel	435,591	-31.33	1,537,814	-32.09	Apparel	69,767	-44.79	231,351	-40.05
Textiles	2,050,964	-15.88	1,534,000	-21.55	Textiles	27,122	-3.58	57,408	-1.65
Yarns	98,016	-40.16	35,936	-31.65	Yarns	1,891	-39.30	813	-34.87
Fabrics	696,907	-11.66	198,153	-18.37	Fabrics	3,210	437.05	1,012	172.09
Made-ups & misc.	1,256,041	-15.43	1,299,911	-21.70	Made-ups & misc.	22,021	-9.81	55,583	-2.06
Bangladesh	1,059,449	-17.64	2,560,869	-19.94	Taiwan	370,648	-15.95	260,651	-15.47
Apparel	891,199	-17.60	2,471,203	-19.73	Apparel	24,381	-12.97	72,178	-12.78
Textiles	168,250	-17.88	89,666	-25.44	Textiles	346,267	-16.15	188,473	-16.45
Yarns	0	—	0	—	Yarns	69,856	-43.56	22,263	-44.51
Fabrics	3,915	3525.03	1,186	1013.61	Fabrics	231,419	0.30	129,301	-10.88
Made-ups & misc.	164,335	-19.75	88,481	-26.36	Made-ups & misc.	44,992	-23.03	36,909	-8.61
Indonesia	737,142	-11.02	1,990,827	-18.62	Myanmar	89,263	122.67	198,662	59.25
Apparel	472,731	-23.80	1,814,966	-20.33	Apparel	49,276	73.73	126,454	34.86
Textiles	264,411	27.10	175,861	4.46	Textiles	39,987	241.05	72,208	133.06
Yarns	152,207	39.93	32,461	-4.07	Yarns	0	—	0	—
Fabrics	40,377	16.64	24,412	2.86	Fabrics	11,782	337.98	2,251	201.46
Made-ups & misc.	71,827	11.13	118,987	7.41	Made-ups & misc.	28,205	212.19	69,957	131.37
Cambodia	652,182	9.10	1,501,233	8.55	Japan	126,300	-14.75	191,237	-17.25
Apparel	458,265	-1.23	1,246,749	3.44	Apparel	1,335	-34.18	30,609	-27.17
Textiles	193,917	44.92	254,484	43.23	Textiles	124,964	-14.48	160,628	-15.04
Yarns	150	—	76	—	Yarns	11,732	-31.72	8,119	-25.91
Fabrics	92,075	88.15	15,598	63.56	Fabrics	110,912	-11.69	145,164	-14.10
Made-ups & misc.	101,692	19.81	238,811	42.03	Made-ups & misc.	2,320	-30.76	7,345	-19.48
Pakistan	1,259,584	-8.51	1,249,866	-17.07	Malaysia	84,063	24.74	151,982	-20.81
Apparel	268,329	-7.08	585,094	-17.27	Apparel	26,184	-27.95	126,762	-29.36
Textiles	991,255	-8.89	664,772	-16.89	Textiles	57,879	86.40	25,221	102.14
Yarns	45,694	12.88	14,431	3.42	Yarns	15,988	-13.80	3,894	-18.05
Fabrics	90,137	7.68	78,568	10.65	Fabrics	30,519	341.08	8,541	109.33
Made-ups & misc.	855,424	-11.24	571,773	-20.02	Made-ups & misc.	11,372	103.59	12,786	250.77
Turkey	473,360	-1.54	812,675	-7.48	Israel	220,680	1.88	110,511	-7.00
Apparel	34,687	-24.29	226,122	-26.38	Apparel	980	-46.98	15,103	-51.08
Textiles	438,673	0.86	586,553	2.68	Textiles	219,701	2.30	95,408	8.47
Yarns	53,117	-34.62	43,766	7.76	Yarns	3,497	-58.15	1,617	-57.28
Fabrics	266,661	14.68	95,526	-8.09	Fabrics	132,441	1.56	37,231	-0.33
Made-ups & misc.	118,894	-1.87	447,262	4.82	Made-ups & misc.	83,763	10.21	56,560	20.81
Jordan	153,721	-2.39	715,047	-6.29	ASEAN	4,252,187	-9.70	10,677,258	-10.72
Apparel	152,255	-2.45	712,054	-6.28	Apparel	2,921,178	-14.45	9,590,343	-12.53
Textiles	1,466	4.61	2,993	-9.87	Textiles	1,331,009	2.82	1,086,916	9.21
Yarns	0	—	0	—	Yarns	246,660	34.85	61,879	3.07
Fabrics	0	—	0	—	Fabrics	608,974	-12.31	178,168	-17.29
Made-ups & misc.	1,466	4.68	2,993	-9.76	Made-ups & misc.	475,376	13.96	846,869	17.66

Source: Office of Textiles & Apparel (OTEXA)

Note: SME: square meter equivalents

Clarino™

Maximize your tactile experience
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