



5 DAYS CERTIFICATE COURSES ON PROTECTIVE & MEDICAL TEXTILES SUCCESSFULLY HELD IN APRIL & MAY 2021



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- * Meditech Course : 2nd to 6th Aug 2021
- * Other segments - Coming Soon



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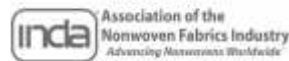
Complete very versatile production line for a variety of nonwovens materials for filters, clothing industry, roofing underlays, cable manufacturing composite, coating carrier, etc.



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ITTA DEFENCE HANDBOOK

INDIAN TECHNICAL TEXTILE PRODUCTS FOR DEFENCE

- A GLOBAL REACH -

Handbook covered major areas of Defence products with Indian Manufacturers' Names, Contact Details and Product Specifications i.e.

- *Protective Clothing & Accessories*
- *Collective Protection*
- *Load Carrying fabric*
- *Geosynthetics*



RATE
Rs. 750/-

**Courier charges extra*



For Copies Contact-

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INDIAN TECHNICAL TEXTILE ASSOCIATION

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ITTA's Certificate Courses on Technical Textiles

HIGHLIGHTS OF PREVIOUS COURSES

The Indian Technical Textile Association (ITTA) has successfully completed TWO 5-Days Certificate Courses - one on Protective Textiles from 12th to 16th April 2021 and the other on Medical Textiles from 24th to 28th May 2021 through Digital Platform.

These courses give in-depth knowledge on the

Technical Textiles (TT) and their emerging opportunities through detailed coverage of topics on both Protective and Medical textile verticals. It gave an opportunity to interact with Industry Experts and benefited the students aspiring to make a career in the Technical Textile Industry.

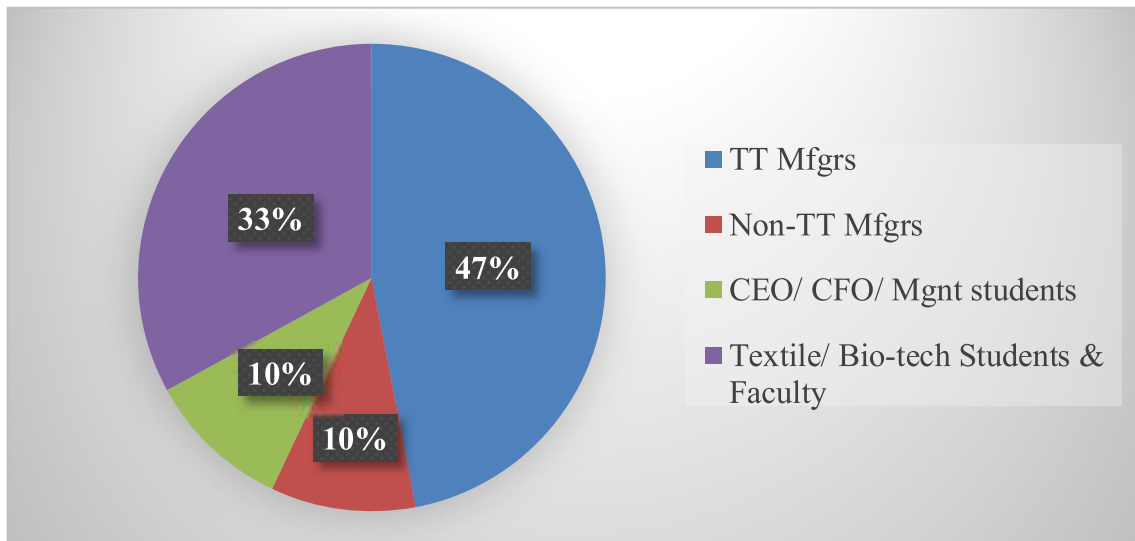
Major Topics covered under these two courses are given below -

MEDICAL TEXTILES
1. Overview of all 12 Verticals/Segments of Technical Textiles
2. Production/ Market size of all TT Segments
3. Concept of HS Code & its Significance in Trade
4. Export/ Import trends of all TT Segments
5. Input materials & Manufacturing Processes - Nonwoven Processes Used - <ul style="list-style-type: none"> ➤ Spun Bond ➤ Melt Blown ➤ Spun Lace ➤ Needle Punched ➤ Coating and Lamination Processes
6. Manufacturing technology of Meditech Products - <ul style="list-style-type: none"> ➤ PPE coveralls ➤ Masks ➤ Surgical Drapes ➤ Gowns & Shoe covers ➤ Disposable Bedsheet/ Pillow Cover ➤ Surgical Dressings/ Packs ➤ Compression Bandage ➤ Disposable Medical Wipes
7. Test methods, Instruments used, National & International Standards
8. Compliances and product/ process certifications
9. Supply Chains Management

PROTECTIVE TEXTILES
1. Overview of all 12 Verticals/Segments of Technical Textiles
2. Production/ Market size of all TT Segments
3. Concept of HS Code & its Significance in Trade
4. Export/ Import trends of all TT Segments
5. Input Materials & Manufacturing Technology of Protech Products - <ul style="list-style-type: none"> ➤ Bullet Proof Jackets ➤ Extreme Weather garments (hot/cold) ➤ Industrial Work Wear ➤ NBC Suits ➤ Electric-Arc & Molten Metal Splash Coveralls ➤ Reflective Garments/strips
6. Test methods, Instruments used, National & International Standards
7. Compliances and product/ process certifications
8. Supply Chains Management

These courses on different segments of Technical Textiles are gaining popularity and received an overwhelming response from the participants. The Participants are spread over various segments of technical textile stake holders which constitutes 47% of TT manufacturers (Products, Chemicals &

Machinery manufacturers) & 10% of Non-TT manufacturers (Knitted & Garments), 10% from CEO/ CFO/ Management students and 33% from graduate & post graduate Textile/ Bio-technology Students & Faculty from reputed Textile Institute.



The feedback from the participants was very encouraging and most of them mentioned that the courses was very informative, useful and knowledgeable. The topics covered, speakers present and quality of discussion were very relevant

in the context of encouraging the innovations in the field of Protective and Medical Textiles. In future ITTA is planning more courses on major verticals/ segments of technical textiles, e.g., Buildtech, Geotech, Agrotech, Indutech, Sportech, etc.



Feedback from the Participants

NAGREEKA EXPORTS LIMITED

“Good co-ordination, discipline & interactive”

SYSTEM 5S PRIVATE LIMITED

“Very useful class to know more technical parts & so many things. Worthy class to understand.”

PASHUPATI POLYTEX PVT. LTD.

“Great experience, I start at zero and learn a lot.”

SHIVA TEXYARN LIMITED

“The 5-day program was really insightful”

MAF CLOTHING PVT. LTD.

“Content is excellent, also speakers are pioneers & very supportive”

EXPORT-IMPORT PERFORMANCE OF TECHNICAL TEXTILE PRODUCTS OF MARCH 2021

(ITTA Analysis on Ministry of Commerce and Industry Data)

The data on export and import of 207 technical textile products/items is published as an indicator of foreign trade performance of technical textile industry in India.

A. EXPORT PERFORMANCE

(Value in INR Cr.)

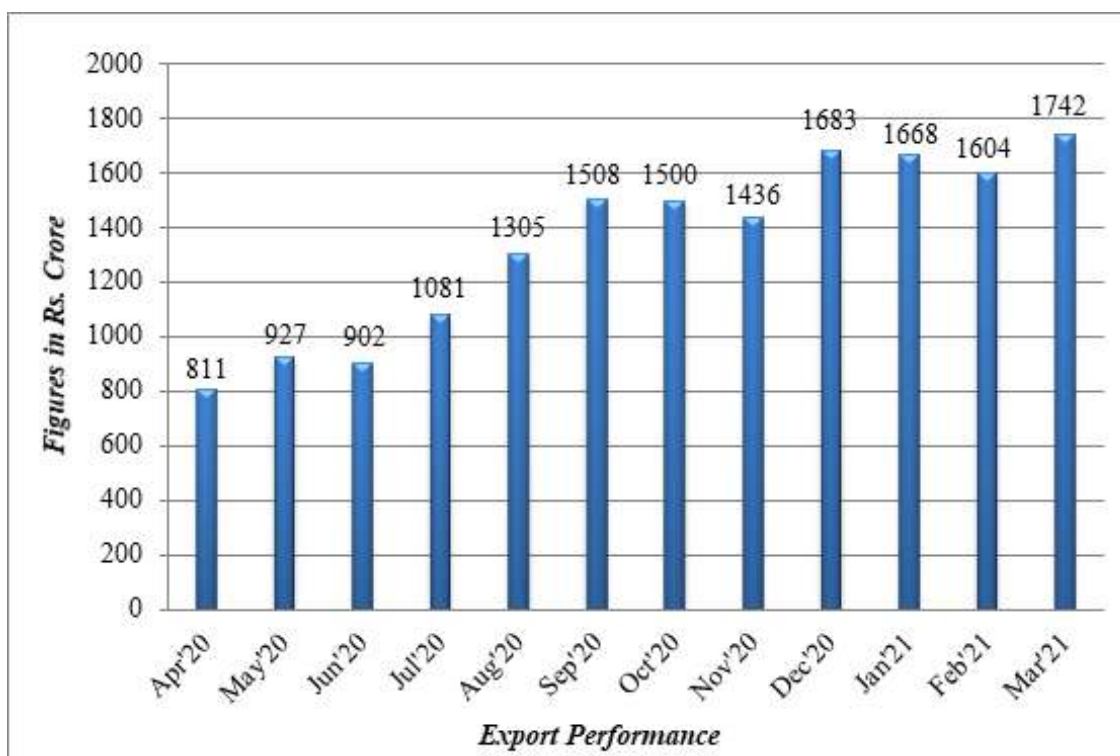
Sr. No	Segments	Mar 2020	Mar 2021	% Growth	Apr'19-Mar'20	Apr'20-Mar'21	% Growth
1	Agrotech	52	75	42%	630	692	18%
2	Buildtech	59	64	10%	728	729	-1%
3	Clothtech	16	21	35%	202	207	13%
4	Geotech	106	214	101%	1129	1841	65%
5	Homotech	8	21	147%	136	166	73%
6	Indutech	134	206	54%	1878	1824	23%
7	Meditech	86	109	27%	1122	1224	16%
8	Mobiltech	98	121	24%	1430	1325	1%
9	Packtech	357	634	77%	5247	5807	58%
10	Protech	36	39	9%	511	441	-5%
11	Sportech	18	38	106%	256	298	13%
12	Nonwovens	85	200	134%	1001	1679	108%
	GRAND TOTAL	1055	1742	65%	14270	16233	14%

Data Source: ITTA Analysis on Ministry of Commerce and Industry (at 8 digit level of HSN Codes)

ITTA Analysis on Monthly data (Mar'20 vs. Mar'21) of Top Four Growth Sectors -

- Homotech** - Key Products: Nylon & Polyamide fabrics, Wicks & Gas Mantle fabrics and Pile & Chenille fabrics.
- Nonwoven** - Key Products: Nonwoven of MMF: Wt.- 25 gsm to 70 gsm, Nonwoven of MMF: Wt.- 70 gsm to 150 gsm and Nonwoven of MMF: Wt.- Not > 25 gsm.
- Sportech** - Key Products: Bleached & Dyed Tent fabrics, Sports Nets and Dyed Parachute fabrics.
- Geotech** - Key Products: Geogrids, Geo-composites and Woven Geotextile.

Figure 1 - Monthly Trend of Export Performance



The above export figures show decreasing trend from December 2020 to February 2021, then it had improved in the month of March 2021.

B. IMPORT PERFORMANCE

(Value in INR Cr.)

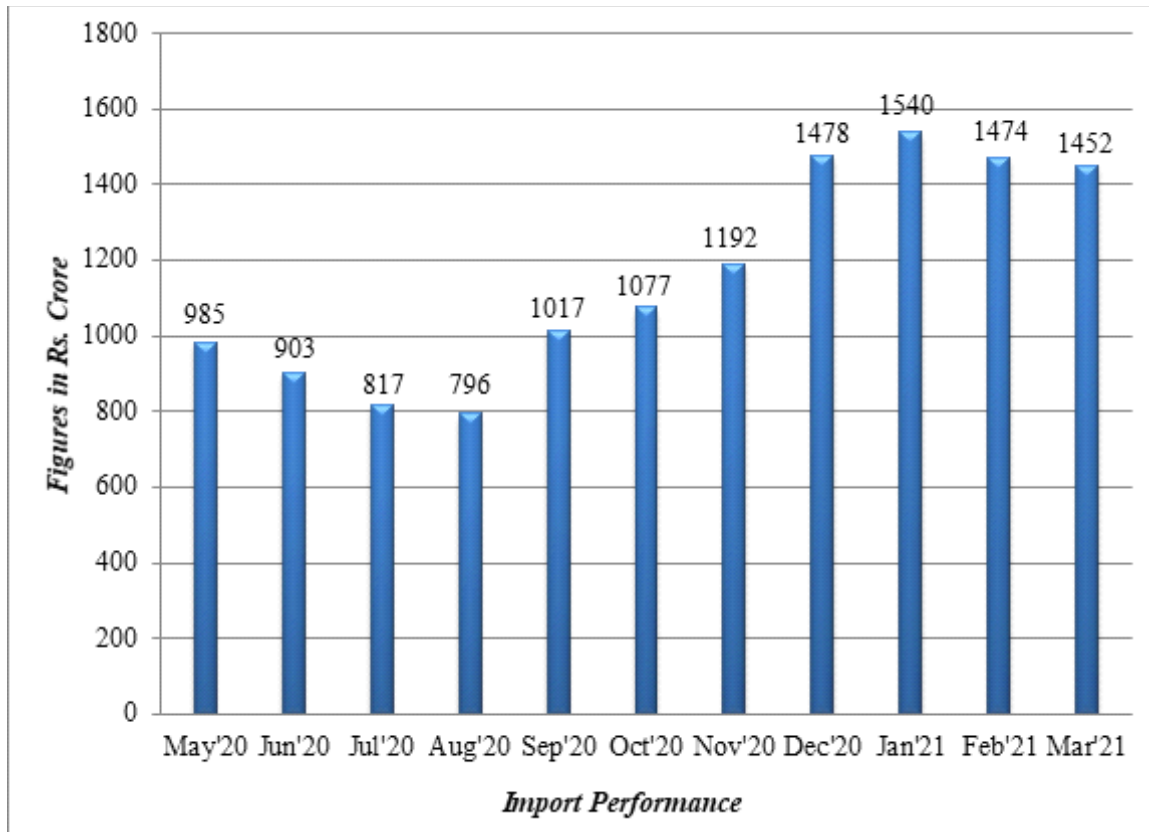
Sr. No	Segments	Mar 2020	Mar 2021	% Growth	Apr'19-Mar'20	Apr'20-Mar'21	% Growth
1	Agrotech	15	27	85%	338	289	32%
2	Buildtech	64	131	106%	1900	1221	2%
3	Clothtech	12	20	74%	267	196	32%
4	Geotech	57	119	110%	1495	1262	42%
5	Hometech	27	38	41%	571	381	-18%
6	Indutech	171	246	44%	2513	2330	25%
7	Meditech	23	71	208%	612	850	113%
8	Mobiltech	275	515	87%	4608	4061	40%
9	Packtech	48	34	-29%	571	440	-21%
10	Protech	16	46	188%	419	414	80%
11	Sportech	4	13	241%	123	129	61%
12	Nonwovens	130	192	49%	1911	1662	12%
	GRAND TOTAL	842	1452	72%	15328	13235	-14%

Data Source: ITTA Analysis on Ministry of Commerce and Industry (at 8 digit level of HSN Codes)

ITTA Analysis on Monthly data (Mar'20 vs. Mar'21) of Top Four Growth Sectors -

- a) **Sportech** - Key Products: Tents of synthetic fibres, Sleeping bags and Artificial Turf.
- b) **Meditech** - Key Products: Sanitary Napkins, Baby & Adult Diaper and Compression Garments.
- c) **Protech** - Key Products: Rubberized textile fabrics for Industrial Gloves & Mittens, Wind cheater & Rain coats and FR fabrics.
- d) **Geotech** - Key Products: Geo-composites, Geogrids and Non-metallic Gabions.

Figure 2 - Monthly Trend of Import Performance



India's imports of TT products have registered a steady growth from the month of September to January 2021 but then it started decreasing from in February to March 2021.

ITTA's Representation to add the PLC controlled High End Filament Warping Sizing Machine under ATUFS

The Computer controlled High End Filament Warping Sizing Machine is not included in the Technical Textiles' eligible machine list of MC-3 under Amended Technology Upgradation Fund Scheme (ATUFS). This process is essential in

fabrics approached ITTA to represent the issues and concerns on this subject.

Accordingly, ITTA made a representation to The Office of the Textile Commissioner (OTXC) and



preparing sized beams to produce very high-quality Parachute Fabrics, Coated Fabric substrates, Bullet Proof Fabrics, NBC suits, Ultra-light weight extremely cold weather fabrics, etc using high performance yarns. In this regard, ITTA members who are planning to install/ invest in the process of this machine for producing high quality technical

strongly recommended to include the above machinery in the eligible technical textile machinery list of MC-3. ITTA also suggested that under section MC-3 / Section B/ Sr. No-1 the following description may be modified as recommended below -

Research Advisory Committee (RAC) Meeting of SASMIRA's R&D Division

The 13th meeting of the Research Advisory Committee (RAC) to review the progress of the SASMIRA's on-going R & D projects was held on 10th May 2021 through video conferencing under the Chairmanship of Shri M. H. Doshi, President, SASMIRA. Dr. Anup Rakshit, ED, ITTA attended the

meeting as the member of the committee. The ongoing R&D projects which are in different stages of completion & approved projects in SASMIRA and new proposals submitted to various funding Agencies on technical textiles were discussed.

1. BIS Sectional Committee Meetings-

1.1 Composites and Speciality Fibres (TXD 40)

The 3rd Meeting of Composites and Speciality Fibres Sectional Committee, TXD 40 was held through audio-video conferencing on 1st May 2021 under the Chairmanship of Dr Santhosh B, Vikram Sarabhai Space Centre, ISRO. As the member of committee, Dr. Anup Rakshit, ED and Dr. Dhaval Patel, Director, ITTA attended the meeting.

Highlights of the key points discussed & decided in the meeting -

1. Renamed the title as 'Technical Textile Component of Composites and High Performance Fibres'.
2. Test method standards on Glass Mats and fabrics, Glass yarns and rovings, Glass Chopped-strand and continuous filament mats & Carbon fibre and Product specification standards on Tubular braided sleeves and Braided tapes were finalized for publication as Indian Standards.
3. Fresh Preliminary drafts to be prepared on Aramid fibre & filament, HT & SHT Nylon filament, HT/SHT Polyester and HT/SHT Polypropylene.
4. Dr Rakshit also emphasized on the need of having Composite product standards which are in use in sports and other activities. ITTA has invited members to come forward with suggestions.

1.2 Technical Textiles for Buildtech Applications (TXD 34)

The 6th Meeting of Technical Textiles for Buildtech Applications Sectional Committee, TXD 34 was held

through audio-video conferencing on 8th June 2021 under the Chairmanship of Prof (Dr) Abhijit Majumadar, Indian Institute of Technology, Delhi. He is the newly appointed Chairman in the committee. As the member of committee, Dr. Anup Rakshit, ED and Ms. Ruchita Gupta, Assistant Manager (Technical) ITTA attended the meeting.

With a request from ITTA, following new Company Representatives were taken as Committee Members of TXD-34 such as SRF Limited, Garware Technical Fibres Limited and Techno Ceiling Products.

Following points were discussed & decided in the meeting --

1. Draft amendment on Synthetic micro-fibres for use in cement-based matrix and Preliminary drafts prepared on Acoustic Fabrics for Architectural Applications & Poly Vinyl Chloride (PVC) Coated Tensile Fabric Architectural Membranes will be issued under wide circulation.
2. SRF Ltd. will provide the technical inputs for Architectural Membranes, Hoarding & signage (Flex) and awning & canopies, Garware Technical Fibres on Scaffolding nets & Insect net for building and Techno Ceiling Products on Woven Coated wall covering, Nonwoven wall coverings and Acoustic fabrics.
3. Drafts revision on IS 10321:1982 - 50-kg tent and IS 11057:1984 - Industrial safety nets will be issued for wide circulation.
4. BIS requested ITTA to suggest the Standards needed by the Buildtech Industry. ITTA has emailed all members to come forward with their suggestions.

BTRA joins hand with Austro water technologies for providing one stop solution in waste water treatment

The Bombay textile research association (BTRA), Mumbai is looking forward to serve the textile processing industry for sustainable and innovative technologies related to waste water management recently joins hand with M/s. Austro Water Technologies Pvt Ltd., Tirupur, for providing one stop solution in waste water management. BTRA and Austro Water Technologies has signed a memorandum of understanding (MOU) dated 19th Jan 2021 for meeting the above objective.

BTRA offers skill upgradation training for technology know-how, operations control, testing and maintenance to ETP technicians and operators in ETP. Also undertake ETP adequacy audits, provide result oriented complete technical consultancy, designing, Engineering, Erection, Commissioning of new waste water treatment plant



up to ZLD and take care of Revamping and Servicing of existing ETP plants up to ZLD.

[Source - <https://www.btraindia.com/mission.html>]

NATIONAL NEWS

India Baby Diapers Market is Expected to Grow around USD1092 Million by FY2027

Increasing disposable income and huge infant population are the key factors driving the baby diapers market in India. According to TechSci Research report, the baby diapers market in India captures the market size of approx. USD794 million in the year FY2021 and the market size is expected to grow at approx. USD1092 million in the year FY2027. The India Baby Diapers Market is projected to grow at a CAGR of around 5.62% during the forecast period FY2022 -FY2027.

Due to the impact of COVID-19, various markets have seen a huge downfall but there has not been much impact on the India Baby Diapers Market. It was the logistics and manufacturing of diapers that were affected for few initial days of lockdown. But later the diapers came into the category of essential products, because of which the market regained its pace.

“India Baby Diapers Market is expected to grow at a

rapid pace reason being growing urbanization and an increasing number of working women across the country. Even, the factors like increasing disposable income, a rising number of nuclear families, and birth of 27 million babies on average each year, are going to increase the demand for baby diapers. Therefore, the baby diaper industry in India is expected to witness robust growth in the coming years. On the demand side, a few drivers such as enhancement in the product quality, increased awareness and growing penetration in rural markets also playing a major part in the growth of India Baby Diaper Market”, said Mr. Karan Chechi, Research Director with TechSci Research, a research-based global management consulting firm.

South India dominates the country's baby diaper market in the year FY2021, and the region is expected to maintain its dominance during the forecast period. North India is another fastest-

growing region in India's baby diaper industry. This data calculation is not just about urban India, sales of baby diapers in rural India have jumped over USD2 billion. As per the historical data, the market estimates suggest that diaper sales in rural India have grown by over 150%.

Some of the players operating in the India Baby Diapers Market are Procter & Gamble (P&G), Unicharm India Pvt. Ltd., Kimberly Clark Lever Pvt. Ltd., Essity AB, The Himalaya Drug Company, Nobel Hygiene Pvt. Ltd., Me N Moms Pvt. Ltd., Swara Baby Products Pvt. Ltd., TZMO S.A., and The ABENA Group and many more. But the major market share of approx. 80% is captured by the brands like Pampers (by P&G), and MamyPoko Pants (by Unicharm India Pvt. Ltd.).

[Source - <https://techsciblog.com/india-baby-diapers-market/>]

Reinforced Soil Wall for Kalikhola Bridge



Maccaferri India was involved in the survey, geotechnical investigation, design, supervision of work and supply of material for construction of reinforced soil wall (RS wall) for the approaches of the Kalikhola bridge.

Border Roads Organization (BRO) has a major contribution in developing the road infrastructure



in the frontier areas of North and North-East India. The 60m long Kalikhola bridge was constructed under BRO Swastik in Sikkim.

The approach wall of maximum height 30m was constructed with gabions as fascia (Maccaferri Terramesh® system) and high strength geogrid (ParaLink®) as reinforcement. This made the solution economical and eco-friendly than a conventional RCC wall. The bridge will improve the connectivity and contribute towards the development of tourism in the remote parts of Sikkim.

[Source - <https://www.maccaferri.com/in/maccaferri-reinforced-soil-wall-kalikhola-bridge/>]

COMPOSITES - Recycling of CFRTP composites and Slitting Machine for Composites

Industrial-scale recycling process for CFRTP composites



Germany based Covestro AG has announced its cooperation with recycling specialist carboNXT GmbH, Germany to recycle the waste generated during the production of Covestro's Maezio brand of continuous fiber-reinforced polycarbonate (CFRTP) composites. Covestro notes that, because the composites consist of different materials that cannot be easily separated from one another, this has become a challenge. Nevertheless, carboNXT has recently developed a recycling process that enables waste to be processed on an industrial scale.

"We are excited about this joint solution, as we cannot process the materials ourselves for technical reasons," explains Ms. Lisa Ketelsen, head of Thermoplastic Composites at Covestro. "By recycling according to type at our partner's plant, the raw materials can be converted back into valuable products with similarly good properties as those characteristic of virgin materials. The recycling of materials makes it possible to use them

again in other products. In this way, we save raw material resources and contribute to the circular economy."

"Our company has many years of experience in recycling carbon fiber-reinforced thermoplastics and has the necessary plant technologies to process such waste," says Mr. Tim Rademacker. "From the processed waste we produce high-quality new compounds of carbon fiber-reinforced polycarbonate for Covestro at carboNXT." According to Covestro, demand for such recycled products is high because they are valuable raw materials, but also because more industrial customers and consumers are looking for more sustainable products.

[Source-<https://www.compositesworld.com/news/carbonxt-develops-industrial-scale-recycling-process-for-covestro-cfrtp-composites>]

Industrial-scale recycling process for CFRTP composites

UK based Cristex Composite Materials supplier of high-performance fibres and fabrics, had announced the arrival of the Ribamatic slitting machine. Cristex have made significant investments over the past 12 months to ensure the company can continuously support its customers' needs and support the growth of its own production department.

According to the company, Ribamatic slitter is designed and developed to process a variety of composite reinforcements and can slit material lengths from a maximum width of 3000 mm down to as narrow as 30 mm wide. This machine will enable Cristex to enhance the quality and precision of cut tapes and will accelerate the production process therefore increasing our slitting capacity.



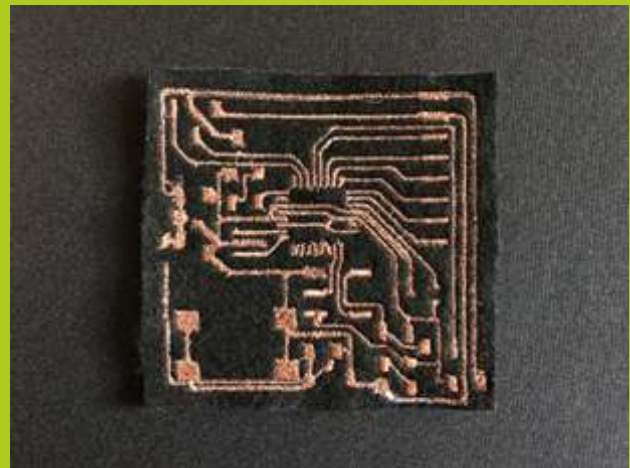
“As a business, we want to be more than just a trusted material supplier. We understand the

increasing need for technical support from the start of the process to the end, by offering our customers a tailored solution for all service requirements,” the company said.

[Source - <https://www.crewbook.in/2021/05/26/uk-firm-cristex-composite-materials-presents-ribamatic-machine/>]

INDUTECH - Smart Thread Technology

Smart fabric technology blends traditional sewing techniques with fibre-based printed circuit boards



Nextiles, a New York based textiles manufacturers launched its smart thread technology that captures biometric and biomechanics data into sports and performance market. They have developed a now-patented technique for sewing sensors directly into fabrics. Nextiles blends traditional sewing techniques with printed circuit boards to make flexible materials with sensors embedded within fabrics. The fabrics allow for complete biomechanic and biometric sensing captured on one platform - no straps, rings, wraps or clunky attachments that only capture partial data.

The process leverages traditional sewing machines and commonly found threads, such as nylon or spandex which are semi-conductive and measure mechanical changes from multiple data points. Nextiles differentiates its suite of data analytics by providing Newtonian measurements through its fabrics - force, bending, stretching, velocity and pressure - to offer athletes and teams data such as torque, power, fatigue, strain, and more.

The fabric also captures traditional measurements by combining force data with IMU (inertial measurement unit) technology for direction, speed and distance. The company provides clients with APIs (application programming interfaces) and SDKs (software development kits) to stream data via Bluetooth in real-time and offers the ability for data to be stored locally and in the cloud.

“Modern sewing technology is almost 2,000 years old, but the industry has been overlooked in recent decades because our society believes we maximised its utility,” said Mr. George Sun. “However, at Nextiles, we are rekindling textile innovation, and more importantly doing it in what was once the sewing capital of the world, New York. One of the reasons we value fabrics over traditional circuit board technologies is our philosophy of building from the bottom-up -thread by thread.”

[Source - <http://www.e-textile.in/single-platform-data-from-nextiles/>]

MEDITECH - Biodegradable Baby Wipes and High-End Meltblown Nonwovens

Baby Wipes made of Lenzing's Biodegradable VEOCEL™ fibers



New York-based baby care brand Coterie has launched wipes made from 100% plant-based biodegradable and compostable materials. Designed in partnership with Lenzing Veocel, the Coterie wipes are the most sustainable and the largest (up to 30% bigger) baby wipes on the US market.

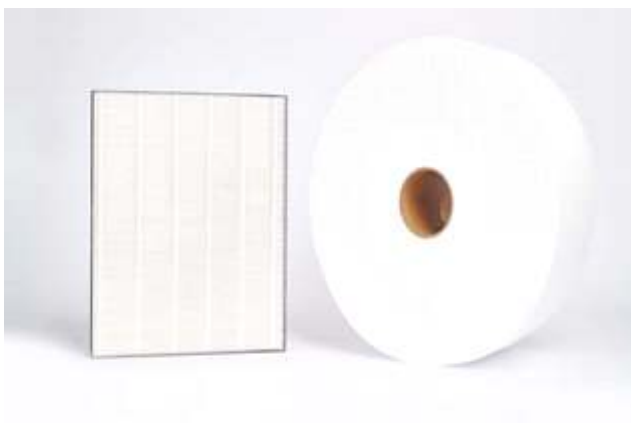
Following recent certification testing, they have proved to be fully compostable after just a few weeks and decompose even under the toughest of conditions. By comparison, the acceptable standard for compostable products can take up to six months, and plastic-based products, like most competitive wipes, can take hundreds of years. Additionally, the new wipes are the first in the USA to be certified by the Environmental Working Group (EWG) for chemical safety, the National Eczema Association for gentleness, and TÜV-OK Compost HOME for sustainability.

The new wipes effectively remove dirt and irritants while helping protect the skin's barrier properties and natural pH balance. The wipes contain 99% purified water with 1% carefully selected ingredients including Vitamin E and glycerin to

protect the baby's skin further. They are also dermatologically tested for safety, even on sensitive or eczema-prone skin.

"We're on a mission to revitalize the baby-care space while setting new industry standards for performance and sustainability," said Mr. Frank Yu, founder, and CEO of Coterie. "Our partnership with Veocel is a testament to our continued investment and dedication to sustainable innovation, and we're proud to have designed another high-performing product that provides the perfect combination of effective cleaning, enhanced skin health, and efficiency for the environment."

[Source - <https://www.lenzing.com/newsroom/press-releases/press-release/coterie-introduces-baby-wipes-with-veocel™-fibers-to-us-market>]



KNH based in Taiwan has been dedicated to meltblown technology for more than 20 years, which is widely applied in the medical and personal protective filter material. KNH has officially entered

KNH Launches HEPA Grade Meltblown

the high-end filtration market by launching the HEPA grade meltblown nonwovens with high efficiency and high permeability.

KNH is the first manufacturer of air through and meltblown nonwovens in Taiwan. The main nonwoven products it produces are air through, thermal bond, airlaid, spunlace, meltblown and calender bond. Due to the impact of Covid-19, KNH expanded meltblown production lines in 2020 to

meet the high demand from worldwide customers. This year, KNH launched the HEPA grade meltblown nonwoven with high efficiency and high permeability to supply the high-end filtration market.

Compared with the general meltblown nonwovens, KNH HEPA Meltblown nonwovens can meet the requirements of high-efficiency filtration H10-H14, with the lower air resistance and higher performance. The efficiency can be achieved up to

99.95%; the air resistance can be decreased around 30-40%. Therefore, KNH HEPA Meltblown nonwovens can also provide medical and personal protection filters with more breathable, comfortable, and protective options.

[Source - https://www.nonwovens-industry.com/contents/view_breaking-news/2021-06-01/knh-launches-hepa-grade-meltblown/15325]

SPORTECH - Moisture-Wicking Active Apparel and Wearable Sports Technology

Developed Moisture-Wicking Active Apparel



Fieldsheer Apparel Technologies, a US-based developer of innovative Mobile Warming Technology, has come out with Mobile Cooling by Fieldsheer, a line of moisture-wicking active apparel. Mobile Cooling has been incorporated into a variety of cooling garments, including shirts, tank tops, hoodies, high-visibility vests and shirts, neck towels, and neck gaiters. Designed for even the hottest climates and conditions, Mobile Cooling apparel wicks moisture away, keeping the wearer cool, dry, and comfortable, whether engaged in outdoor recreation or work-related chores.

Mobile Cooling apparel does more than simply lower the wearer's body temperature - it also delivers powerful protection from harmful UV rays while keeping users safe from heat exhaustion and dehydration. Ultimately, it can provide a safety barrier from a wide variety of heat- and sun-related issues.

It also incorporates several complementary technologies into its apparel line, not only generating cooling properties but a number of additional benefits. The centrepiece of this

technological mixture is drirelease GEO Cool, a natural technology developed by New Jersey based Optimer Brands, a pioneer in performance and comfort textile solutions. Performance properties are "built into" each thread of the fabrics with an engineered blend of 85-90% hydrophobic (water absorbing) to 10-15% hydrophilic (water absorbing) fibres. Drirelease fabric uses 38% recycled materials, making it extremely eco-friendly.

The line also utilises additional technologies to not only enhance the cooling effect but to eliminate moisture and odour while preserving garment integrity. Fieldsheer's Sweatsheer moisture wicking technology helps keep skin dry as the sweat is moved away from the skin to ensure hours of sweat-free comfort. The company incorporated Odorsheer technology to combat bacteria and microbes, which can infiltrate clothing causing odour, colour fading, and a short garment lifespan.

[Source-<https://www.technicaltextile.net/news/us-company-fieldsheer-develops-moisture-wicking-active-apparel-274054.html>]

Wearable electronics technology for Sports Industry



Myovolt, the Los Angeles-based pioneer of patented wearable recovery technology, has developed four new products exploiting focal vibration to massage muscles, stimulate blood flow, promote localised circulation, relieve soreness and increase flexibility for athletes on the move. Using Myovolt products for as little as ten minutes can reduce muscle and joint soreness by up to 70%.

The company's arm, shoulder, lower back, and leg units are all equipped with the Myovolt module, containing vibration software and electronics technology embedded in a soft, size-adjustable package designed to conform comfortably to the body to deliver clinical-grade results during warm-ups and cooldowns.

"We've created clothing with physiotherapy benefits built-in," said Myovolt co-founder, Mr. Steve Leftly. "The Myovolt module is lightweight and easy to operate with one-touch controls, so it can be used anywhere and immediately after an intense training session to reduce soreness and alleviate DOMS - delayed-onset muscle soreness. The wearable recovery therapy category is growing fast and is set to become the next generation of sports technology."

[Source - <https://www.prnewswire.com/news-releases/new-zealand-team-behind-garment-integrated-electronics-for-nasa-adidas-and-nike-launches-myovolt-brand-in-us-bringing-wearable-vibration-recovery-to-american-athletes-301283489.html>]

PROTECH - Breathable Disposable Protective Clothing

Highly Breathable Disposable Personal Protective Clothing Proven to Reduce Heat Stress

Toray Industries, Inc., based in Japan announced that evaporative thermal resistance testing has confirmed that the fabric in LIVMOA™3000, a highly breathable model of disposable personal protective clothing, reduces heat stress. The company designed this apparel to optimize safety and comfort.

Protective clothing normally increases such stress because it shields the body from the surroundings, impeding heat release. Hot environments in which

the risks of heat stroke are high make it hard to dissipate body heat from temperature differences with surroundings, so perspiration becomes the prime means for cooling.



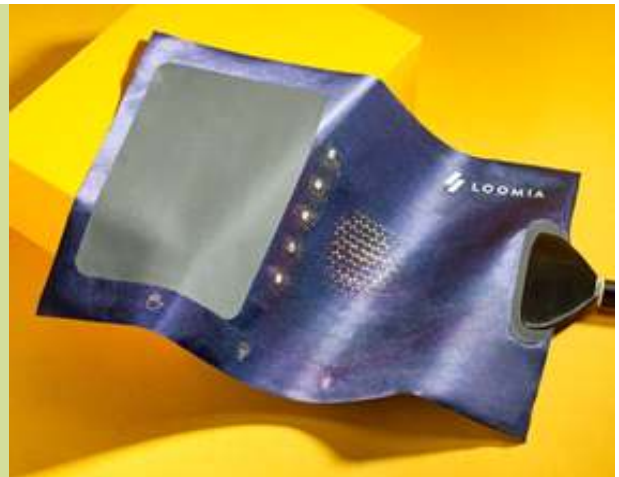
Evaporative thermal resistance testing looks at the ease with which perspiration evaporates and the impact on heat stress. The test found that the Wet Bulb Globe Temperature (WBGT) index, a benchmark for heat stress, showed a corrected regular clothing, and that this Toray fabric lowers heat stress more during work than general-purpose protective clothing. The company accordingly believes that its apparel can help guard against heat stroke.

LIVMOA™3000 offers greater air permeability than items with equivalent dust protection capabilities. Testing also confirmed that this product is better than counterparts at lowering heat stress when work movements generate air flows inside the garment.

[Source - <http://asiantex.net/2021/05/31/toray-5/>]

MOBILTECH - Soft Circuit Technology for Automotive

Technology can combine several functions in one soft circuit system



Loomia Electronics, based in California, has partnered with the Global Alliance Automotive (GAA) to promote the use of soft circuit technology in the automotive industry. Its patented e-textile technology is a soft, flexible, customisable circuit that can be embedded into automotive fabrics such as PU leather, wood veneer and knits and wovens. The technology can provide lighting, user interfaces, sensing and heating for interiors and is distinguished by easy to customise components and lightweight integration.

Loomia's soft circuit systems are a game-changer for the automotive industry. There are 3D touch/HMI/heating/lighting solutions on the market already, but the fact that Loomia is able to combine several functions in one soft circuit system offers our customers on the OEM and system supplier level a freedom of choice and tailoring which is outstanding. The fact that in the end the circuit system can be used as a soft, flexible and

robust fabric is adding extra advantages compared to other individual solutions available on the market.

Loomia's soft circuit systems can be used when standard PCBs (printed circuit boards) aren't up to the task, bringing heating, lighting and sensing to car seats, medical apparel, outdoor gear and more. The company has partnered with a 40-year-old printed electronics manufacturer, Eastprint, to bring its technology to scale. E-textiles are predicted to be a \$5.5 billion market in the next decade but lack the supply chain and manufacturing scale to reach that potential. The LEL (Loomia Electronic Layer) technology is a solution to this problem.

[Source - <https://www.loomia.com/> or <https://www.innovationintextiles.com/smart-textiles-nanotechnology/automotive-inroads-for-loomia/>]

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WELCOME TO NEW MEMBERS

ASTRA TECH INDIA, MAHARASHTRA

Astra Tech represent internationally renowned manufacturers of textile machinery for Technical Textiles and accessories only from Europe. They are: LACOM GmbH, Germany: Hotmelt Laminating and Coating Systems- Multi Purpose, Multi Roller, Gravure Roller and Slot Die, MORCHEM S.A.U., Spain: PUR Hotmelt Adhesives, Solvent Based, Water Based adhesives, cleaners and primers, SCHOTT & MEISSNER, Germany: Ovens, Dryers, Heat Recovery Systems, Heating/cooling calenders, Wet/Dry cooling systems, Cutters, accumulators, Winders, Palletisers and Bonding systems, FARE' S.p.A., Italy: Complete Lines for Spunbond/ Meltblown nonwoven products/complete line to produce all type of fibers including mono and bicomponent fibers & Machines for producing Tapes and RAFIA AND MARIPLAST Spa, Italy: All type of Yarn Carriers for spun and filament yarns including dye tubes for filament/long fibre yarns.

MEHER INTERNATIONAL, GUJARAT

Meher International is the largest distributor / supplier for Industrial yarns. The products range covers High Tenacity Polyester Yarn for sewing threads, industrial fabrics, ropes, fish nets, webbing, slings, tapes & hose pipes and High Tenacity Nylon 6 & 6.6 Yarn for sewing threads, industrial fabrics, ropes, industrial belt tyre cord fabrics, hose pipes & fish nets with a total sales value of 12.91 cr. (FY 2019-20).

ORIPOL INDUSTRIES LTD., ODISHA

Oripol Industries was incorporated in 1984 has been a pioneer in manufacturing packing material for bulk commodities like Fertilizer, Cement etc. In 2012, the company started manufacturing Technical Textiles such as Non-Woven Textiles - Spun Bond & Melt Blown products. They have spunbond and meltblown plant. The product range includes Fruit cover, Insect Protector, Nonwoven UV Fabric - 0.40 cr., Baby diapers, Surgical Disposables, Surgical dressing material, sanitary napkins - 0.62 cr. and Nonwoven ecofriendly bags - 18.68 cr. (FY 2019-20) with a production capacity of 300 MT/year.

GEOFAB INDUSTRIES, GUJARAT

Since last 15 years they are manufacturing and supply the Geotextile products since 2005 under company name Techno Fabrics. From August 2020, the firm have been taken over and renamed to Geofab Industries and from last 2 years they have entered in manufacturing Insect nets & Ground cover i.e., 500 MT/year (FY 2019-20) for Agriculture applications. Their products are woven & nonwoven geotextile, geobags, geotubes, etc. with a production capacity of 1500 MT/year (FY- 2019-20). It's an ISO 9001:2015 certified company. Machineries such as Sulzer weaving m/c, Sectional warping m/c, Rewinding m/c, Rolling m/c, Yarn twisting m/c, Wide width fabric cutting m/c and 3 color printing m/c.

CARREMAN SILVERCREST CLOTHING (INDIA) PVT. LTD., KARNATAKA

Carreman Silvercrest was established during 2006. They are manufacturing highest quality formal suit; it has recently diversified into technical garments which are "essential" in nature. They have machineries such as automated sewing, pressing & cutter m/c and heat seam sealing m/c. Their product range includes Ready garments - 3.72 million/year, PPE coveralls - 1 million/year, Isolation gowns - 5 million/year. Surgical gowns - 5 million/year and Aprons - 20 million/year (FY 2019-20).

PRN TECHTEX PVT. LTD., MAHARASHTRA

PRN TECHTEX provide complete technology & machinery solutions for manufacturing of needle punch, spunlace, wetlaid and thermobonding nonwoven fabric. They also provide solution for textile waste recycling, Airlay nonwoven lines and flat belt ovens. They represent ANDRITZ Asselin Thibeu, ANDRITZ Perfojet, ANDRITZ Laroche and SCHOTT + MEISSNER for India market who are known globally for manufacturing of top-quality machines and providing tailor made solutions as per customers requirement.

TECHNO CEILING PRODUCTS, MAHARASHTRA

Techno Ceiling Products manufacture Non-Woven Polyester Fiber Panels i.e., 1000 MT/year (FY 2019-20) for acoustic purposes under the brand name Techno Acoustic. This Techno Acoustic brand polyester panels are indigenously designed and manufactured for providing acoustic solutions that help in controlling reverberated noise in any living space. Machineries such as bale opener, carding, cross lapper, needle punching, calendar.

ANMOL GLOBAL, GUJARAT

Anmol Global is the manufacturer of Woven & Nonwoven Interlining fabric - 1500 Tons/year & Sublimation paper used in digital printing process - 1000 Tons/ year (FY 2019-20) and have Nonwoven and Coating machines.

ITTA PUBLICATIONS

Name of the Publication	Price*	Type of Publication
ITTA Defence Handbook - Indian Technical Textile Products for Defence - A Global Reach	₹750	Handbook
International Conference on "Technology & Machinery Innovations for Technical Textiles" held on 19th January, 2019	₹2000	Seminar Proceedings (CD-ROM)
3 rd Defence-ITTA Joint Exhibition cum Seminar on Technical Textile held on 22 nd & 23 rd May 2017	₹2000	Seminar Proceedings (CD-ROM)
2 nd Defence-ITTA Joint Exhibition cum Seminar on Technical Textile held on 15 th & 16 th June 2016	₹1000	Seminar Proceedings (CD-ROM)
First Indian Navy-ITTA Seminar on Clothing and Footwear held on 7 th & 8 th January 2016	₹1000	Seminar Proceedings (CD-ROM)
Symposium on Medical Textile -Applications & Opportunities held on 14 th July 2015	₹1000	Seminar Proceedings (CD-ROM)
Symposium on Hi Tech Application Areas of Nonwoven held on 30 th Jan 2015	₹1000	Seminar Proceedings (CD-ROM)
Handbook on Geosynthetics case studies of ITTA Members (2013)	₹750	Handbook *Courier charges extra

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JUNE 2021

OSH INDIA (South)

03-04 June 2021, Bengaluru, India

Web: <https://www.oshindia.com/south-india/>

7th NONWOVEN TECH ASIA 2021 (International Exhibition & Conference)

04-06 June 2021, Delhi, India

Web: <https://www.nonwoventechasia.com/>

INTERNATIONAL NONWOVENS SYMPOSIUM

09-10 June 2021, Lyon, France

Web: <https://www.edana.org/events/nonwovens-symposium/international-nonwovens-symposium>

ITMA ASIA + CITME 2020

12-16 June 2021 in Shanghai, China

Web: <http://www.itmaasia.com>

35TH INTERNATIONAL TEXTILE MACHINERY (ITM) EXHIBITION

22-26 June 2021 in Istanbul

Web: <https://www.itmexhibition.com/itm2021>

JULY 2021

WORLD OF WIPES (WOW)

12-15 July 2021, Georgia, USA

Web: <https://www.worldofwipes.org>

AUGUST 2021

2nd ITTA's Certificate Course on Medical Textiles

02-06 August 2021

Web: <http://www.ittaindia.org>

TECHTEXTIL NORTH AMERICA

23-25 August 2021, North Carolina, USA

Web: <https://techtextil-north-america.us.messefrankfurt.com>

IFAI OUTLOOK CONFERENCE 2021

29-31 August 2021, South Carolina, US

Web: <https://techtextil-north-america.us.messefrankfurt.com>

SEPTEMBER 2021

INDEX

7-10 September 2021, Geneva, Switzerland

Web: <http://www.edana.org>

RISE 2021 (Research Innovation & Science for Engineered Fabrics Conference)

28-30 September 2021

Web: <http://www.edana.org>

UPCOMING EVENTS

OCTOBER 2021

A+A

26-29 October 2021, Düsseldorf, Germany

Web: <https://www.aplusa-online.com>

NOVEMBER 2021

IFAI EXPO

1-4 November 2021, Tennessee, USA

Web: <http://ifaexpo.com>

HYGIENIX

15-18 November 2021, Arizona, USA

Web: <https://www.hygienix.org>

OSH INDIA 2021

25-26 November 2021, Mumbai, India

Web: <https://www.oshindia.com/mumbai/>

TECHTEXTIL INDIA

25-27 November 2021, Mumbai, India

Web: <https://techtextil-india.in.messefrankfurt.com/>

DECEMBER 2021

INDIA ITME 2021

(11th India International Textile Machinery Exhibitions)

8-13 December 2021, Greater Noida

Web: <https://itme2021.india-itme.com>

MARCH 2022

IDEA 2022

28-31 March 2022, Florida, USA

Web: <https://www.ideashow.org/>

FiltXPO™ 2022

29-31 March 2022, Florida, USA

Web: <https://www.filtxpo.com/>

JUNE 2022

TECHTEXTIL 2021

21-24 June 2022, Frankfurt, France

Web: <https://techtextil.messefrankfurt.com/frankfurt/en.html>