



# INDIAN TECHNICAL TEXTILE ASSOCIATION

## E-BULLETIN

*e-magazine for members*

Issue No.82

January-February, 2023

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**"TECHNOTEX 2023"**

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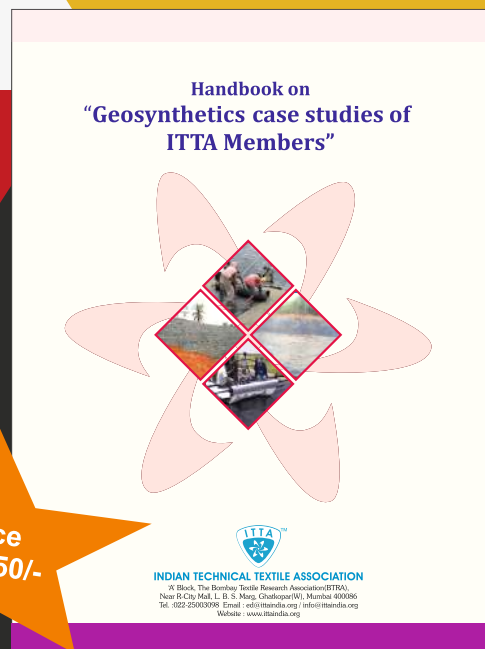


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## International Conference and Exhibition on Reinforced Plastics (ICERP 2023) in Mumbai

FRP Institute in Partnership with ITTA organized the International Conference and Exhibition on Reinforced Plastics (ICERP 2023) on 18th - 20th January 2023 at the Bombay Exhibition Centre, Mumbai. This was the 10th Edition of ICERP event and first time ITTA has become a partner with FRP Institute, Chennai. The composite products are showing very high growth rate in India and therefore, for the benefits of ITTA members, this cooperation will be helpful to resolve various issues of the composite industry in future. Number of ITTA members have exhibited their Products & Services in the exhibition such as JD Techfab Pvt. Ltd., Jushi India Fiberglass Pvt. Ltd., Marktech Composites Pvt. Ltd., Arvind PD Composites, Montex Glass Fibre Industries Pvt. Ltd., Saumit Interglobe Pvt. Ltd., The Bhor Chemicals and Plastics Pvt. Ltd., and Urja Products Pvt. Ltd.

The Objective of the Conference and Exhibition was to bring together all the stakeholders in one platform in the field of Composites. ICERP 2023 was the Gateway to the Indian composites market with a higher growth rate in the next few years as the Indian economy offers opportunities to international companies for making an investment in the Indian Composites Industry. In addition, there was a Composite product display, Awards and Business Meetings.

The conference covered the interesting topics such as Global Market composites Scenario, Flame Retardant Solutions for Composites, Composites in Chemical Sector, An Overview of opportunities for Composites Applications in India in the Road Infrastructure, The application of FRP composites in building engineering, Durability of FRP Buildings, FRP Composites and Fire-retardant Properties, Composites In Marine Applications, Use of 3 Dimensional Composite fabrics for Ballistic Protection, Hybrid Composite Beams (HCB)- Innovative Composite Bridge beams for Highway and Rail bridges, Carbon Efficient Infrastructure with Composites, Graphene and Carbon Nanomaterials for Applications in Composites, The Recyclamine Technology and Recyclable Epoxy Systems for Composites, Lightweight Composites for Automotive Applications, FRP Bridge Construction in India, etc.

ITTA participated in the ICERP 2023 exhibition and had a stall displaying our activities and services. Number of delegates visited the stall, enquired about activities of ITTA, future technical textile courses, conference & exhibition and showed interest to become a member.

### GLIMPSES OF EVENT





## GLIMPSES OF EVENT



# Technotex 2023 held in Mumbai

Ministry of Textiles (MOT) in association with the Federation of Indian Chambers of Commerce and Industry (FICCI), partnered by Indian Technical Textile Association (ITTA) organized the 10th Edition of the series i.e., "TECHNOTEX 2023" from 22nd - 24th February 2023 at Bombay Exhibition Centre, Mumbai. The event provided the common platform for interaction amongst stakeholders from across the global technical textile value chain. It also attracted the participation from all institutional buyers from Army, Navy, Air Force, CISF, CRPF, Paramilitary Forces, Police and Others.

The event was inaugurated by the Hon'ble Union Minister of State for Textiles, Smt. Darshana Jardosh. The other notable dignitaries present in inaugural ceremony - Shri. Rajeev Saxena, Joint Secretary, Ministry of Textiles; Mr. Mohan Kavrie, Chairman & Mentor, FICCI Technotex SME Organizing Committee; Shri. R D Udeshi, Reliance Industries and Shri. Amit Agarwal, Chairman, Indian Technical Textile Association (ITTA). She launched an e-book on Technical Textiles titled 'Technical Textiles Ecosystem in India: Market Overview, Inherent Linkages and Growth Opportunities' on the occasion.

## KEYNOTE SESSION -

The Hon'ble Union Minister for Textiles, Commerce and Industry and Consumer Affairs, Food and Public Distribution, Shri. Piyush Goyal addressed the Keynote Session of Technotex 2023 on 24th February 2023. He said that it is time for the Indian textile industry to focus on scale, quality, speed and higher volume.

He released a Seven BIS Standards and Knowledge Report on global best practices in Technical Textiles on the occasion. Also released the Exhibitors' Catalogue, showcasing the products presented by the Technotex exhibition.

It was followed by the CEO Roundtable which was chaired by the Hon'ble Union Minister. The Hon'ble Union Minister of State for Textiles, Secretary-Textiles, JS and other senior Govt officials from MoT & State Govt. were also present. There were about 75-80 COEs from the leading technical textile industry participated in the discussion.

## KEY AREAS DISCUSSED IN THE CEO ROUNDTABLE -

Shri. Amit Agarwal, Chairman; Shri. Avinash Misar, Vice-Chairman and Dr. Anup Rakshit, ED, ITTA were part of the CEO Roundtable. Highlighted of the points discussed are given below -

1. Last year, a number of new HSN Codes on technical textile items were allocated by the Ministry of Commerce, as per the recommendation from MoT, and published in May 2022 in the latest edition of the Central Excise 2022 tariff book. However, all these new HSN Codes are not included in the list of GST tariff documents. Due to which industry is facing problem.
2. Discussion was held on the new subsidy schemes to be launched by MoT, similar to ATUs, for technical textile industry. The Hon'ble Textile Minister commented that there are number of ATUF cases pending for JIT. Industry should take initiative to complete them at the earliest, then we can plan for new schemes.
3. Inter-ministerial Committee- Couple of years back, 92 technical textile items/applications were identified by the MoT as mandatory to be used in various projects handled by other major ministries, e.g., Agriculture, Road constructions, protective & medical textiles for human safety. A group of Nodal Officers were allocated this work to monitor. But it was observed that over the years this activity has not made any progress. It is therefore requested to revive this activity for the growth of technical textiles.
4. Hon'ble Textile Minister urged the technical textile industry to take max. advantage of the NTTM schemes. He mentioned that on R&D projects we could allocate only Rs 231 Cr. fund out of Rs 1000 Cr. These projects are in partnership with the Industry.

## ROUNDTABLE MEETING -

Number of Roundtable meetings were held during the three days of Technotex23 event. Dr. Anup Rakshit, Executive Director was invited as a Moderator and Speaker for the Two Roundtable Meeting.



1. The topic on “Exploring the Window of Opportunity for Usage of Technical Textiles in PM GATI SHAKTI” was moderated by Dr. Rakshit. The eminent speakers were- Brig Prasanna S Joshi, Chief Engineer (P) Shivalik, Border Roads Organization; Shri. S K Oza, ARE- Geotechnical Engineering Directorate, Research Designs and Standards Organisation; Dr. Vasant G. Havanagi, Chief Scientist & Head - Geotechnical Engineering Division (GE), Central Road Research Institute and Shri. Tiru Kulkarni, President – Geosynthetics Division, Garware Technical Fibres Ltd. The discussion was on infrastructure projects, the expectations & perspective of the different Line Ministries & Departments revolving around the opportunities for Geotextiles such as PM GATI SHAKTI.
2. During the roundtable on Technical Textiles – A User Perspective (Defence & Security Institutions), Shri. Avinash Misar, Vice Chairman, ITTA gave the focused areas of business development on the Protech segment.
3. Another roundtable mtg on “Canvassing on Standards, Quality, Regulatory & Trade Aspects of

Technical Textiles” was moderated by Dr. M S Parmar, Director, NITRA. Eminent speakers are Shri. Dharmbeer Yadav, Scientist C, Bureau of Indian Standards; Shri. Mayur Katiyar, Scientist B, Bureau of Indian Standards; Dr. Anup Rakshit, ITTA and Shri. D. Veerasubramanian, Scientific Officer, SITRA. The discussion in this session emphasized on existing framework and way forward in the context of Standards, Quality, Regulatory & Trade in Technical Textiles.

ITTA has mobilized its member to participate in the exhibition and following members such as Oerlikon Textile India Pvt. Ltd., Venus Safety & Health Pvt. Ltd., Karam Safety Pvt. Ltd. and Reflectosafe. More than 50+ delegates visited the ITTA members' stalls and shown interest in different products that are displayed by members.

ITTA also participated in the TECHNOTEX 2023 exhibition and had a stall displaying our activities and services. Number of delegates visited the stall, enquired about activities of ITTA, future technical textile courses, conference & exhibition and showed interest to become a member.

## GLIMPSES OF EVENT







## ITTA SIGNED MOU WITH SAFETY APPLIANCES MANUFACTURERS ASSOCIATION (SAMA)

Safety Appliances Manufacturers Association (SAMA) is an Association of Occupational Safety Appliances & Services – Providers, Manufacturers, Distributors & Dealers. Enhancing safety awareness and guiding the end-user for optimum usage of Safety Appliances & services, technologies, and equipment. Organizes events & campaigns for the members that boost workplace safety awareness across industries. The objective of MOU is:-

1. To promote Technical Textiles in India and abroad.
2. It will create a common platform to share knowledge and help each other to resolve various industry issues.

# EXPORT-IMPORT PERFORMANCE OF TECHNICAL TEXTILE PRODUCTS OF NOVEMBER 2022

(ITTA Analysis on Ministry of Commerce and Industry Data)

The data on export and import of 215\* technical textile products/items is published as an indicator of foreign trade performance of technical textile industry in India.

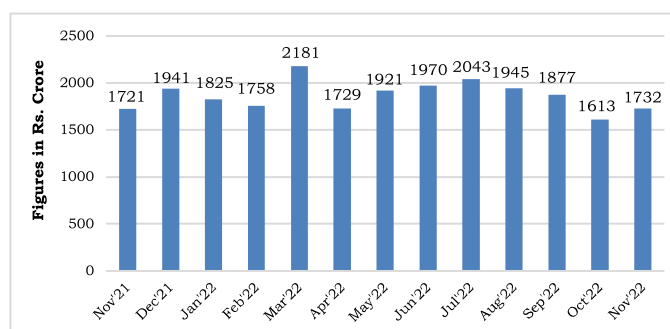
## A. EXPORT PERFORMANCE

(Value in INR Cr.)

Sr. No	Segments	Nov 2021	Nov 2022	% Growth	Apr'21-Nov'21	Apr'22-Nov'22	% Growth
1	Agrotech	58	56	-5%	438	527	20%
2	Buildtech	75	70	-7%	550	601	9%
3	Clothtech	24	26	8%	209	204	-2%
4	Geotech	167	94	-43%	1677	908	-46%
5	Homotech	21	25	18%	172	154	-10%
6	Indutech	229	268	17%	1982	2211	12%
7	Meditech	174	216	24%	1066	1812	70%
8	Mobiltech	96	167	74%	1079	1313	22%
9	Packtech	613	577	-6%	5406	5272	-2%
10	Protech	42	46	9%	348	512	47%
11	Sportech	72	83	15%	597	724	21%
12	Nonwovens	150	104	-31%	1136	873	-23%
	<b>GRAND TOTAL</b>	<b>1721</b>	<b>1732</b>	<b>1%</b>	<b>14660</b>	<b>15111</b>	<b>3%</b>

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

Figure 1 - Monthly Trend of Export Performance



There was a dip in the above export figures from August to September 2022, then the export had shown a slight increase from October to November 2022.

### Top Ten Exported Products in Month of Nov'22 -

SR. NO.	HSN CODES	PRODUCT NAMES	VALUES (IN CR.)
1	63053200	Flexible Intermediate Bulk Containers (FIBC)	522
2	56074900	Other cordage of Polyethylene/ Polypropylene	77
3	87089500	Safety airbags with inflater system	61
4	59039090	Other fabric plated, laminated, coated, impregnated with other plastics	55
5	53101013	Jute Hessian fabrics	53
6	84212300	Oil or petrol-filters for internal combustion engines	51
7	40093100	Tubes, Pipes and Hoses of Vulcanised Rubber Reinforced/ Otherwise combined only with Textile Materials without fittings	51
8	40151200	Gloves, mittens & mitts used for medical, surgical, dental or veterinary purposes	49
9	59031090	Other Fabrics impregnated, laminated, plated, and coated with PVC	44
10	61152990	Panty Hose and Tights of other fibres	43

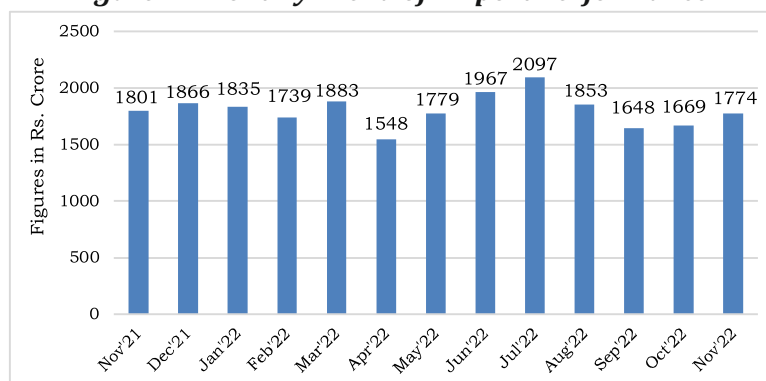
## B. IMPORT PERFORMANCE

(Value in INR Cr.)

Sr. No	Segments	Nov 2021	Nov 2022	% Growth	Apr'21-Nov'21	Apr'22-Nov'22	% Growth
1	Agrotech	40	33	-19%	297	263	-11%
2	Buildtech	150	190	27%	1056	1516	43%
3	Clothtech	35	29	-18%	212	230	9%
4	Geotech	130	121	-7%	1051	918	-13%
5	Hometech	35	29	-17%	242	263	9%
6	Indutech	323	364	13%	2535	2844	12%
7	Meditech	124	118	-5%	752	981	30%
8	Mobiltech	611	529	-13%	4218	4635	10%
9	Packtech	54	60	11%	410	400	-2%
10	Protech	70	96	37%	510	683	34%
11	Sportech	32	48	49%	202	398	97%
12	Nonwovens	197	157	-20%	1428	1452	2%
	<b>GRAND TOTAL</b>	<b>1801</b>	<b>1774</b>	<b>-1%</b>	<b>12913</b>	<b>14583</b>	<b>13%</b>

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

**Figure 2 - Monthly Trend of Import Performance**



India's import of TT products has registered a decrease in month of August 2022, then the import had shown a marginally increase from September to November 2022.

### Top Ten Imported Products in Month of August 2022 -

SR. NO.	HSN CODES	PRODUCT NAMES	VALUES (IN CR.)
1	87089500	Safety airbags with inflater system	145
2	59039090	Other fabric plated, laminated, coated & impregnated with other Plastics	85
3	59032090	Other fabrics impregnated, laminated, plated, and coated with Polyurethane	83
4	59031090	Other Fabrics impregnated, laminated, plated, and coated with PVC	71
5	59021090	Other Tyre cord fabric of nylon or other polyamides	70
6	84212300	Oil or petrol-filters for internal combustion engines	70
7	54022090	Other high tenacity yarn of Nylon or other Polyester (Textured Yarns)	53
8	54021990	Other high tenacity yarn of Nylon or other Polyester (Less than 840 Denier)	47
9	70191200	Glass Rovings	46
10	59021010	Tyre Cord Fabric of high tenacity yarn of Nylon or other Polyamides impregnated with Rubber	46

### \*NOTE -

1. CBIC, MoF, GOI has now incorporated Additional List of 52 Technical Textile Items - 8 existing items & 44 new items in the CUSTOMS TARIFF OF INDIA-2022 effective from 01.05.2022.
2. These 44 HSN codes have not been updated in the GST portal, so industry is not able to use it & data is also not available in MoC&I website. The above report was therefore generated based on 215 (207+8) TT items.



## Agro Textiles Market Size to boost USD 11.9 Billion by 2027 at CAGR 4.7%

Agro Textiles Market size is expected to be valued at US\$11.9 billion by the end of the year 2027 and is set to grow at a CAGR of 4.7% during the forecast period from 2022-2027. The increasing demand from the agricultural sector for a better quality of crops, increased productivity and technological advancements are driving the demand for the agro textile market.

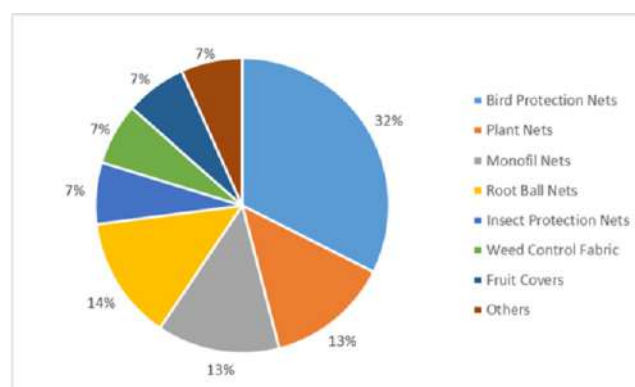
Furthermore, the commercialization of bio-based agricultural products coupled with raising farming standards and advancement in technologies is also driving the demand for the agro textile market. The increased use of agro textile in horticulture and animal husbandry is also increasing the demand for agro textile market. The various types of materials used in agro textiles such as polyethylene, polyester, nylon and other are strong and highly resistant to UV rays and other external factors. This is further widening the demand of the Agro Textiles market.

Amid the Covid-19 pandemic, the agro textile market was hugely affected owing to the various legal and economic restrictions laid by governments across the world. Due to the various restrictions laid down during the pandemic across the globe, the agro textile market was hugely affected. Any movements including movement of people and goods were banned fearing the spread of the coronavirus. This hugely impacted the agro textile market, as the sales crashed down due to the exponential decrease in demand. The situation is however set to improve by the year ending 2021 and the agro textile market is expected to grow.

This IndustryARC report on the Agro Textiles Market highlights the following areas -

- Asia-Pacific market held the largest share in the agro textiles market owing to increase in population in the region coupled with the increase in agriculture activities is driving the demand for agro textiles market.
- The growing agricultural industry is also one of the significant factors driving the agro textile market.
- The increase in demand from the animal husbandry and horticulture industry is driving the demand for agro textiles.
- Amid the Covid-19 pandemic, the agro-textiles market witnessed slow growth owing to the covid-19 pandemic.

**FIGURE: Agro Textiles Market Share, By Product Type, 2021 (%)**



[For More Details visit - <https://www.industryarc.com/Research/Agro-Textiles-Market-Research-503543>]

## Waterproof Breathable Textiles Market Size to boost USD 2.7 Billion by 2026 at CAGR 5.9%

Waterproof Breathable Textiles market size is forecast to reach US\$2.7 billion by 2026, after growing at a CAGR of 5.9% during 2021-2026 due to the growing fitness consciousness and the increasing popularity of stylish and comfortable sports apparel. Waterproof breathable fabrics are designed for use in garments that provide protection from the weather i.e., wind, rain, snow, and also loss of body heat. There is a large variety of

waterproof breathable fabrics which includes densely woven fabrics, microporous and hydrophilic membranes and coatings, their combinations, etc. Multilayered breathable fabrics are also being developed in recent times to enhance the functional characteristic of the fabric.

The area has experienced huge growth in the past

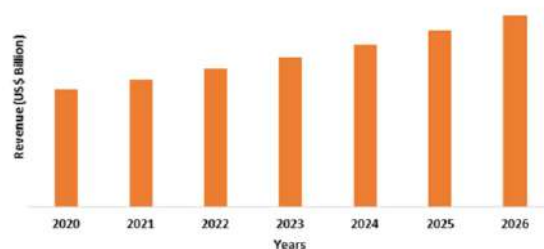
few years as the waterproof-breathable fabrics proved very effective in a number of fields such as active sportswear, mountaineering, military, and various other applications. The outer layer of waterproof breathable textiles comprises of membranes and water repellent solutions or laminates, which are usually made of PTFE, Polyvinylidene Fluoride, Fluoropolymers, expanded PTFE, polyester or polyurethane. The rapid growth of the sportswear industry has increased the demand for waterproof breathable textiles; thereby, fueling the market growth. Furthermore, the trend of going green is also expected to drive the waterproof breathable textiles industry substantially during the forecast period.

This IndustryARC report on the Waterproof Breathable Textiles Market highlights the following areas -

- Asia-Pacific is the fastest growing waterproof breathable textiles market, owing to the numerous textile industries in the region. According to India Brand Equity Foundation (IBEF), the Indian technical textiles market is expected to expand to US\$23.3 billion by 2027.
- PU waterproof breathable textile uses no solvents, so it doesn't produce harmful toxins. This fabric will eventually deteriorate. Being a material that can withstand heat and moisture, there is less overall waste making it one of the most eco-friendly textile choices for sportswear.

- In waterproof breathable textiles the formulation and application of microporous and hydrophilic membranes and coatings have been well researched in different fields of applications. Smart breathable fabrics and fabric based on biomimetics, which has recently gained popularity has started to show great potential. The use of polyester microfilaments in densely woven structure has also proved its worth in waterproof breathability, thermal insulation and windproof character of fabric.
- The major opportunity for this market is high research spending. Among all the products being used in this field, biomimetic clothing is proving to have unlimited scope. Advancing technology and methods can lead to developments in the field of waterproof breathable fabrics which can be used effectively and efficiently in the near future.

**Figure: Europe Waterproof Breathable Textiles Market Revenue, 2020-2026 (US\$ Billion)**



**[For More Details visit - <https://www.industryarc.com/Research/Waterproof-Breathable-Textiles-Market-Research-502932/>]**

## India's airbag market to rise to Rs.6K-7K Cr. by FY2027

India's airbag industry is projected to grow to ₹6,000-7,000 crore by fiscal (FY) 2027, from the current levels of ₹2,400-2,500 crore, at a 4-year compound annual growth rate (CAGR) of 25-30%, as per ICRA. The airbag industry is one of the fastest growing auto component segments and is expected to benefit from the increase in content per vehicle arising from higher regulatory requirements and voluntary increase in the number of airbags per vehicle for enhancing safety, ICRA said.

Earlier, only one airbag per car (driver airbag) was mandatory from July 2019. This increased to two airbags (dual front airbags) for category M1 vehicles (vehicles that can seat up to eight passengers and weigh less than 3.5 tonnes) manufactured from January 1, 2022. Currently, for M1 category vehicles that are going to be manufactured from October 1, 2023, two side airbags and two side curtain airbags

have been mandated, for preventing torso injury for people occupying front row outboard seating positions and prevent head injury for people occupying the outboard seating positions.

"The mandatory content per vehicle for airbag manufacturers is expected to rise from ₹3,000-4,000 currently to ₹8,000-10,000 by October 1, 2023. The average number of airbags per car sold is about three currently, and this is expected to increase significantly post the mandatory implementation of six airbags per car from October 1, 2023. The cost for OEMs could increase further depending on modifications required in cars' structural changes and deployment of additional sensors," said Ms. Vinutaa S, Vice president and sector head, ICRA.

Inflators form about 50% of the total cost of airbags,

while cushions and other components form the remaining. The industry currently imports 60-70% of its components, primarily from overseas parents/joint venture partners, stemming from the lack of indigenous technological capability and absence of adequate volumes. Unless there is adequate backward integration for the incremental airbags expected to be produced, the import content would only increase further going forward.

“There is immense scope for localisation and development of the tier-II vendor ecosystem in this space and increasing volumes could make this economically viable. It can improve margins through greater value addition and ease supply-chain challenges for airbag manufacturers,” added ICRA. Airbag component manufacturing is a part of the PLI scheme, for facilitating increase in

indigenous manufacturing. Given the potential for multi-fold increase in airbags volumes, most airbag manufacturers are in the process of localising key components.

“Capacity building in the next one year is critical to meet regulatory requirements in a timely manner. Several players have started undertaking capacity enhancements in the last 6-8 months to gradually scale up their facilities, and ICRA expects a capex of ~ ₹1,000-1,500 crore in the next 12-18 months for capacity enhancements and localisation measures,” added Ms. Vinutaa.

**[For More Details visit - <https://www.technicaltextile.net/news/india-s-airbag-market-to-rise-to-6k-7k-cr-by-fy2027-icra-284927.html>]**

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Bank Name - Bank of Baroda,  
Chakala Branch, Mumbai - 400093.  
Current Account No - 04220200000491  
IFSC Code - BARB0CHAKAL

### For more information contact:

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## 1. ENGAGEMENTS WITH CENTRAL & STATE GOVERNMENTS

### 1.1. Meeting of TAMC under ATUFS

The 32nd TAMC meetings under ATUFS were held through audio-video conferencing on 31.10.2022 and 14.12.2022 under the Chairpersonship of Ms. Roop Rashi, Textile Commissioner. Dr. Anup Rakshit, ED, ITTA attended the meeting. MOM was circulated to all ITTA members.

Major Decisions Taken in TAMC -

- a) 31 machinery manufacturers/ authorized agents were enlisted under ATUFS.
- b) industrial sewing machine attachment

digitally controlled Button feeder attachment is an attachment for main machine and not a main machine & hence the Decoding of Year of manufacturing is not necessary as per ATUFS guidelines.

- c) To accept self-issued Certificate of Origin from manufacturer for all countries who falls under domain of Regulation EU 2015/2147 subject to submission of Rule Positioning by the manufacturer and submit certificate /countersigned COO from respective Chamber

### 1.2. Meeting to review the list of technical textiles items to be brought under QCO

This is in extension to the meeting held on 29th June 2022 to review the list of 107 technical textiles items to be brought under Quality Control Order (QCO), following which MoT is preparing to release QCOs for 59 items across Geo textiles, Protective textiles, Agro textiles and Medical textiles.

Further on this, BIS has shared the List of additional 34 technical textile items (apart from the 59 items considered already) in the categories of Floor

covering, Packtech, Buildtech, Indutech, Ropes and cordage are to be discussed in the meeting held on 28th February 2023 that may be considered to be brought under QCOs. The meeting was attended by Dr. Anup Rakshit, ED and Shri. Anil Kumar Vasupillai, AED, ITTA. For further approving the 34 technical textile items under QCO, JS, MoT requested the stakeholders to submit the suggestions to MoT, so that a revised list of QCO will be circulated for further views/ comments.

## 2. EVENTS SUPPORTED & CONTRIBUTED BY ITTA

### 2.1. TECH4TEX - Technical Textiles Conclave Punjab was held at Amritsar

Punjab State Council for Science & Technology and Guru Nanak Dev University organised "TECH4TEX" - Technical Textile Conclave Punjab at Amritsar on 28th February 2023. The conclave was organized in collaboration with Technology Enabling Centre, Panjab University; Department of Apparel and Textile technology - Guru Nanak Dev University, Amritsar; Punjab Chapter of CII; Amritsar Group of Colleges & various Textile Associations of Amritsar. Dr. Anup Rakshit, ED, ITTA was invited as Key Speaker in Opening Session in the Conclave.

Dr. Dapinder Kaur Bakshi, Joint Director, PSCST emphasized 'Technical Textiles' as a sunrise sector. She shared that Govt. of Punjab is keen to support the Textile industries of the state to graduate towards Technical Textiles through supporting research & technological interventions. During the Inaugural Session, Dr. Anup Rakshit, ITTA shared insights about National Technical Textile Mission & other government initiatives. Dr. P. J. Singh, Vice Chairman of CII Punjab applauded govt. initiatives and urged the industry to come forward to adopt the emerging technologies and committed support from CII. Dr.

Jatinder Kaur Arora, Executive Director, PSCST during her special address apprised that under Mission Innovate Punjab, consolidation of state's research, innovation & entrepreneurship competence is being carried out. She apprised that 'Translational Research Cohorts' are being set up in key priority areas, Technical textile being one, to promote synergies between Academia & Industry to understand sectoral challenges & their addressal. Dr. PK Pati, coordinator GJCEI- GNDU presented the vote of thanks. Technical session was chaired by Dr. P. J. Singh, VC-CII Punjab and Prof. Manu Sharma, Coordinator, TEC-PU wherein eminent Textile Industry and research institutions deliberated on the existing technologies & the future needs.

About 120 delegates including Researchers, faculty members, Textile Industry representatives, Policy Makers, Central & State Govt. Departments, Startups and other stakeholders across the State participated in the event. In the end of event, Dr. Varinder Kaur, head, Department of Apparel and Textile Technology at Guru Nanak Dev University, honoured all the guests and speakers and also encouraged the textile industry to adopt the technical textiles production in Punjab.

# DEVELOPMENT OF INDIAN STANDARDS ON TECHNICAL TEXTILES

## 1. BIS Sectional Committee Meetings

### 1.1 Technical Textiles for Medtech Applications Sectional Committee, TXD 36

The 20th Meeting of Technical Textiles for Medtech Applications Sectional Committee, TXD 36 was held through video conferencing on 14.12.2022. The meeting was attended by Mr. Nirav Mehta from ITTA and ITTA Members from Ginni Filaments Ltd., Johnson and Johnson, KOB Medical Textiles Pvt. Ltd., Nobel Hygiene, Surgeine Healthcare India Pvt. Ltd. and Surya Textech.

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

- 1) **Ready for Publication** - Following Indian Standard is finalized for publication - i) TXD 36 (19627), Textiles - Medical Respirator
- 2) **Draft Preparation Stage** - Preliminary draft on 'Guidelines for Reprocessing of Multiple-use Healthcare Textiles' will be prepared by BIS.
- 3) Panel was constituted to review/ study the various news report and study report of Toxic link (Delhi based NGO) regarding presence of harmful chemicals in Sanitary Napkins (phthalates and VOCs) on sanitary pad available in the market and provide their recommendation to BIS.

### 1.2 Industrial Fabrics Sectional Committee (TXD 33)

The 17th Meeting of Industrial Fabrics Sectional Committee, TXD 33 was held through video conferencing on 10.01.2023. The meeting was attended by Dr. Anup Rakshit, ED, Ms. Ruchita Gupta, Manager (Technical) from ITTA Secretariat and ITTA Members from Archroma India Pvt. Ltd., Entremonde Polycoaters Ltd., Garware Technical Fibres Ltd., Ginni Filaments, Khosla Profil Pvt. Ltd., Kirti Filtration and Automation Pvt. Ltd., Kusumgar Corporates Pvt. Ltd., Masturlal Pvt. Ltd., Pacific Harish Industries Ltd. & Welspun Pvt. Ltd.

Following points were discussed & decided in the meeting --

1. **Wide Circulation** - Following Draft standards will be issued under wide circulation- IS 6803 - Special proofed canvas and Duck, IS 13510 -

Polyester Cotton blended, rip-stop, IS 14445:1997 - Fabrics for Awnings and Camps, Industrial Filter Fabric and Industrial Nonwoven Wipes.

2. Following new subjects/new areas/gap areas identified for Industrial Fabrics under SNAP 2022-27 are Synthetic hoses & pipes, Synthetic Conveyor & drive belts, AGM Separators for VRLA Batteries, Industrial webbing and slings, Composite Micro Glass fibre and Speciality fiber-based Battery Separators for Lead acid Batteries and Abrasive cloth. ITTA was requested to share the name and contact details of 2-3 manufactures on above products.

### 1.3 Technical Textiles for Clothtech Applications including Narrow Fabrics and Braids Sectional Committee, TXD 39

The 06th Meeting of Technical Textiles for Clothtech Applications including Narrow Fabrics and Braids Sectional Committee, TXD 39 was held through video conferencing on 24.01.2023.

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

1. **Ready for Publication** - Following Indian Standard is finalized for publication - i) Doc No: TXD/39/20359 Cotton Tapes For Berets Mercerized [IS 6672:1989], ii) Doc No: TXD/39/20335 Polypropylene Braided Tapes For Berets [IS 13597:1992], iii) Doc No: TXD/39/20325 Cotton Webbing Rolled Edges [IS 7777:1987], iv) Doc No: TXD/39/20327 Woven Cotton Tapes Light Medium and Heavy Qualities [IS 9675:1980], v) Doc No: TXD/39/20351 Glass And Glass-Polyester Fibre Woven Tapes Part 1 [IS 5352:1999], vi) Doc No: TXD/39/20355 High Density Polyethylene Webbing [IS 10692:1983], vii) Doc No: TXD/39/20358 Silk Viscose Rayon Ribbon Tape [IS 10056:1982] and viii) Doc No: TXD/39/20360 Cotton Tapes Unproofed and Proofed For Ammunition Purposes [IS 6487:1983].
2. IS 8156:2014 Fasteners for consumer goods - Synthetic hook and loop tape (Third Revision) was transfer from PGD 14 to TXD 39.

## MoT clears 15 R&D Projects worth Rs 32.25 Crores under NTTM



Ministry of Textiles (MoT) cleared 15 R&D projects worth around INR 32.25 crores across key strategic areas such as Speciality fibre, Protective textiles, High-Performance Textiles, Geotextiles, Medical Textiles, Sustainable Textiles, and Textiles for Building Materials during the 5th Mission Steering Group (MSG) meeting held under the chairmanship of Shri. Piyush Goyal, Hon'ble Union Minister of Textiles, Commerce and Industry and Consumer Affairs, Food and Public Distribution on 27th January 2023.

Among these 15 R&D projects, 7 Projects of Speciality Fibres, 2 from protective Textiles, 2 from High Performance Textiles, 1 from Geotextiles, 1 from Medical Textiles, 1 from Sustainable Textile, 1 from Textiles for Building Materials was approved.

While addressing the 5th Mission Steering Group meeting, Shri. Goyal said that leading textile manufacturers and institutes should come together to indigenously develop strategic and high-value technical textile products, with the support of the NTTM. Technical Textile Machinery and Equipment development has been a major challenge which needs collaborative interventions from Government, Industry and Academia, including commercialization of the developed machines. The

General Guidelines for indigenous development of machines and equipment in the application areas of technical textiles under NTTM is a strong-foot forward and needs to be utilized the industry at its fullest, he further emphasised.

Shri. Goyal urged the premier public and private academic and engineering institutes and Industries to apply under the education and internship guidelines already launched under NTTM on priority basis.

He also reviewed the progress of previously sanctioned R&D projects under NTTM during the meeting. In addition, the way forward and action plan for propelling India's technical textiles sector was discussed and recommended including Wider Field-level Outreach Programmes for Research in Fundamental, Applied, and Machine Development across TRAs, Premier Institutes and Industry Associations; Development of new BIS standards; Enact new Quality Control Orders (QCOs); Rationalization of HSN Codes; Mandation of technical textiles' items across Line Ministries and Departments; and Identification of specialized skill requirements in the sector.

[Source - <https://pib.gov.in/PressReleasePage.aspx?PRID=1894189>]

## Guidelines for Technical Textiles Degree Programme in UG & PG issued

The Ministry of Textiles (MoT) has given clearance to two guidelines, namely, 'General Guidelines for Enabling of Academic Institutes in Technical Textiles- for Private & Public Institutes' and 'General

Guidelines for Grant for Internship Support in Technical Textiles (GIST)', under the NTTM.

General Guidelines for Enabling of Academic Institutes in Technical Textiles- For Private & Public



Institutes will enable New Technical Textiles Degree Programme (UG & PG) and updating of existing conventional degree programmes with new papers of Technical Textiles. MoT intends to develop ecosystem in technical textiles not only in textile field but other disciplines of Engineering like Civil, Mechanical, Electronics etc., Agriculture institutes, Medical Colleges, Fashion institutes.

The Guidelines cover the funding of upgradation/enhancement of laboratory equipment, training of lab personnel and specialized training of Faculty members of the relevant department/specialization in the University/Institute, with respect to the undergraduate (UG) and Postgraduate (PG) degree programmes. This will cover Public funded institutions and also private institutions having NIRF ranking.

The detailed General Guidelines for Enabling of Academic Institutes in Technical Textiles- For Private & Public Institutes are available on official website of Ministry of Textiles under NTTM web page- <https://www.texmin.nic.in/technical-textiles-mission>. The online applications may be submitted on the dedicated online education application portal under <http://nttm.texmin.gov.in/> only, from the date of opening of portal (10th January 2023) till 2nd March 2023 (17.00 hrs).

The implementation of General Guidelines for Grant for Internship Support in Technical Textiles (GIST)

shall be conducted in two phases, (i) Empanelment of the eligible Companies, (ii) Internship Program, wherein the grant of upto INR 20,000 per student (B. Tech students in 2nd/3rd/4th Year of the relevant Departments/ Specializations of eligible private/public institutes) per month shall be provided to the empaneled companies, subject to the maximum period of 2 months of funding support for internship period. The eligible agencies will be textile industries with turn over more than 10 crores, Textile Research associations under Ministry and textile machinery manufactures.

The detailed 'General Guidelines for Grant for Internship Support in Technical Textiles (GIST)' are available on the official website of Ministry of textiles under NTTM web page - <https://www.texmin.nic.in/technical-textiles-mission>. The applicant companies may submit their applications by cut-off date 23.02.2023.

Smt. Shah emphasized that the Ministry has also issued guidelines for inviting research proposals for indigenous development of Technical Textiles machinery/Tools/Equipment& Instruments, which allows participation from private industries also. Premier research organizations like DRDO, CSIR have also been approached for inviting research proposals. Guidelines for promoting Start-ups in technical textiles are under formulation.

[Source - <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1888868>]

## CBIC extends levy of Anti-dumping Duty on - Jute products imported from Nepal, Bangladesh and Fishing Net exported from



Anti-dumping Duty (ADD) on imports of "Jute Products comprising of Jute Yarn/Twine (multiple folded/cabled and single), Hessian fabric, Jute sacking bags and Jute sacking cloth" from Nepal and Bangladesh has been extended for five years as per the Notification No. 33/2022-Customs (ADD) dated 30th December 2022 issued by Central Board of Indirect Taxes and Customs (CBIC), Ministry of

Finance, Govt. of India. These duties were imposed following recommendations of the commerce ministry's investigation arm Directorate General of Trade Remedies (DGTR).

The DGTR, in its probe in September last year, concluded that there is continued dumping of these products from Nepal and Bangladesh and the imports are likely to enter the Indian market at

dumped prices in the event of cessation of existing duty. It had recommended continued imposition of the anti-dumping duty on the imports to remove injury to the domestic industry.

The duty ranges between USD 6.3 per tonne and USD 351.72 per tonne. It is applicable to products like jute yarn/twine, sacking bags and hessian fabric. While the DGTR conducts the probe and recommends the duty, the finance ministry takes the final decision to impose the same. Jute products are primarily used in packaging; geotextiles like landfill covering, and embankment reinforcement; protection of rooting plants; handbags, and all types of stiff bags.

The Central Board of Indirect Taxes and Customs (CBIC), Ministry of Textiles, Govt. of India has extended the levy of Anti-dumping Duty (ADD) on

“Fishing Nets” originating in or exported from China PR till 09th July 2023 as per the Notification No. 01/2023-Customs (ADD) dated 06th January 2023.

Previously, the CBIC issued Notification No. 20/2018-Customs (ADD) dated April 10, 2018, which imposed a definitive anti-dumping duty (ADD) for a five-year period on imports of fishnet or fishing nets coming from China or Bangladesh.

**[Source-<https://www.cbic.gov.in/htdocs-cbec/customs/cs-act/notifications/notfns-2022/cs-add2022/csadd33-2022.pdf> OR <https://kashmirreader.com/2023/01/11/india-extends-anti-dumping-duty-on-jute-products-imported-from-nepal-bangladesh/> & <https://taxinformation.cbic.gov.in/view-pdf/1009609/ENG/Notifications>]**

## IIT Delhi Develop Technology for Industrial Scale Production of Nanofibres



A team of researchers at the Indian Institute of Technology Delhi's (IIT-D) SMITA Research Lab has developed a technology for the industrial scale production of nanofibres that is superior to the commercial technologies available. The pilot equipment has been validated in an industrial set-up for producing nanofibres at commercial scale. The technology has been granted patents in India, UK and USA.

Continuous mass production of nanofibres over a wide width, high rates of deposition, uniform deposition, production of low diameter fibres and adhesion are some of the challenges encountered during the deposition of nanofibres on substrates. The researchers from the textile and fibre engineering department, could address all such challenges and develop a scalable prototype.

There are a few manufacturers outside India that make continuous electrospinning machines.

However, their products suffer from non-uniform deposition when low add-ons are required, which is an essential requirement for a cost-effective solution. In India, there is no company engaged in the mass production of nanofibers.

IIT-D research group is the first one to develop technology for continuous production of nanofibres over a large width of substrate suitable for various applications. The high-efficiency fuel and oil nanofibre filters developed were found to be stable during the mechanical fabrication process and then during the life of the filter. The technology is a game changer for meeting tighter standards of vehicular pollutions, for protection of individuals from rising air pollution, and health care devices, etc.

**[Source - [https://home.iitd.ac.in/show.php?id=152&in\\_sections=Press](https://home.iitd.ac.in/show.php?id=152&in_sections=Press)]**

## Maharashtra Govt. to draft its new textile policy by March 2023



The Maharashtra Government will formulate its new textile policy by March end 2023, revealed by Mr. Chandrakant Dada Patil, Maharashtra Textile Minister on 30th January 2023.

Inaugurating the Clothing Manufacturers Association of India's (CMAI) 76th National Garment Fair (NGF), informed that the present textile policy of Maharashtra has been operative from 2018 to 2023, and will be expiring on 30th March 2023.

The Maharashtra Govt. has appointed a committee of 30 various stakeholders, including

recommended to extend the present textile policy for further three months, he added. According to Mr. Patil, the committee will submit its final report by March-end and based on these recommendations, the Maharashtra government will form its new textile policy. Mr. Patil further informed that the Govt. of Maharashtra is planning to set up a garment trading hub in Mumbai on the lines of China's Guangzhou and Turkey's Istanbul.

**[Source-<http://www.uniindia.com/news/west/maha-govt-to-draft-its-new-textile-policy-soon-minister/2906834.html>]**

## Reliance Industries launches HEXaREL™ fabric technology in Mumbai



Reliance Industries Limited has launched HEXaREL™ as a new fabric technology designed for apparel and home textiles at Tecoya's Fibres & Yarns Exhibition at the Jio World Convention Centre in Mumbai.

HEXaREL™ technology-enabled textiles are designed to provide superior thermal conductivity, moisture management, and many other properties that give the wearer an, “unmatched feeling of comfort and hygiene.”. Textiles manufactured with the new technology will be cool to touch, anti-bacterial, anti-viral, mosquito repellent, anti-odor, and antistatic among other features.

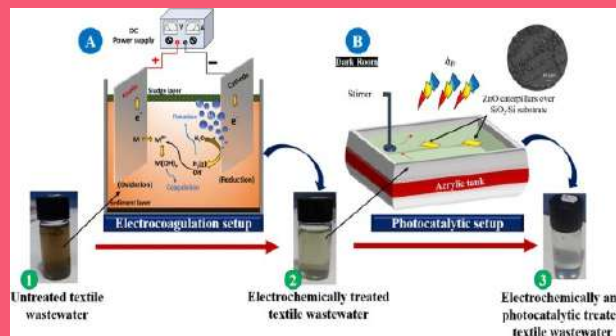
This superlative combination of advantages makes HEXaREL™ based fabrics/garments

multifunctional, responsive, and adaptive. The six-in-one discernible benefits of HEXaREL™ appeal to the consumer's positive bias, ensuring better buy-offs from retail shelves. In line with Reliance's customer-centric focus, HEXaREL™ not only provides a superior product but also development and marketing support and solutions to all its prime customers.

**[Source - <https://in.fashionnetwork.com/news/Reliance-industries-launches-hexarel-fabric-technology-in-mumbai,1479362.html>]**



# IIT Jodhpur researchers develop two-step process for treating textile wastewater



The Indian Institute of Technology (IIT) Jodhpur's researchers have developed a two-step process for treating textile wastewater before discharging them into natural water bodies. The treatment includes the electrochemical processing of the sample in the first step, followed by the real-time photocatalytic degradation using novel ZnO caterpillars outgrown over carbon nanofibers in the second step.

The technology possesses several advantages, reducing the constraints of each process when applied separately, along with the complete degradation of pollutants, and no secondary pollution. The coloured wastewater that emerged from textile industries can be processed with the explored technique and reused the treated water for various other purposes, said Dr. Ankur Gupta, Assistant Professor, Department of Mechanical Engineering, IIT Jodhpur.

Talking about the need for the research, Dr. Gupta, said, "We need to think about recycling the wastewater & reusing the water wherever possible." There is an escalating need to address the problem associated with contaminated water which is the consequence of a huge number of steel and textile

industries that release a large amount of polluted wastewater. Degradable organics, heavy metals, dyes, surfactants, and pH-controlled chemicals are among the contaminants found in textile effluents (TEs).

The salient features of the research include:

- The integrated process provides high organic matter removal efficiency with better reduction of harsh colours present in the real textile samples.
- A facile fabrication approach is used to produce ZnO caterpillars outgrown over carbon nanofibers on Si substrate using the vapour-liquid-solid method.
- Real-time textile wastewater degradation is monitored using the IoT technique by integrating a NodeMCU microcontroller board and a pH sensor.

[Source - <https://apacnewsnetwork.com/2023/01/iit-jodhpur-researchers-develop-two-step-approach-for-textile-industry-based-wastewater-recovery/>]



## ITTA SIGNED MOU WITH THE TEXTILE INSTITUTE (TI)

Textile Institute (TI) is a unique organisation in textiles; clothing and footwear incorporated in England by a Royal Charter granted in 1925 and is a registered charity. The Institute has Individual and Corporate Members in up to 70 countries. The membership covers all sectors and all disciplines in textiles, clothing and footwear with current focus on Technical Textiles. Benefits of the MOU are:-

1. ITTA Members can become member of TI at a discounted rate of 30%
2. To jointly organise International workshop, seminar or symposium for technical textile companies.
3. To support major events of Technical Textiles Industries organized by ITTA and TI members.



## *SPORTECH - Seamless Knits in Ski Outerwear*

### Seamless Knitted base layers in Ski outerwear



The X-Alp ski touring outfit designed by ODLO, Switzerland extends the Swiss brand's expertise in seamless knitted base layers to ski outerwear for the first time and received a 2022 ISPO Award at the sports gear exhibition in Munich in December.

The PFC-free, waterproof and windproof jacket consists of a knitted outer fabric that is extremely elastic in all directions thanks to its construction and is supported by a waterproof and highly breathable elastic membrane. The particularly quiet and soft hardshell material weighs only 120gsm and can be packed smaller than conventional hardshells. Zoned functions knitted into the face fabric provide

further weight reduction, enhanced breathability and combined with the underlaid waterproof membrane - a unique visual effect.

With the X-Alp Performance Knit 3L jacket and pants they have employed innovative warp knitting and waterproof membrane technologies to deliver new levels of comfort and freedom of movement, while still delivering 3L protection from the elements.

[Source-<https://www.innovationintextiles.com/fibres-yarns-fabrics/seamless-knits-debut-in-ski-outerwear/>]

## *PROTECH - Recycled Laminates for workwear*

### Recycled laminates for protective workwear



A new product technology for protective workwear with a significantly reduced environmental impact is being launched under the Gore-Tex Professional brand by W. L. Gore & Associates, Inc., USA. The environmental footprint of the waterproof, windproof and breathable 'Soft Gore-Tex Shell' technology is greatly reduced through 3 levers: durability of materials, textiles derived from

recycled PET bottles and, finally, a textile circular knitting and solution dyeing process. In total, this results in almost 54% CO2 savings, about 64% less water consumption, and reduced chemical usage. In addition, the circular knitting process not only reduces CO2 emissions, but the hard shell laminates are soft to touch.

For the production of the new 2-layer and 3-layer Soft Gore-Tex Shell laminates, W. L. Gore, relies on recycled PET drinking bottles. The use of recycled materials in the outer textile or inner lining significantly reduces the proportion of new raw materials and the consumption of water and energy.

The production processes also contribute to a lower footprint: for example, the outer material as well as the lining of the 3-layer Soft Gore-Tex Shell laminate are made using the knitting process, which is less energy-intensive than the warp-weft weaving process. Another advantage of this process is the high wearing comfort and the soft drape and hand of the laminate.

The inner lining of the laminate is also solution dyed.

In this dyeing process, the dye is added to the polymer before the yarn is spun. The yarn thus obtained is permanently depth-dyed and can be knitted directly into a textile. Since no further dyeing processes are required, consumption of CO<sub>2</sub>, water and chemicals is reduced accordingly. Solution dyeing uses up to 90% less water than conventional dyeing methods. Chemical use is reduced by 60% and CO<sub>2</sub> emissions by up to 58%. In addition, solution dyed textiles are 10 times more lightfast than traditionally dyed textiles and therefore do not fade as quickly.

[Source - <https://www.textiletechnology.net/technical-textiles/news/w.l.-gore-recycled-laminates-for-workwear-save-over-50-co2-33469>]

## SMART TEXTILES - Fever Detecting Hat

### Smart textiles used in fever-detecting hat



Researchers at the Louisiana State University (LSU), Department of Textiles, Apparel Design and Merchandising is exploring ways to use “smart clothing” to track newborns' temperatures. In this regard, a body-tracking wearable technology in the form of a hat is being developed through

thermochromic yarn that changes color based on body temperature. The hat will monitor the infant's temperature and its threads will change colors to alert others if there is a temperature spike. Using thermochromic technology may reduce the need to monitor a newborn's temperature using thermometers and other invasive technologies. The hat also has the potential to reduce the number of times the infant is disturbed for a temperature check.

The hats are designed to have a band that combines functional and cotton yarn to detect temperature without influencing its comfort. Advanced knitting

technology makes it possible to explore functional yarns in the medical field. The prototype for the hat was produced using flatback knitting machines. These versatile machines are fully computer-controlled, allowing the operator to customize patterns and tension.

The thermochromic yarn threshold temperature can be changed by adding additional yarns or changing the knitting pattern. The research explores different yarn colors, knitting structures and threshold temperatures to determine which combination produces the desired color-changing effect.

[Source - <https://www.textiletechnology.net/technical-textiles/news/lsu-smart-textile-that-detects-fevers-33457#:~:text=A%20body%2Dtracking%20wearable%20technology,there%20is%20a%20temperature%20spike.>]



### Recycled nylon 66 recovered from silicone- coated airbags



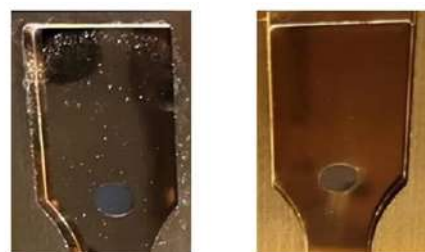
Toray based in Japan has developed technology to create a recycled nylon 66 recovered from discarded silicone-coated airbags offering the same flowability and mechanical properties as virgin nylon 66 injection moulding grades.

Airbag fabric can be coated or non-coated with silicone. Recycling of the non-coated fabric is common practice; Refinverse Group, Inc. was the first in Japan to achieve commercial-scale

silicone-coated fabric recycling. It strips the silicone from airbag fabric scrap cuttings, after which these are washed.

Toray obtains material from the Refinverse Group, which it compounds with certain additives to create its high-quality recycled nylon. It is introducing the new material under the Eco-use brand name. An issue with recycling through stripping and washing has been the traces of silicone that fail to be eliminated during the process, degrading the resin and contaminating the moulds during processing. Another issue has been that the high viscosity of the airbag yarn limits applications in thin-wall and other injection moulding processes requiring high fluidity.

Toray incorporated certain additives that prevent any residual silicone resin from migrating to the surface of moulded products, and at the time, considerably reducing mould adhesion. The result is



White silicone spots on injection mold surface (left) after 20 shots

a recycled nylon 66 resin with flowability and mechanical properties on par with those of virgin material. Toray plans to start full-fledged sample work in April 2023 or later, and ultimately looks to procure recycled raw materials at its overseas sites to establish a global supply system. It will also explore commercialising recycled nylon 66 products made from airbags recovered from end-of-life vehicles.

[Source - <https://www.mrchub.com/news/406045-toray-develops-recycled-nylon-66-recovered-from-silicone-coated-airbags/>]

## COMPOSITES - Technology for Recycling Carbon Fiber

### New Technology for recycling Carbon fiber



Asahi Kasei, in collaboration with the National Institute of Technology at Kitakyushu College and the Tokyo University of Science, has developed a new method for recovering carbon fiber from vehicle composites. According to the company, because of their unique blend of stiffness, mechanical strength, and light weight, carbon fiber reinforced polymers (CFRPs) are extremely appealing for a variety of industries in challenging application domains (GFRPs). However,

because to the difficulty in separating the carbon fibers from the resin at the end of their useful lives, CFRPs are expensive and difficult to recycle.

Asahi's newly discovered approach, which eliminates the need for cutting up carbon fiber during previous recycling methods, enables the fiber to be extracted effortlessly, producing continuous strands with qualities that are identical to those of virgin fiber.

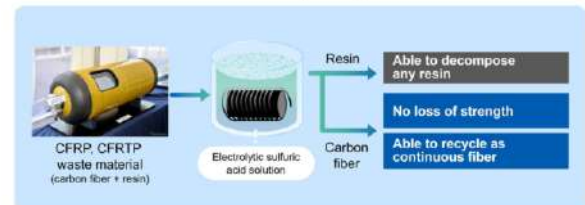
It is based on an electrolyzed sulphuric acid solution that totally decomposes the resin it is embedded in while maintaining the original strength and continuous nature of the fiber. This makes it possible for it to continue being used in high-performance applications and offers an affordable, circular solution to the problem of carbon fiber plastic composites' end-of-life. A carbon fiber-reinforced thermoplastic unidirectional (CFRTP-UD) tape developed by Asahi is also based on recycled continuous carbon fiber and Leona polyamide resin.

This CFRTP-UD tape, which is stronger than metal and may be used on car frames and bodies, makes it

Asahi Kasei's Method for Recycling Carbon Fiber



Asahi Kasei's Method for Decomposing CFRP and CFRTP Waste



possible to recycle end-of-vehicle parts into new, distinct parts. By about 2030, the company hopes to have practical use.

[Source - <https://www.asahi-kasei.com/news/2022/e221214.htmls>]

## BUILDTECH - FR Fabric Bond Tape

### Flame Retardant Fabric Bond Tape



US-based Perigee Direct has launched the Trivantage fabric bonding tape. Available in a range of styles including standard, fire-retardant and black and white, the welding tape is designed to weld together fabric panels to create strong, stitch-free seams.

It works with a range of heat-sealable fabrics such as RF (Radio Frequency) bar, hot wedge, and

other hot air welding equipment. The tape has a polyurethane base and has been extensively tested

for its strength. The product is offered exclusively through Trivantage and each roll is 100 yards long (300 feet). It can be used with vinyl, polyester, acrylic, and other compatible fabrics.

Ideal for use in awning, marine, and industrial fabric projects, the fabric bond welding tape eliminates the need for sewing and using colour-matching thread.

[Source - <https://www.technicaltextile.net/news/us-perigee-direct-unveils-flame-retardant-fabric-bond-tape-285304.html>]



## **N.U.M.S TECHNOFASHIONS INDIA PVT. LTD., TAMIL NADU**

N.U.M.S Technofashions are manufacturing knitted garments for medical applications. They have machineries such as Single Thread Single Needle m/c, overlock m/c, Flatlock m/c, Automatic Printing m/c 6 Pallet, Buttoning m/c (Air & Power), Stain Remover m/c, Cone Winding m/c, Automatic Fusing m/c Single Pallet & 4 Pallet, Strapping m/c and Band Knife, Straight Knife & Round Knife Cutting m/c. Their current production line produces one million knitted pet shirts which are used after surgical operations of dogs.

## **DEVKINANDAN AGRO NET, GUJARAT**

Devkinandan Agro Net, located in Gujarat, is the Manufacturer, Supplier and Exporter. They have manufacturing facility with Monolayer extruder m/c and Raschel knitting m/c. They are manufacturing Agriculture Shade net, Knitted Cloth, Green Net, Safety Net, Green House net, Mandap Decoration Net and Tent House Net. Current production is about 200 Ton/year.

## **ECONET INDUSTRIES, GUJARAT**

Econet Industries, located in Rajkot, Gujarat is the manufacturer of Warp Knitted fabrics. Having machineries such as Extrusion line, Raschel Knitting m/c, Folding, Plating & Rolling m/c and Hydraulic Bale Press. Their production line produces 420 MT/year warp knitted fabrics for making shade nets for Agriculture and Horticulture and Scaffolding nets.

## **AMIRAJ PLASTIC INDUSTRIES, GUJARAT**

Amiraj Plastic Industries, founded in 1999 having manufacturing facility with Plastic Processing Extrusion m/c, Raschel Shade Net m/c and Rope Making m/c. Their product range includes warp knitted fabric for making Agro Shade Nets - 720 MT/year and Plastic Ropes - 3000 MT/year.

## **POSITEX PVT. LTD., DELHI**

Positex was founded in 2005 with a manufacturing base for specialised Polyester and Nylon based fabrics for Sportswear Knits - 600 Tons/month. They are a Sportswear fabric manufacturer, Jacket and Activewear fabric supplier catering to all leading International and Domestic Brands in the category. They have machineries such as Inspection m/c, Packing m/c and Lab testing equipments.

## **POLYSPIN EXPORTS LTD., TAMIL NADU**

Polyspin Exports Ltd., (PEL) commenced commercial production in 1990. This was the first Indian company to produce Leno Bags for export. They have machines such as 120 mm and 135 mm Extruder, Shuttle Circular Loom, Needle m/c, Air Compressor, Folding m/c, Lamination m/c, Cutting m/c, Printing m/c, Stitching m/c & Packing m/c. After 7 years, PEL successfully produced FIBC Bags in 1997. After the commercial production of FIBC bags - 10,800 MT/year, PEL stopped the production of small bags.





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Dark Green

#### **Our contact details**

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# UPCOMING EVENTS

DATES	EVENTS NAME	PLACE	WEBSITE
<b>DOMESTIC EVENTS</b>			
18-20 January 2023	<b>ICERP 2023 (International Conference &amp; Exhibition on Reinforced Plastics)</b>	Mumbai, India	<a href="https://icerpshow.com/">https://icerpshow.com/</a>
18-19 January 2023	<b>OUTLOOK™ (Nonwoven, Personal care and Hygiene Conference)</b>	New Delhi, India	<a href="https://www.edana.org/events/outlook/outlook-india">https://www.edana.org/events/outlook/outlook-india</a>
20 January 2023	<b>Incontrol! India 2023</b>	New Delhi, India	<a href="https://bch.in/incontrol-india/">https://bch.in/incontrol-india/</a>
02-03 February 2023	<b>FILTREX INDIA</b>	New Delhi, India	<a href="https://www.edana.org/events/filtrex/filtrex-india">https://www.edana.org/events/filtrex/filtrex-india</a>
22-24 February 2023	<b>TECHNOTEX 2023</b>	Mumbai, India	<a href="https://www.technotexindia.in/">https://www.technotexindia.in/</a>
01-04 March 2023	<b>ITMACH INDIA 2023</b>	Gujarat, India	<a href="https://www.kdclglobal.com/itm-ach-india-2023.html">https://www.kdclglobal.com/itm-ach-india-2023.html</a>
21 <sup>st</sup> April 2023	<b>ITTA &amp; WRA JOINTLY - NATIONAL CONCLAVE ON SPORTECH - The Future of Sport Textiles and Accessories Industry in India</b>	Delhi, India	<a href="https://ittaindia.org/">https://ittaindia.org/</a>
06-07 July 2023	<b>OSH INDIA SOUTH</b>	Chennai, India	<a href="https://www.oshindia.com/">https://www.oshindia.com/</a>
12-14 September 2023	<b>TECHTEXTIL INDIA 2023</b>	Mumbai, India	<a href="https://techtextil-india.in.messefrankfurt.com/mumbai/en.html">https://techtextil-india.in.messefrankfurt.com/mumbai/en.html</a>
28-30 September 2023	<b>9<sup>TH</sup> EDITION NONWOVEN TECH ASIA (International Exhibition &amp; Conference)</b>	Delhi, India	<a href="https://www.nonwoventechasia.com/">https://www.nonwoventechasia.com/</a>
18-20 October 2023	<b>WORLD OF CONCRETE 2023 EXPO</b>	Mumbai, India	<a href="https://www.woc-india.com/">https://www.woc-india.com/</a>
23-25 November 2023	<b>OSH INDIA</b>	Mumbai, India	<a href="https://www.oshindia.com/">https://www.oshindia.com/</a>
<b>INTERNATIONAL EVENTS</b>			
10-13 January 2023	<b>HEIMTEXTIL FRANKFURT</b>	Frankfurt, Germany	<a href="https://heimtextil.messefrankfurt.com/frankfurt/en.html">https://heimtextil.messefrankfurt.com/frankfurt/en.html</a>
05-08 February 2023	<b>GEOSYNTHETIC CONFERENCE</b>	Kansas, USA	<a href="https://geosyntheticsconference.com/">https://geosyntheticsconference.com/</a>
20-23 February 2023	<b>4<sup>th</sup> GEOAFRICA (African Regional Conference on Geosynthetics)</b>	Cairo, Egypt	<a href="https://geoafrica2023.org/">https://geoafrica2023.org/</a>
02-05 March 2023	<b>IWA OUTDOOR CLASSICS 2023</b>	Nuremberg, Germany	<a href="https://www.iwa.info/en">https://www.iwa.info/en</a>
28-30 March 2023	<b>INTERTEXTILESHANGHAI HOME TEXTILES SPRING EDITION</b>	Shanghai, China	<a href="https://intertextile-shanghai-hometextiles-spring.hk.messefrankfurt.com/shanghai/en.html">https://intertextile-shanghai-hometextiles-spring.hk.messefrankfurt.com/shanghai/en.html</a>
18-21 April 2023	<b>INDEX™23</b>	Palexpo, Geneva	<a href="https://www.indexnonwovens.com/en/">https://www.indexnonwovens.com/en/</a>
10-12 May 2023	<b>TECHTEXTIL NORTH AMERICA</b>	Atlanta, Georgia	<a href="https://techtextil-north-america.us.messefrankfurt.com">https://techtextil-north-america.us.messefrankfurt.com</a>
04-06 June 2023	<b>OUTDOOR BY ISPO 2023</b>	Munich, Germany	<a href="https://www.ispo.com/en/outdoor">https://www.ispo.com/en/outdoor</a>
08-14 June 2023	<b>ITMA 2023</b>	Milan, Italy	<a href="https://itma.com/">https://itma.com/</a>



DATES	EVENTS NAME	PLACE	WEBSITE
17-20 July 2023	<b>WORLD OF WIPES (WOW) (International Conference)</b>	Atlanta, Georgia	<a href="https://www.worldofwipes.org/">https://www.worldofwipes.org/</a>
30 July-04 August 2023	<b>ICCM 2023 (International Conference on Composite Materials)</b>	Belfast, UK	<a href="https://iccm23.org">https://iccm23.org</a>
16-18 August 2023	<b>INTERTEXTILESHANGHAI HOME TEXTILES AUTUMN EDITION</b>	Shanghai, China	<a href="https://intertextile-shanghai-hometextiles-autumn.hk.messefrankfurt.com/shanghai/en.html">https://intertextile-shanghai-hometextiles-autumn.hk.messefrankfurt.com/shanghai/en.html</a>
12-13 September 2023	<b>RESEARCH, INNOVATION AND SCIENCE FOR ENGINEERED FABRICS (RISE) 2023</b>	North Carolina, USA	<a href="https://www.riseconf.net/">https://www.riseconf.net/</a>
17-21 September 2023	<b>12<sup>th</sup> INTERNATIONAL CONFERENCE ON GEOSYNTHETICS (ICG)</b>	Roma, Italy	<a href="https://www.12icg-roma.org/">https://www.12icg-roma.org/</a>
10-12 October 2023	<b>FILT<sup>TM</sup>XPO 2023</b>	Chicago, USA	<a href="https://www.filtxpo.com">https://www.filtxpo.com</a>
24-27 October 2023	<b>A+A 2023</b>	Germany	<a href="https://www.aplusa-online.com/">https://www.aplusa-online.com/</a>
13-16 November 2023	<b>HYGIENIX 2023</b>	New Orleans, LA	<a href="https://www.hygienix.org">https://www.hygienix.org</a>
14-16 November 2023	<b>WATERPROOF MEMBRANES 2023</b>	Cologne, Germany	<a href="https://www.ami-events.com/event/8c445995-58fb-4630-9b2d-c9e1c8f07305/summary">https://www.ami-events.com/event/8c445995-58fb-4630-9b2d-c9e1c8f07305/summary</a>
19-23 November 2023	<b>ITMA ASIA + CITME</b>	Shanghai, China	<a href="https://www.itmaasia.com/">https://www.itmaasia.com/</a>
22-25 April 2024	<b>IDEA 2024</b>	Florida, USA	<a href="https://www.ideashow.org">https://www.ideashow.org</a>
23-26 April 2024	<b>TECHTEXTIL 2024</b>	Frankfurt, Germany	<a href="https://techtextil.messefrankfurt.com/frankfurt/en.html">https://techtextil.messefrankfurt.com/frankfurt/en.html</a>
04-08 June 2024	<b>ITM 2024 (International Textile Machinery Exhibition)</b>	Istanbul, Turkey	<a href="https://www.itmexhibition.com/itm2024">https://www.itmexhibition.com/itm2024</a>
17-20 June 2024	<b>WORLD OF WIPES (WOW) (International Conference)</b>	Minneapolis, USA	<a href="https://www.worldofwipes.org/">https://www.worldofwipes.org/</a>