PLEXCONCIL - The Plastics Export Promotion Council

PLEXCONNECT

Edition 7, January 2020

Fibre Reinforced Plastics - A Bright Outlook

Export Credit Insurance Support

Pipes & Fittings - Panel Of The Month

Invoice Factoring in Trade Finance

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THE PLASTICS EXPORT PROMOTION COUNCIL

3rd Edition

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Foremost, on behalf of the Committee of Administration and all my colleagues at Plexconcil, I would like to extend very warm wishes to all our readers and members for the New Year 2020. Here is wishing you all a year filled with joy, prosperity and the best of health.

I am pleased to inform you that the year ended on a high note for us with the successful completion of yet another edition of CAPINDIA. We would like to thank all participants, visitors and buyers, the team of all four councils and all our vendor partners who lent their unstinted support to the show. As I see CAPINDIA grow each year, I realize that it is a proud testimony to all the effort and hard work that goes into its making. It is also my pleasure to share with you all that not only the show, but the RBSM at CAPINDIA was also a huge success. 362 buyers from 53 countries attended the RBSM, and we received business enquiries worth over USD 7.59 million and onsite orders worth USD 2.65 million in the plastics segment alone.

The event was inaugurated by the Chief Guest, Smt. Meeta Rajivlochan, IAS, Addl DGFT Mumbai and also attending were Deputy Secretary - EP(CAP) Section, Ministry of Commerce, Shri Sunil Ranjan, Under Secretary - EP(CAP) Section, Ministry of Commerce, Shri Vijay Shanker Pandey and other officials from Ministry of Commerce as well as the Chairmen of Chemexcil, Capexil and Shefexil. I would like to especially mention here that during her address, she touched upon two points that I believe are very integral to the growth of our industry. The first one being the need for digitization and AI in our manufacturing processes. This is especially significant as the future of any sustainable business lies in digitization as it leads to not only operational efficiency, but also reduces energy consumption, guarantees product quality and consistency as well as allows for larger capacity outputs or customization. All aspects that will place our industry, on par with those of the developed world. Secondly, she talked about huge logistics costs faced by exporters and stated that the Department of Commerce was working on reducing costs from the nearly 14% that we are at to around 10% that is in line with global standards. Infrastructure is a very critical aspect of our business as it has a direct impact on the growth of exports. All in all, it was a very heartening experience and as we commence our journey into yet another year, it has renewed our confidence in the future of our industry.

In this issue of the magazine, we have taken a detailed look into the FRP Composite segment. FRP is one of the product segments that has wide applications and we believe more needs to be done to create awareness of the excellent business opportunities that the segment has to offer. We also look at Turkey as an export destination. Turkey is one of the few countries with whom India enjoys a trade surplus and offers excellent potential for our export growth.

We bring you glimpses of CAPINDIA, India Pavilion at K 2019 as well as other interesting read on Automotive Plastics, Credit Export Insurance, Invoice Factoring in Finance, news and more. Do keep sending us your feedback or suggestions.

Once again, here is wishing you continued success in the year ahead and thank you for your faith in us. Happy New Year 2020 !!

Warm regards,

Ravish Kamath
Chairman

Council Activities November 2019

Consultative Meeting Organized By Govt Of West Bengal For Bengal Business Conclave on 06th November, 2019 at Nabanna, Kolkata

The Government of West Bengal organized a consultative meeting for Bengal Business Conclave on 6th November, 2019 at Nabanna, Kolkata. Dr. Amit Mitra, Hon'ble Minister-in-Charge for Finance, Industry, Commerce & Enterprises, Information Technology and Electronics, Micro, Small & Medium Enterprises and Textiles delivered the keynote address. Senior Officials from Government of West Bengal were also present at the session. Mr NIlotpal Biswas, RD represented the Council at this meeting.

FICCI National Executive Committee Meeting (NECM) organized by FICCI – Southern Region on 06th November 2019 at Hotel ITC Grand Chola, Chennai

FICCI National Executive Committee Meeting (NECM) was held in Chennai on 06th November 2019 at Hotel Grand Chola, the meeting started off with special address by Thiru. M.C. Sampath, Hon'ble Minister for Industries, Govt. of Tamil Nadu, where the Hon'ble Minister briefed the participants about Tamil Nadu's strong performance in manufacturing & services sector and also its strong footprint in other diverse sectors such as aerospace & defence sector for effective growth of Industrial units in Tamil Nadu.

The well-known industrialists present at the meeting urged the State government to promote the proposed petrochemical investment region in the Cuddalore-Nagapattinam region. Mr. Janardhanan Ramanujalu Co-Chairman of FICCI's Petrochemical Industry Committee informed that the government had already notified 45 villages to be part of the petrochemical hub, post that there has been no action. There is a need to promote the region to attract investments into the region. Mr. Ramanujalu, who is also vice president and regional head, South Asia, SABIC India Pvt. Ltd, said that other states have been aggressively developing their petrochemical region and it is important for Tamil Nadu to also put the development of the petrochemical hub on a fast lane.

Noted Industrialist A.C. Muthiah also pointed out that long ago, Southern Petrochemical Industries Corporation (SPIC) along with Madras Refineries had planned a huge petro-chemical complex to manufacture 'aromatics' including raw materials like purified terephthalic acid (PTA) used to produce synthetic fibres. However, he said that the project could not take off due to litigation and urged the State government to look at possibilities of reviving it.

Thiru. M.C. Sampath, Hon'ble Minister for Industries, Govt. of Tamil Nadu said that the State is keen on developing the petrochemical region and is taking all possible measures for the benefit of trade and economy.

The meeting had senior representatives from various industries and trade associations and the Council was represented by Mr R. Dayanidhi, Assistant Director in the above said meeting.

Meeting with Mr. Anil Agarwal, Additional DGFT to discuss withdrawal of MEIS on FIBC w.e.f. 1st August, 2019 – November 8, 2019 – Udyog Bhawan, New Delhi

Plexconcil Regional Director, Mr. Sanjiv R. Dewan met Mr. Anil Agarwal, Additional DGFT, with regard to the MEIS withdrawal on FIBC with effect from 1st August, 2019. Mr. Agarwal informed that there were budget constraints and discussions were taking place at the highest level and a decision would be communicated duly. He also emphasized that data be urgently furnished to enable fix rates under RoDTEP.

Human Hair Association-cum-Human Hair & Hair Products Panel Meeting – 09th November 2019 – Chennai

Mr. Benjamin Cherian, Panel Chairman (Human Hair & Hair Products Panel, Plexconcil) and President, Human Hair and Hair Products manufacturers and Exporters Association of India (HHHPMEAI), convened this meeting with members of the Human Hair Association on Saturday, 09th November, 2019, at the Presidency Club, Chennai.

Mr. Cherian briefed members on the steps taken by the Association with support and assistance from Plexconcil in the last several years to represent and lobby for the ban on export of goli/chutti hair, and for preventing the under-invoicing and smuggling of human hair to Myanmar and China by unscrupulous traders, including Myanmar and Chinese nationals (which has hit genuine exporters and also resulted in major loss of jobs), through various representations made to the Commerce Secretary and the Zonal Additional DGFT (through Plexconcil), and various personal visits for Ministry meetings, and the recommendations obtained as a result of such an effort.

Steps to be taken up to follow up on the same were discussed, and Mr. Cherian further added that the industry was expecting G.O. on the same to be issued within 10 days. Suggestions/recommendations were to be made to the Plastics Export Promotion Council by the Panel on export marketing support required, by identifying and recommending appropriate International Trade Fairs for the sector to participate in, to grow the exports of Human Hair and Hair Products.

Mr. Jaswanth Soundarapandian, Regional Director, and Mr. R. Dayanidhi, Assistant Director, attended the above meeting.

Eastern Regional Committee meeting of the Council held in Kolkata on 13th November 2019

Eastern Regional Committee meeting of the Council was held in Kolkata on 13th Nov 2019 mainly to discuss the following agenda points:

- Export performance of plastic goods (Eastern Region) for the period April to Sept. 2019.
- Council's export promotion activities for the FY 2019-20.
- Issues & concerns w.r.t export of plastic goods from ER
- Matters pertaining to RODTEP for the plastic products

Review council's membership position

Mr Prasan Lohia, Regional Chairman welcomed the members and talked about challenging times due to recession, trade protectionism, overall trade going down and falling economic growth, need for focused efforts to sustain our growth and India's plastic export registering negative growth. He also informed about CAPINDIA 2019 exhibition.

PLASTIVISION INDIA 2020 Exhibition Roadshow on 13th November 2019 at Rajkot:

AIPMA organized Plastvision India 2020 Roadshow - Business ka Booster Meet at Sayaji Hotel Rajkot on 13th November, 2019. This event was supported by Saurashtra Plastics Manufacturers Association and Rajkot Plastic Manufacturer's Association. Mr Mayur D Shah, Vice President, AIPMA welcomed all the dignitaries and urged them to be present at the PLASTIVISION INDIA 2020 Exhibition scheduled to be held in Mumbai from 16th to 20th January, 2020 at the Bombay Exhibition Centre, Mumbai. He shared some of the most inspiring aspects of the exhibition such as recycling, Industry 4.0 and waste management which are involved in this edition of exhibition.

Mr. Kishore Sampat, Vice President- Finance, AIPMA informed delegates during presentation that more than 25 countries and more than 1 lac sq. Mtr area including 1500 plus exhibitor and 2.5 lac visitors will feature in this 11th edition of Plastic exhibition. Mr Mansukhbhai Kamani, President, Saurashtra Plastics Manufacturers Association encouraged entrepreneurs and industry representative of Saurashtra region to take maximum advantage of this influential international exhibition by becoming part of it. The program had senior representatives from various industries and trade associations of Sauratshtra, Bhavnagar and Dhoraji Region. The Roadshow was attended by Mr. Naman Marjadi, Assistant Director, Regional Office-Ahmedabad.

Interactive session on "Iran Trade Payment Mechanism from IDBI Bank Ltd" followed by Roadshow of 5th CAPINDIA 2019 on 14th Nov, 2019 at Ahmedabad:

Payments pertaining to Iran Trade are facilitated in INR mainly through UCO Bank which is one of the Nodal Banks designated by the Government. However, exporters have also reported issues while transacting through UCO Bank. In this regard, PLEXCONCIL in joint association with CHEMEXCIL were approached by Trade Finance Dept., IDBI Bank Ltd, Mumbai who have also offered to facilitate India-Iran Trade Settlements in INR. To further address member's queries, Interactive session on Iran Trade Payment Mechanism from IDBI Bank Ltd was organized at Exhibition Hall (Inter Dye Asia), Gujarat University Convention Centre, Ahmedabad on 14th November, 2019. Mr Lalit Bhandari, GM & Senior Trade Finance Head and other team members from IDBI bank gave details related to process flow and operational aspects in Indo-Iran Bilateral Trade (Rupee Payment Mechanism).

The session was followed by a presentation on 5th Edition of CAPINDIA - India's Leading Buyer Seller Meet Cum Exhibition. Mr S.G Bharadi-Executive Director, CHEMEXCIL, invited participants to take part in the Exhibition and benefited from the "Make in India" initiative to boost export for the Plastics & chemicals Industry. He also emphasized on Reverse buyer seller meet and advantage it can provide to participating industries to boost their exports, promote networking and trade collaborations. The Council was represented by Mr. Naman Marjadi, Assistant Director, Regional Office-Ahmedabad in the above program.

Awareness Seminar On Sabka Vishwas (Legacy Dispute Resolution) Scheme 2019 And Cap India Promotion on 14th November 2019, Kolkata

PLEXCONCIL in association with CHEMEXCIL and IPF organized the above seminar in Kolkata on 14th November, 2019. Mr. Partha Santra, Superintendent, CGST, Kolkata, Mr. Debdudal Chatterjee, Superintendent, CGST, Kolkata made a presentation on the Sabka Vishwas (Legacy Dispute Resolution) scheme 2019. Presentations were followed by an interactive session. Mr Amit Pal, COA Member delivered the welcome address.

Meeting for consideration of MAI proposals for 2020-2021 in respect of ASEAN countries –November 14, 2019 – Udyog Bhawan, New Delhi

The meeting was chaired by Shri. ShyamalMisra, Joint Secretary, to discuss proposals of EPCs and other trade promotion bodies under the MAI Scheme for the financial year 2020-2021.

Council's proposal for participation in VietnamPlas 2020, was approved at the meeting. JS also suggested that our Council should come up with more proposals in the ASEAN region.

Mr. Sanjiv R. Dewan, Regional Director represented the Council at the above meeting.

Regional Committee Meeting of Northern Region – November 14, 2019 – Council's Delhi Office, Nehru Place

The Regional Committee of the Northern Region of the Council was chaired by Mr. Vikram Bhadauria, Regional Chairman (North) at the Council's Delhi office. Some of the key issues that were discussed during the meeting were as below:

I. Review of Export Performance of the major product categories exported from North India and discuss issues hampering growth in exports from North India

- While reviewing the export performance, it was noted that there has been a decline of 3.9% in total plastic exports for the period April-September, 2019, with plastic raw materials registering a negative growth of 19.18%. Regional Chairman mentioned the decline in international prices of raw material as one of the reasons for the negative growth, and was optimistic that growth should pick – up as international prices were expected to rise, going forward.

- On issues hampering growth in exports, the issue regarding "Single Use Plastics" and the representation from M/s Vacmet India Ltd., Agra in this regard was discussed. RD informed that the EP (CAP) Division had already taken up this issue, and written to the Ministry of Environment, Forest and Climate Change, for taking appropriate action in the matter. Members present were also requested to furnish data urgently with regard to RoDTEP, for which the Council has been sending reminders.

II. To discuss the effectiveness of Export Awareness Seminars held in the Northern Region and suggest future course of action

- RD informed that the issue of Export Awareness Seminars/Membership outreach programmes was discussed at a recent meeting held in Mumbai, where it was acknowledged that these seminars had not proved to be effective, as far as getting those who had attended these events to become members of the Council was concerned. However, the decision taken in Mumbai was that we may continue with this activity, with a view to create greater awareness about the benefits of Council membership, and motivating the processors to enter exports.

- Mr. Manoj Agarwal enquired, how many of those who attended the export awareness seminars in Jaipur and Ludhiana, had become members of the Council. RD informed that till date none of those who had attended the seminars had taken up membership, although some had shown interest in taking up membership sometime in the future. The result of such events in other regions was disappointing as well. It was then felt that funds allocated for this activity be put to better use, and instead a networking event be done with Trade Commissioners of select Foreign Missions located in Delhi. Regional Chairman was requested to approach the Chairman/ED to explore the possibility of having the funds reallocated for this activity.

III. Engagement with Foreign Missions in Delhi to enhance trade in Plastics

- Regional Chairman briefed the Committee and shared his thoughts on the proposed engagement with Foreign Missions in Delhi. The purpose and objective for holding such an event was highlighted as below:

- To focus on Foreign Missions of regions like Eastern

- Europe, North Africa, CIS and SAARC, which give us a trade opportunity in excess of $100 billion. There is huge untapped potential for export to these regions, which needs to be realized.Given India's cultural and historical relations with many of these regions, it was felt,countries from these regions should be engaged with more vigorously. It was expected that this event would generate a lot of interest amongst the plastic exporters towards these regions. Valuable insights were expected to be obtained during the networking with the representatives of the Foreign Missions, which would also help the Council in evolving a strategy to boost plastic exports to these regions.

- Participants from India would include select large Indian plastic processors already engaged in exports (or their association representatives), representatives from GOI and representatives from the Council.

- The Indian plastics processors would be invited from all over the country and it was felt, that given the guest list and stature of the event they would make the effort and expense to come to Delhi.

- It was proposed to keep the guest list of upto 60 people so that a closer engagement with Trade representatives, GOI officials & Industry could be facilitated.

- Regarding the funding of the event, it was felt that part of the budget allocated for the outreach programs could be used for this function, since the two outreach programs done so far in the Northern Region, had not yielded any result so far, with regard to enrolment of new members.

IV. Mobilising exhibitors for CAPINDIA 2019 from the Northern Region

- Regarding mobilising exhibitors for CAPINDIA 2019, from the Northern Region, the Vice Chairman informed that he had requested his suppliers to par-

ticipate in the event, and suggested members present to also request their suppliers for participation.

- Vice Chairman also informed about having contacted the major plastic associations such as OPPI, to request their members to participate in CAPINDIA. Members present were requested to use their contacts in the industry to get plastic processors to participate in CAPINDIA.

- Mr. VikramBhadauria, Regional Chairman (Northern Region), Mr. Arvind Goenka, Vice Chairman, Mr. ManojAgarwal, M/s Kanpur Plastipack Ltd., Kanpur, Mr. Pranay Kumar, M/s VasudhaEcofriends Projects Pvt. Ltd., New Delhialongwith Mr. Sanjiv R. Dewan, Regional Director were present at the meeting.

Meeting on Export Promotion for MSMEs in Engineering & Automotive Sector organised by MSME Development Institute – Chennai on 15th November 2019 at MSME, Guindy-Chennai

MSME Development Institute – Chennai organised for an interactive meeting on Export Promotion for MSMEs in Engineering & Automotive Sector, during the meeting MSME DI briefed the participants about various initiatives taken by the development institute for promoting exports from MSME sector. The Chennai Development Institute has been given the task of exploring MSMEs in Engineering & Automotive sector and diversifying their operations more into export markets for further sustainable growth amongst the sector.

The participants and MSME DI officials had fruitful discussions for effective implementation. The meeting was attended by Mr. R. Dayanidhi, Assistant Director from the Council.

Meeting with stakeholders to discuss Scheme for Setting up of Plastic Parks – November 19, 2019 – Shastri Bhawan, New Delhi

The meeting was held under the Chairmanship of Secretary (C&PC), to discuss additional points for framing up new Guidelines relating to the Scheme for setting up of Plastic Parks. Secretary informed that the progress of the four existing plastic parks, had so far been disappointing, and one of the factors affecting the success of this Scheme, was the poor location of these plastic parks. He informed that the Government had already spent more than Rs.100 crores on this Scheme, and this meeting had been convened to essentially debate on the interventions that are required for the success of this Scheme.

During the course of the meeting, it was observed, that only one unit was currently operational in the plastic park at Tamot, Madhya Pradesh, out of the four existing plastic parks. It was also observed that an assured supply of raw materials was essential for plastic parks to succeed. Representative from AIFTMA, also stated that each state needs to clearly come out with its policy on plastics, particularly with regard to single use plastics, EPR and plastic waste management, in order to remove uncertainty amongst plastic processors on these issues. Any fresh investments by plastic units would only take place, if such uncertainties were addressed.

It was finally concluded that amendments were required in the existing plastic parks policy, and a committee should be formed to suggest amendments to the same. The Committee should include prominent plastic associations, FICCI, CIPET, and associations involved in plastic recycling.

Mr. Arvind Goenka, Vice Chairman & Mr. Sanjiv R. Dewan, Regional Director represented the Council at the above meeting.

Meeting regarding Future Vision and Research in Chemicals & Petrochemicals Sector November 20, 2019 – Shastri Bhawan, New Delhi

The meeting was held under the Chairmanship of Secretary (C&PC), to discuss the future direction for undertaking research in the Chemical and Petrochemical sector and constitute a coordination committee to decide the Terms of Reference for the same. The need for this arose, as it was felt that while there was a lot of good work being done in R&D and innovation in educational institutions and research institutes, there was however, very little engagement between them and the industry. As a result, there were a lot of ideas, which were not commercially realized, resulting in missed opportunities for industry.

It was decided at the meeting to have a web portal, where all the research institutes, laboratories etc. could upload their research. It was also suggested that the requirements of industry be identified, and research should be carried out as per these requirements, so that research is focused, and satisfies the needs of the industry. Plexconcil highlighted the fact that the plastics processing industry was in dire need of technology upgradation, in order to increase export competitiveness and boost export of finished plastic goods. Research should be directed towards introducing newer technology, which should cut down production costs, and enable the industry to be more competitive in the international market. Council also highlighted the need for having BIS standards for finished plastic goods, in order to prevent import of sub-standard plastic goods into the country.

Mr. Arvind Goenka, Vice Chairman& Mr. Sanjiv R. Dewan, Regional Director represented the Council at the above meeting.

Meeting to interact with plastic industry to address their concern regarding issues in getting land – November 29, 2019 – Udyog Bhawan, New Delhi

The meeting was chaired by Additional Secretary, DPIIT. Joint Secretary (C&PC), informed about the Plastics Parks Scheme of the Government, and mentioned that there were currently six plastic parks that had been set up, out of which one was complete in all aspects. However, he informed that the Scheme had not really taken off, and there was currently only one unit that was operational in the park.

It was informed at the meeting that the Delhi-Mumbai Industrial Corridor Development Corporation (DMICDC) had informed about land availability in the industrial clusters under the DMIC project at four cities. These were the Dholera Industrial city in Dholera, Gujarat, Aurangabad Industrial city, in Aurangabad, VikramUdyogpuri, in Ujjain, Madhya Pradesh, and Integrated Industrial Township Greater Noida, at Greater Noida, Uttar Pradesh. The area available as part of industrial land use in these cities ranged from 332 acres in Greater Noida, U.P. to 1759 acres in Dholera, Gujarat. However, the cost of land varied from Rs. 1980/sqm in Ujjain to Rs. 5100/sqm in Greater Noida, which it was felt was too high. It was suggested that the Government could instead lease out the land at a reasonable rent, which would encourage the plastic processors to set up their units there. Our Council also suggested some other facilities that should be made available at these industrial areas, in order to attract plastic processors there. The suggestions made were as below:

- Infrastructure should include accommodation for employees.
- Warehousing space for raw materials and finished goods.
- Common effluent treatment plant.
- Plastic Waste recycling unit should be there and subsidized by the government
- Direct Power from the grid should be made available at a reasonable rate. For units which opt for solar energy the government should give some additional incentives, in order to encourage the same.
- We already have interest subvention for exports. However interest subvention should also be there for financeraised for setting up the unit.

Dr. Nayak from CIPET suggested that CIPET would have a skill centre and a testing facility at these industrial areas. The Council suggested that land should be close to the port, in order to minimize logistics cost and make plastic exports more competitive. Keeping this in mind, it was decided to develop the industrial land available at Dholera, Gujarat, for the plastics sector. It was decided to initially allocate around 200 acres land, and have most of the common facilities suggested above. Land at a reasonable rent, power directly from the grid, and interest subvention for setting up plastic processing units, would be offered as mentioned by the Additional Secretary, apart from the common facilities suggested above.

Mr. Arvind Goenka, Vice Chairman. Mr. Pranay Kumar, M/s Vasudhaecofriends Projects Pvt. Ltd., and Mr. Sanjiv R. Dewan, Regional Director, represented the Council at the meeting.

PLASTIVISION INDIA 2020 EXHIBITION ROADSHOW - 30th November 2019 - Chennai

The Plastivision India 2020 Roadshow was held on Saturday, 30th November 2019, at the Savera Hotel in Chennai. Shri. Jayadev Meela, Co-Chairman, PVI2020 accorded special welcomed to the Chief Guest, Shri CA P.G. Sadguru Das, President of Hindustan Chamber of Commerce, on behalf of AIPMA. He also welcomed all the dignitaries and urged them to be present at the PLASTIVISION INDIA 2020 Exhibition, scheduled to be held in Mumbai from 16th to 20th January, 2020, at the Bombay Exhibition Centre, Mumbai.

Shri. S. Rakkappan, President, Tamil Nadu Plastics Manufacturers Association (TAPMA) who co-ordinated all the 6 roadshows in Tamil Nadu, for AIPMA, urged their members to be part of Plastivision India 2020. He also said that TAPMA was jointly promoting a Polymer Park in Thiruvallur District in Tamil Nadu, and also another project to recycle waste with support from MSME DI and invited recycling units to utilize and participate in the CFC.

Shri. Kailash Murarka, Chairman, NEC, PVI 2020, made a presentation and stated that the 2020 edition will feature over 1500 Exhibitors, and over 2,50,000-plus visitors were expected to visit PVI 2020, which will see a 20% increase in space, 230 more exhibitors and 11 additional countries exhibiting in the 2020 edition of the Exhibition, as compared to the previous edition held in 2017. The 2020 edition of the Show will also feature New technologies, a Start-up Zone, IT Solution Providers, a Recycling Pavilion, Solar and Industry 4.0 which will throw light on Robotics and Digitization of business models for the future. The event video was also screened at the roadshow.

The Chief Guest, Shri. CA P.G. Sadguru Das, encouraged industry stalwarts and entrepreneurs to aim big and achieve big in the future. The Council's Chennai office represented the Council in this roadshow.

India Pavilion @ K 2019

India Pavilion @ K 2019

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CAPINDIA 2019

Show Round Up

The fifth CAPINDIA opened with much pomp and fervour on December 2nd, 2019 at the Bombay Exhibition Centre in Goregaon, Mumbai. India's largest sourcing and networking event for plastics, consumer & packaging materials, chemicals, building & construction material, mining & mining products, allied machinery, shellac, forest and allied products, CAPINDIA is held under the aegis of the Department of Commerce, Ministry of Commerce & Industry, Government of India (GOI), supported by Department of Chemicals and Petrochemicals, GOI, and organised jointly by PLEXCONCIL, CHEMEXCIL, CAPEXIL & SHEFEXIL.

The event was inaugurated by Smt. Meeta Rajivlochan, IAS Additional DGFT, Mumbai in the presence of Shri Ravish Kamath, Chairman – PLEXCONCIL, Shri Ajay Kadakia, Chairman – CHEMEXCIL, Shri R. Veeramani, President – CAPEXIL & Shri Ashvin K Nayak, Chairman – SHEFEXIL. Shri. Sunil Ranjan, Deputy Secretary and Shri. Vijay Shankar Pandey, Under Secretary, Ministry of Commerce & Industry, Government of India also attended the inauguration.

The 5th Edition concluded successfully, generating on-site business over USD 7 million and enquiries worth USD 76 million for the four participating councils, over the 3 days. Plastics exporters garnered onsite orders with USD 2.6 million and enquiries worth USD 7.59 million. It is expected that CAPINDIA has set in motion, for the four participating councils, to receive a cumulative business of an estimated USD 200 million in the coming year.

(In Picture - Left to Right: Executive Director – Chemexcil, Mr S G Bharadi, Executive Director – Shefexil, Dr Debjani Roy, Chairman – Shefexil, Mr Ashvin Nayak, Chairman – Chemexcil, Mr Ajay Kadakia, Chief Guest, Smt. Meeta Rajivlochan, IAS, Addl DGFT Mumbai, Chairman – Plexconcil, Mr Ravish Kamath, Chairman – Capexil, Mr R. Veeramani, Deputy Secretary - EP(CAP) Section, Ministry of Commerce, Shri Sunil Ranjan, Under Secretary - EP(CAP) Section, Ministry of Commerce, Shri Vijay Shanker Pandey, Section Officer - EP(CAP) Section, Ministry of Commerce, Smt Shilpa Kaushal, Executive Director – Plexconcil, Mr Sribash Dasmohapatra, Director – CAPEXIL, Mr. V. R. Chitalia)

Image Courtesy: Modern Plastics

This expansive 'Made In India' showcase of India's manufacturing capacities and capabilities (including its abilities to service overseas markets), held over 3 days hosted manufacturers/exporters, who showcased hundreds of products to 350+ overseas buyers from 45 countries and was spread over an impressive 10,000 sq. mtrs.

The event was attended by Domestic & Overseas buyers, International Agents and Distributors seeking market representation from Indian exporters, End Users seeking raw materials for captive consumption, Private Label Buyers, Merchant Exporters, Industrial and Marketing Consultants, Central and State Government Departments & Agencies and many more.

"Plastics sector has demonstrated double-digit growth in the past two years. However, there is still further lot of scope to grow our exports further. India has largest base of scientific and IT qualified professionals, however the IT solutions are offered offshore to international countries to the domestic consumption in countries abroad. The MSME sector which employees to over 445 Mn workforce which is over 72 percent of working population in India. The IT solutions, Internet of Things and Artificial Intelligence is yet to be implemented in its full scale in the MSME sector.

Logistics cost in India at 14% is much higher than even countries such as Japan at 11% and US at 9-10% and have a huge impact on exporters' costs. To reduce the logistics cost and bring it down to around 10%, the Department of Commerce has begun an exercise on developing sector specific indices starting with the export industry that will also allow India to break into the list of top 30 countries in the World Bank Logistics Performance Index. India ranked India 44 in 2018 from 54 in 2014. The index will help identify a cost efficient way of transporting inputs and finished goods. The initiative will also provide an added impetus to the Chemicals, Plastics and Petrochemicals sectors that have a lot of scope to grow. We need to look at how much further growth we can add to these sectors." - ***Smt. Meeta Rajivlochan, IAS, Additional DGFT, Mumbai, Chief Guest at the event.***

"5th CAPINDIA 2019 is a very significant calendar event for international buyers and it gains greater significance as our Honourble Union Commerce & Industry Minister Shri Piyush Goyal has set a target to triple India's exports from USD 331 billion to USD 1 trillion within a short span of 5 years. India's plastics exports in 2018-19 were USD 10.89 billion (up 24% from exports in 2017 -18 of USD 8.85 billion). Globally plastics is a 1 trillion-dollar economy and this is just enough to demonstrate the vast potential that the segment holds for our fraternity. The plastics industry in India today, is one of the most significant contributors to the world's economic development and its application has diversified to include a variety of key segments such as automotive, construction, electronics, healthcare, textiles, FMCG, and more. India is exporting to more than 210 countries, across the globe and India's plastics industry employs over 5 million people and comprises over 50,000 manufacturing units." - ***Ravish Kamath, Chairman, Plexconcil***

Reverse Buyer-Seller Meets (RBSMs) for MSME exporters with 400+ international buyers from 48 countries

One of the largest RBSMs held for the trade in the country, CAPINDIA provided the perfect networking platform for its participants and international buyers. Existing as well as budding Indian exporters directly engaged with more than 350+ international buyers from 48 countries during the Reverse Buyer-Seller Meets (RBSMs) held during the Fifth CAPINDIA. Organized under the MAI Scheme of the Ministry of Commerce, RBSMs held during CAPINDIA have proven highly effective in fruitful interactions between international buyers and Indian exports, thereby substantially promoting new business development for participants.

While the event received interest from over 700 international buyers, 400 leading buyers were selected to attend the CAPINDIA RBSM after stringent selection process to ensure the right Buyer-Seller Match. The RBSM included a series of meetings of Buyers & Sellers from all participating Councils.

International buyers hosted during the event were from Nigeria, Ethiopia, Tanzania, Kenya, Uganda, Ghana, South Africa, Zimbabwe, Mauritius, Burkina Faso, Viet-

nam, Fiji Island, Singapore, Indonesia, Myanmar, Thailand, Malaysia, Russia, Ukraine, Kyrgyzstan, Uzbekistan, Tajikistan, Azerbaijan, Belarus, Chile, Guatemala, Brazil, Mexico, Tunisia, Saudi Arabia, Oman, Jordan, Sudan, Egypt, Iran, Iraq, Lebanon, Palestine, Kuwait, Algeria, Syria, Yemen, Qatar, Nepal, Bangladesh, Sri Lanka, Afghanistan, Australia, New Zealand and Vietnam amongst others.

MSME-TIPB's Participation at Tamil Nadu State Pavilion

With the positive feedback received from exhibitors who had participated in the previous edition under Tamil Nadu Pavilion, the **MSME Trade & Investment Promotion Bureau (M-TIPB)** successfully participated under **MSME Department, Government of Tamil Nadu's State Pavilion** with 10 MSME exhibitors to provide much needed platform for the growth of this sector.

Participating companies under the TN State Pavilion had the opportunity to meet the over 350 International Buyers from 48 countries for a one-to-one meeting and network with leading companies within India during the Gala Evening Dinner. The State Pavilion also received special coverage across media channels as the specially published show daily.

The feed forward was very encouraging and most exhibitors were happy with the flow of buyers, with some even having received orders and enquiries for potential business opportunities.

Seminars @ CAPINDIA

With aim to help exporters understand the challenges facing the industry in today's time, including financial challenges, trade policies in various countries, as well as enhance knowledge sharing, Plexconcil organized three seminars by eminent speakers along the sideline of the CAPINDIA event. These included:

- Collateral-Free Trade Finance made Easy was presented by Mr. Smruti Ranjan Dora from Drip Capital Services India LLP
- How to manage payment issues with Iran was presented by a specialist team from IDBI Bank
- Currency derivatives for exporters was presented by Mr. Anil Rangwani, Product Manager, Currency Derivatives - BSE Limited

The seminars were well received by attendees that included exhibitors, buyers and visitors at the event.

Plexconcil - Committed to the Growth of Plastics Export

During the event, Plexconcil announced it plans to lead trade delegations to certain countries like USA, Japan and Korea etc to help Indian exporters network with major importers in those countries and grow their businesses. The Council is also exploring new markets to increase its market share besides the traditional markets in which Indian exports have a good market share. Plexconcil continues to extend and promote Government schemes amongst industry members by undertaking various activities and initiatives to ensure that small or big manufacturers or non-exporters are encouraged into the segment by providing them with the right guidance & support.

"China, United States, and the United Arab Emirates continue to be top-3 destinations for India's plastics products. These three countries accounted for 27.5 percent of India's plastics product exports, by value, during H1 2018-19. In the first half of 2019, the trend in plastic exports from India has been very positive with a strong year-on-year growth vis-a-vis 2017-18 with August 2018 topping $800 million. India's plastics exports in H1 2019 were boosted by higher exports, especially to North-East Asia, Africa, European Union, South Asia, and North America". – ***Sribash Dasmohapatra, Executive Director, Plexconcil***

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Major Product Segments

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- Raw materials and auxiliaries
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- Services for the plastics and rubber industries

Visitor/ Buyer Profiles

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- Raw material producer
- Manufacturer of plastics and rubber products
- User of plastics and rubber products
- Trade services
- Universities, technical colleges
- Craft

PLEXCONCIL

The Plastics Export Promotion Council

To participate, contact : Mr. Sanjiv Dewan

98110 41897 plexnr@plexconcil.org

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- Thousands of new products launched during the show

The Plastics Export Promotion Council

To Book Your Space, Contact: Mr. Mukesh Bisht +91 9819844154 bisht@plexconcil.org

Important Circulars and Notifications

New Important decree issued by the Egyptian Authority for Import and Export Control

The Embassy of India, Cairo, Egypt has communicated the following information with regard to Export to Egypt:

- Any foreign company that would like To Export products to Egypt needs to register the foreign factory with the General Organization for Export and Import Control (GOEIC), Website: https://www.goeic.gov.eg/

- In addition to that, for every container, it should send the usual invoice and packing list, etc, However, there is a New Decree issued from (GOEIC) which says that every container must have inspection certificate as the following:

Important instructions for issuing pre-shipment inspection certificates, published on 09/10/2019:

Requirements for pre-shipment inspection certificates:

1. The pre-shipment inspection certificate should be issued by one of the branches of the registered companies at GOEIC according to the field of accreditation, and the allowed places of inspection.

2. The pre-shipment inspection certificate can be accepted from the branches of the registered companies at GOEIC (each according to its field of accreditation) located outside the exporting country, to be documented from Chamber of Commerce, and the Egyptian Embassy in the exporting country.

The Decree is already published on GOEICs Website:
https://www.goeic.gov.eg/en/news/default/view/id/496#.Xbl2lydKkUw.whatsapp

Important Note: please find the following link which includes the approved inspection companies in Egypt: https://www.goeic.gov.eg/en/pages/default/psiCcompaniesList/type/industrial/m/6-161

The council circular is available for reference on https://plexconcil.org/public/custom/files/circulars/1575005976.pdf

Regarding fully electronic refund process through FORM GST RFD-01 and single disbursement

Central Board of Indirect Taxes and Customs, GST Policy Wing New Delhi has issued circular ***No. 125/44/2019 – GST dated 18.11.2019*** regarding fully electronic refund process through FORM GST RFD-01 and single disbursement.

In order to ensure uniformity in the implementation of the provisions of law across field formations, the Board lays down the procedure for electronic submission and processing of refund applications in supersession of various earlier Circulars.

With effect from 26.09.2019, the applications for the following types of refunds shall be filed in FORM GST RFD 01 on the common portal and the same shall be processed electronically:

- Refund of unutilized input tax credit (ITC) on account of exports without payment of tax;
- Refund of tax paid on export of services with payment of tax;
- Refund of unutilized ITC on account of supplies made to SEZ Unit/SEZ Developer without payment of tax;
- Refund of tax paid on supplies made to SEZ Unit/SEZ Developer with payment of tax;
- Refund of unutilized ITC on account of accumulation due to inverted tax structure;
- Refund to supplier of tax paid on deemed export supplies;
- Refund to recipient of tax paid on deemed export supplies;
- Refund of excess balance in the electronic cash ledger;
- Refund of excess payment of tax;
- Refund of tax paid on intra-State supply which is subsequently held to be inter-State supply and vice versa;
- Refund on account of assessment/provisional assessment/appeal/any other order;
- Refund on account of “any other” ground or reason.

Members are requested to take note of above changes. The above circular having Annexure - A is available for reference on http://www.cbic.gov.in/resources//htdocs-cbec/gst/circular-cgst-125.pdf

The council circular is available for reference on https://plexconcil.org/public/custom/files/circulars/1574159523.pdf

Regarding notification ITC 9HS), 2017 – Schedule – 1 (Import Policy)

The Directorate General of Foreign Trade, New Delhi has issued Notification No. 31/2015-2020 dated 13th November, 2019 regarding Notification of ITC (HS), 2017 – Schedule-1 (Import Policy).

As an effect of this Notification, ITC (HS) 2017-Schedule-1 Import Policy is amended in sync with the Finance (No. 2) Act, 2019 dated 1st August, 2019.

The Government hereby notifies the Exim codes introduced / deleted /split / merged / changed in description vide the Finance (No. 2) Act, 2019 dated 1st August, 2019 in the ITC (HS), 2017 as Annexed to this Notification.

The above-said notification having Annexure is available for reference on http://dgft.gov.in/sites/default/files/notification%20No.%2031%20dated%2013.11.2019%20in%20English.pdf

The council circular is available for reference on https://plexconcil.org/public/custom/files/circulars/1574159465.pdf

Amendment in Conditions for refund of Deemed Export Drawback

The Director General of Foreign Trade has issued Notification No. 28/2015-2020 dated 31/10/2019 regarding Amendment in Chapter 7 of the Foreign Trade Policy 2015-20 pertaining to Conditions for refund of Deemed Export Drawback w.e.f 05.12.2017.

As per above notification, following amendment has been done:

Para No.	Existing Provision	Amended Provision
7.03(b)	**Deemed Export Drawback for BCD**	**Deemed Export Drawback**
7.06	**Conditions for refund of deemed export drawback** Supplies will be eligible for deemed export drawback as per para 7.03 (b) of FTP, as under: The refund of drawback in the form of Basic Customs duty of the inputs used in manufacture and supply under the said category shall be given on brand rate basis upon submission of documents evidencing actual payment of basic custom duties	**Conditions for refund of deemed export drawback** Supplies will be eligible for deemed export drawback as per para 7.03 (b) of FTP, as under: Refund of drawback on the inputs used in manufacture and supply under the said category can be claimed on 'All Industry Rate' of Duty Drawback Schedule notified by Department of Revenue from time to time provided no CENVAT credit has been availed by supplier of goods on excisable inputs or on 'Brand Rate Basis' upon submission of documents evidencing actual payment of basic custom duties.

As an effect of this notification, Refund of drawback of Duty paid on inputs is also allowed on All Industry Rate.

Further, please note that O/o. DGFT has also issued Public notice no. 40/2015-2020 dated 31/10/2019 pertaining to this subject and the same is available on http://dgft.gov.in/sites/default/files/PN-40_0.pdf

The Notification No. 28 dated 31.10.2019 is available for reference on http://dgft.gov.in/sites/default/files/NF-28_0.pdf

The council circular is available for reference on https://plexconcil.org/public/custom/files/circulars/1575982627.pdf

International News

Mattel Announces Goal to Achieve 100% Recycled, Recyclable or Bio-based Plastic Materials in All Products and Packaging By 2030

EL SEGUNDO, Calif.--(BUSINESS WIRE)--Mattel, Inc. (NASDAQ: MAT) today announced its goal to achieve 100% recycled, recyclable or bio-based plastics materials in both its products and packaging by 2030. In the first half of 2020, the Company will debut its first product aligned with this goal: the iconic Fisher-Price® Rock-a-Stack® made from sugarcane-based plastics and packaged in 100% recycled or sustainably sourced material.

This new goal expands the Company's Environmental Sustainable Sourcing Principles that were announced in 2011. The Company now sources 93% of the paper and wood fiber used in its packaging and products from recycled or Forest Stewardship Council (FSC) content, surpassing its 2018 goal of 90%. In addition, the Company has adopted the How2Recycle label, a standardized labeling system that clearly communicates recycling instructions to the public.

Earlier this year, Mattel established an Environmental Sustainability Council comprised of a cross-functional team of leaders dedicated to actively advancing the Company's sustainability efforts in several areas, including materials innovation.

"Environmental sustainability is a corporate priority at Mattel and creating sustainable products and packaging is an important part of our commitment to the planet," said Ynon Kreiz, Chairman and CEO, Mattel. "Our dedicated cross-functional team made sustainability a key priority throughout the product and packaging design and production process. Today, we are delivering on that priority by announcing our first product made from sustainable materials and we look forward to expanding our efforts to all Mattel brands."

"Innovation is part of our DNA, and it is central to our work in environmental sustainability," said Richard Dickson, President and Chief Operating Officer, Mattel. "Our world-class designers have consistently created products that can be passed on to generations and, today, we are continuing this proud tradition with our new sustainable Rock-a-Stack, one of the most iconic and best-selling toys in the toy industry."

Fisher-Price will celebrate its 90th anniversary in 2020, and by the end of the year, all Rock-a-Stack toys sold worldwide are on track to be made with plant-based plastics and packaged in 100% recycled or sustainably sourced material. The beloved Rock-a-Stack toy, which was launched by Fisher-Price in 1960 to introduce babies to relative size and stacking, will be made from a sugarcane-based polyethylene, a renewable raw material. By streamlining the toy's materials, it can also be fully recycled, which will eliminate waste and more easily enable the material to be recovered and repurposed at the end of the toy's service life.

Commission sets goal for polymer REACH registration proposal by 2022

The European Commission has stated its commitment to publish a proposal by 2022 to bring "at least some" polymers under the REACH registration requirement, according to sources and confirmed by the EU executive. Polymers are currently exempt from REACH registration or evaluation processes, although they are subject to authorisation or restriction if an EU member state chooses to include them in proposals.

But Chemical Watch has learned that, at the last meeting of the Competent Authorities for REACH and CLP (Caracal) on 6-7 November, the Commission told members it was working on a proposal for polymer registration, stating an objective to finalise it by 2022. The EU executive has held two workshops to advance discussions on the topic. And it has commissioned Wood consultancy to conduct research to determine which polymers should be registered first, under a tiered approach. A report is expected in 2020/2021.

Parallel to this, it will run a pilot project to assess findings from voluntary registrations of polymers, sources have said. The renewed regulatory focus comes amid mounting pressure globally to clamp down on plastics accumulating in the environment.

Echa is witnessing unprecedented levels of interest in its proposed restriction for intentionally-added microplastics. And, in a letter this month to the incoming Commission leaders, 24 NGOs demanded "swift and comprehensive" registration of 20,000 low volume chemicals, including nanomaterials and polymers.

Polymers, both natural and synthetic, are chemical compounds created by molecules bonded together in long repeating chains. They have unique physical properties because of their structure, such as toughness and elasticity, that can be tailored for different uses. They include materials such as polyethylene – the most common plastic in the world, found in everything from shopping bags to storage containers – and polystyrene, used in food packaging.

Polymers represent a low concern due to their high molecular weight, but the number in commerce is estimated at between 400,000 and over one million. A Commission spokesperson confirmed its plans for a proposal on polymer registration but declined to provide any further details "at this stage".

Article 138

REACH Article 138(2) provides for an ongoing review of the 'risks posed' by polymers, with a view to identifying those that display equivalent levels of concern to other substances. This clause has acted as a trigger for a number of studies related to REACH registration requirements since 2012.

The article also states that a report must be published on the need, if any, to register certain types of polymers, taking into account the impact on competitiveness and innovation – something that has proved difficult to demonstrate. An assessment under Article 138(2) requires identification at substance level, which is a major challenge in the case of polymers.

The Commission, as part of its second REACH Review action points, called for a review of registration requirements for low tonnage substances and polymers. The first REACH Review in 2013 concluded there was insufficient information on the impact on innovation and competitiveness of polymer registration.
Source: chemicalwatch.com

Vodafone reduces size of SIM holder to reduce plastic use

Telecommunications company Vodafone has reduced the size of its standard credit card-sized SIM holder by 50% to reduce plastic waste. By the end of December, Vodafone will start offering a range of eco-friendly accessories under the label Red Loves Green. The Red Loves Green product range will be available at retail stores next year.

The range will include 100% biodegradable or recyclable phone cases made from reused ocean plastic, charging banks and docks developed using sustainable materials and plastic-free packaging. As part of the initiative, the company will also offer the sustainable Fairphone 3 smartphone across Germany, Italy, the UK, Spain and Ireland markets.

Launching the new range is a part of Vodafone's strategy to reduce the use of all non-essential plastics. It is expected to cut Vodafone's plastic waste by over 340t a year while also eliminating up to 5,000t of the CO_2 annually.

Vodafone External Affairs director Joakim Reiter said: "Halving our environmental impact means not only tackling material issues such as our carbon footprint and e-waste but also taking action in other areas where we have an impact such as the non-essential or disposable plastics we use in our retail stores and offices.

"Building on many of the initiatives launched across Vodafone's markets, we want a consistent approach everywhere we operate. This begins with the rollout of half-sized SIMs, tackling unnecessary plastics in our offices and offering our customers eco-friendly accessories."

Vodafone will gradually replace the full-sized cardholders across all Vodafone's 24 markets.

Source: www.packaging-gateway.com

Dubai Airport's single-use plastic ban will begin on January 1, 2020

The deadline to ban all single-use plastics at both of Dubai's airports is looming. The phased approach will see plastic cutlery, drinking straws, take-away food packaging and polythene bags removed from cafés, restaurants and shops at the world's busiest international airport from January 1, 2020. During the next twelve months additional products will be replaced both in customer spaces and behind the scenes.

Pledge was made in June

Since the announcement was made to free Dubai International Airport and Dubai World Central Airport in June of this year, Dubai Airports has been working closely with more than 250 of its concession and hospitality partners to fulfil the promise by the beginning of the new year. With 90 million passengers passing through Dubai's two airports – DXB and DWC – every year, consuming tens of thousands of plastic items from straws to water bottles to coffee lids daily, the plastic-free initiative has presented some serious challenges for those involved.

Long Journey

Eugene Barry, EVP Commercial at Dubai Airports said; "This pledge is another step on a long journey to becoming a more environmentally responsible airport. Along with our partners, including global brands such as McDonalds, Costa Coffee and Starbucks, we are committed to not only removing single-use plastics but in their place providing appropriate and importantly sustainable alternatives.

"Among the challenges faced, the biggest is sourcing alternatives for plastic bottles, one of the most frequently used and discarded pieces of single-use plastics. As we work to reduce and ultimately eliminate plastics from our airports, we are increasing our recycling facilities in the customer spaces and a new partnership that will allow us to properly dispose of thousands of tonnes of single-use plastic, each year," added Barry.

The additional recycling points will also support with the management of the tens of thousands of bottles and waste brought in to the airport daily, something Dubai Airports' expects will also decrease as people become more conscious of their usage. Results from a specially commissioned survey into the recycling habits of travellers showed an increased awareness, both around personal usage of plastic products and recycling, at home and while travelling.

Survey

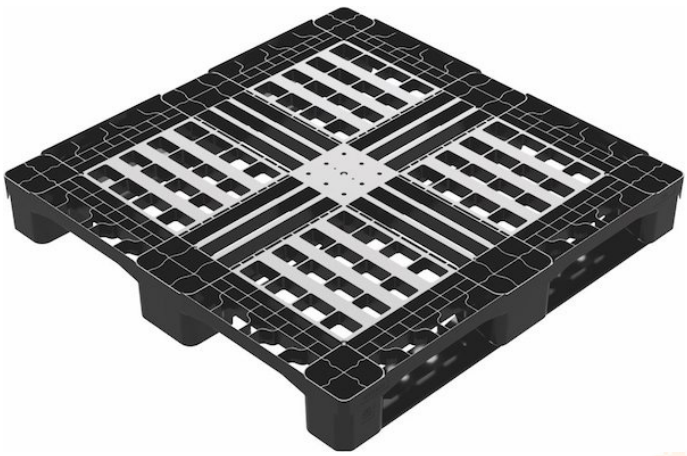
In the UAE, over half (52 per cent) of respondents claim to carry a reusable water bottle while travelling, 49 per cent would choose to dine in an airport restaurant to

avoid plastic packaging that comes with take-out food options, almost a third (32 per cent) of respondents refuse to buy items at the airport containing non-recyclable materials. And importantly, 92 per cent of respondents state that airports should be more vocal about what steps they are taking to recycle waste.

Moving forward through 2020, significantly more single-use plastic products will be replaced throughout the two airports by concession and hospitality partners. Notable among them is fast food powerhouse, McDonald's who will be replacing a total of 5,608,740 items with recyclable materials at Dubai's two airports DXB and DWC.

Also, Costa Coffee which has committed to replacing its plastic-lined cups with a 100 per cent renewable, plant-based "smart" cup. The coffee giant uses over 2.6 million cups a year in Dubai's airports alone, so a significant impact will be made. This will be shortly by the introduction of a coffee cup lid made entirely from wood and paper fibre instead of single-use plastic.
Source: Gulfnews.com

Cabka-IPS: Sustainable transport solutions from recycled plastic



Plastic recycling specialist Cabka-IPS will be presenting its innovative solutions for the sustainable and economical transport of goods at LogiMAT 2020 on 10-12 March in Stuttgart, Germany. The Eco CP3 chemical pallet is a three-runner pallet designed for a dynamic load capacity of 1,400kg. Visitors can get a first look of the latest generation of the collapsible large load carrier CabCube, as well as the light and robust chemical pallets CP3 and CP9 in Hall 6, Booth C21.

At LogiMAT, Cabka-IPS will be presenting the third generation of its successful, collapsible large load carrier, the CabCube 3.0. The CabCube is made from recycled household packaging waste and is thus particularly sustainable. The injection moulding process used for production makes the load carrier extremely robust and durable, and the CabCube is designed for a wide variety of supply industries – particularly suited for the distribution and storage of high volumes and light parts.

The empty container can be collapsed down to a fraction of its original size, thus saving space and costs on the return transport. The latest generation of the CabCube includes several models with various dimensions and varying maximum filling weights, cover specifications, or different bottoms with feet or runners. This platform system allows users to select the container that best suits their requirements.

Another highlight at the trade fair booth of Cabka-IPS are the new chemical pallets Eco CP3 and Eco CP9. These are primarily designed for the transport of chemical goods and practical for many other applications and industries. The pallets are container-optimised, and the innovative design makes them very light yet very robust and impact-resistant.
Manufactured using recycled plastic, the Eco CP3 is a 1,140 x 1,140mm three-runner pallet with a weight of about 12.5kg. It is designed for a dynamic load of 1,400kg. The 14-kg Eco CP9 is even more stable than the Eco CP3 due to its six runners. Its design makes it particularly suitable to block stacking, as the support frame optimally distributes the weight over the load underneath.

Source: eppm.com

Ford Has Been Recycling 1.2 Billion Plastic Bottles Every Year to Make Vehicle Parts

Ford Motor Company has been helping to promote the use of environmentally-friendly auto parts—and one way they're doing that is by using recycled plastic bottles for carpets, underbody shields on all cars and SUVs, and wheel liners on F-Series trucks.

"The underbody shield is a large part, and for a part that big, if we use solid plastic, it would likely weigh three times as much," said Thomas Sweder, design engineer, Ford Motor Company. "We look for the most durable and highest performing materials to work with to make our parts, and in this case, we are also creating many environmental benefits."

In the past decade, aerodynamics has driven the need for underbody shields—and the global use of plastics in vehicle parts has grown exponentially. Ford alone uses about 1.2 billion recycled plastic bottles per year—about 250 bottles per vehicle on average.

Here's how it works: when plastic bottles are thrown into a recycling bin, they are collected with thousands of others, and shredded into small pieces. That's typically sold to suppliers who turn it into a fiber, by melting the bottle and extruding it. Those fibers are mixed together with other various types of fiber in a textile process and used to make a sheet of material which is formed into the automotive parts.

Due to its light weight, recycled plastic is ideal for the manufacturing of underbody shields, engine under-shields, and front and rear wheel arch liners that can help improve vehicle aerodynamics. These shields reportedly also help create a significantly quieter environment on the new 2020 Ford Escape.

This is not the only way that Ford has been using recycled materials to benefit the environment; the automotive company recently partnered with McDonald's coffee suppliers to recycle all of their coffee roasting biowaste into headlights. "Ford is among the leaders when it comes to using recycled materials such as this, and we do it because it makes sense technically and economically as much as it makes sense for the environment," Sweder said. "This material meets all of our robust specifications for durability and performance."

Source: goodnewsnetwork.org

Kraiburg kicks off program to develop renewables-based TPEs

Kraiburg TPE is embarking on what it describes as an ambitious campaign to develop custom-engineered thermoplastic elastomers containing variable proportions of renewable raw materials. By developing customer-specific and application-specific compounds using renewable raw materials, Kraiburg TPE is aiming to meet the growing demand for environmentally-friendly and sustainable thermoplastic elastomers.

Kraiburg TPE sees tremendous potential for custom-engineered thermoplastic elastomers with adjustable proportions of renewable raw materials of up to 90%, both in the consumer market and also in the industrial and automotive markets.

Kraiburg points out that "bio" is a broad term that is by no means synonymous with "sustainable" in the sense of a strategy for saving resources and protecting the environment. Because even renewable raw materials also have carbon footprints, as well as water footprints, that can have an impact on the environmental balance, depending on their provenance and the way they are grown. Factors that play a decisive role here include irrigation, fertilizers, transport energy and energy consumed for reprocessing.

"Part of the challenge involves taking into account the environmental balance of the materials' whole life cycles, including their impact on ecosystems and people's health," emphasizes CEO Franz Hinterecker from Kraiburg TPE. "It has also become apparent that what our customers expect from the properties of 'biomaterials' varies widely depending on the application – while at the same time we have to meet strict criteria regarding the materials' conformity and performance."

Kraiburg TPE's modular system makes it possible to develop customer-specific materials with different proportions of renewable raw materials. Typical performance characteristics that are also relevant here include mechanical properties such as tensile strength and elongation, as well as processability, heat resistance and adhesion to ABS/PC or PP and PE, for example. The requirements are determined in close collaboration with each customer and translated into a sustainable and cost-effective solution by our developers.

In classical approaches, it is technically possible to produce bio-based materials with very high proportions of renewable raw materials. However, materials of this kind usually suffer from very high raw materials costs, while providing only very limited mechanical properties. However, the modular system has now enabled Kraiburg TPE to resolve this contradiction almost completely by following a new, innovative approach beside the classical one.

The initial pilot projects based on the classical approach are showing a trend towards bio-based, certifiable proportions of 20% and more. Their potential use extends to all TPE applications in the consumer, industry and automotive markets. Examples range from toothbrushes and hypoallergenic elastic watch straps to fender gaskets.

Kraiburg TPE sees tremendous potential for custom-engineered thermoplastic elastomers with adjustable proportions of renewable raw materials of up to 90%, both

in the consumer market and also in the industrial and automotive segments.

Source: Plastics Today

Cabot debuts carbon masterbatches based on post-industrial carbon black, recycled polymers

Cabot Corporation has launched of a new black masterbatch series made from post-industrial carbon black and recycled polymers. The new formulations are designed to help plastics producers meet sustainability targets across a wide variety of industries, while maintaining optimal performance.

As plastics manufacturers seek more sustainable solutions to comply with global environmental and labeling standards, these formulations are specifically designed to help the industry lower its carbon footprint and increase the amount of recycled and secondary content in end products.

"While our formulated solutions have performed successfully in plastic applications for decades and continue to be a top choice for customers, we are always innovating to perfect and expand our portfolio consistent with the industry's evolving needs," explained Denise Myrtoglou, vice president and general manager, Specialty Compounds EMEA and Americas. "We are pleased to introduce these newest black masterbatch formulations to meet the changing sustainability needs of our customers and advance the circular economy of plastic raw materials, while delivering the high quality and performance standards our customers have come to expect."

The new Techblak 85 series includes formulations based on reclaimed carbons, post-industrial carbon black materials as well as recycled polymers tailored for compounding, injection molding and non-critical film applications for use in industrial, packaging and consumer markets.

"We are acting according to the principles of 'reduce, reuse, recycle' where possible," says Emmanuel Tarret, regional business director, EMEA and Americas for Specialty Compounds. "This applies throughout our manufacturing network including carbon black and masterbatch formulation. With this new masterbatch series, our portfolio now includes not only formulations that are tailored to upgrade recycled scrap but are also formulated with recycled material."

Source: Plastics Today

India News

Saudi company's India engineers develop steel-like plastic

Developing plastic, or resin, that is as strong and resistant as metal has been a long-term quest. If one can do it, then there are enormous advantages. In the automotive industry, it can help lower the weight of the vehicle, while maintaining the integrity of the structure.

It's work that the Saudi Arabian petrochemicals company Sabic has been involved in, including in its large R&D centre in Bengaluru. And the effort has made significant advances. The Bengaluru centre, alongside other Sabic centres, has produced a resin-metal based hybrid solution called Noryl GTX resin that is lighter and just as sturdy as the metals generally used.

"You don't normally associate plastic with high temperatures. But we have developed polymers that can work in very high temperatures (as when a car is painted) and which are replacing traditional metals," says the company's regional head for South East Asia, Australia & New Zealand, Janardhanan Ramanujalu.

"Our resin combines with steel to form a very efficient energy-absorption crash-box structure. It cuts the weight by upto 30% and can be compared to high-strength steel and maintains the required level of crash-worthiness," he says.

The $45-billion Sabic – which may become a part of Saudi Arabian oil company Saudi Aramco – is the third largest diversified petrochemicals company in the world. Its R&D centre in Bengaluru was built at an initial cost of $100 million and is equipped with everything from an electron microscope to high-tech weathering labs to test the wear and tear of products when exposed to the elements. The centre, which has 300 engineers, mostly chemical engineers and material scientists, files around 70 patents a year. Globally the company annually files around 400.

"The application design team at the Bengaluru centre collaborates with global customers in designing and optimising the Noryl GTX resin structures which are moulded over onto the steel skeleton of vehicles. These novel light-weight designs help car structures absorb impact energy (if there's an accident)," says Rajeshwer Dongara, head of the Bengaluru site.

The Bengaluru team specialises in conceptualising the designs and tuning the designs based on vehicle type and vehicle styling using advanced computer-aided predictive engineering tools.

Source: TNN

Government may list 8 single-use plastic items

The Centre is likely to identify as many as eight articles as 'single-use plastic' items that will be discontinued on a priority basis, including plastic cutlery, plastic bags and certain Styrofoam items. Defining single-use plastic is the first step in the direction of doing away with such products in India by 2022, as called for by Prime Minister Narendra Modi during his Independence Day address.

While many states have banned plastic, there are wide variations in implementation and the range of products covered. After consulting stakeholders, the environment ministry is close to announcing a clear and uniform definition of single-use plastic, ET has learnt.

Earlier, there had been speculation that single-use plastic would be banned from October 2, but the government clarified that no such move had been proposed. Industry representatives had written to the environment ministry seeking a clear definition of single-use plastic products and guidelines on phasing them out.

The ministry, having asked states to start curbing single-use plastic, has been working on a practical and implementable definition of such products, officials told ET. The idea is to completely phase out single-use plastic where it is replaceable with environment friendly alternatives and to bring in a robust segregation, collection and disposal mechanism for single-use plastic.

The ministry wrote to the states in September asking them to curb production of plastic bags, irrespective of thickness and size, and Styrofoam (thermocol) cutlery and to encourage manufacturers and consumers to shift to other environmentally friendly material. It asked states to support local bodies in improving segregation of waste at source, their collection and transportation and called upon entities generating plastic waste to find ways to take them back. The Jal Shakti ministry has stepped in to ensure proper disposal of plastic waste. It is preparing to set up a unit to gather and recycle plastic waste.

Every village will be asked to start waste segregation. They will send plastic waste to block-level units that will convert the aggregated waste into bales, shred them and transport them to aggregators for recycling to build in a sustainable mechanism.

Source: Economic Times

Piyush Goyal stresses on MSME exports; says opportunity for small businesses globally under FTAs

Trade, Imports, Exports for MSMEs: The tariff concessions under the Free Trade Agreements (FTAs) signed by India gives export opportunities for products including those from SMEs, said Commerce Minister Piyush Goyal. The SME products on which such concessions are offered by India's trading partners including Japan, South Korea and some ASEAN countries, belong to categories including readymade garments, leather goods, processed foods, and engineering products such as auto components, Goyal informed Lok Sabha on Wednesday. MSME focused export promotion schemes include participation in international exhibitions and fairs, training programme on the packaging for exports, Market Development Assistance (MDA) Scheme for MSME exporters and National Award for quality products.

MSMEs contribute 49 per cent share to India's total exports, which the government is targeting to increase to 60 per cent, MSME minister Nitin Gadkari had said at an event last month. India's total exports stood at $24 billion in October 2019, according to the government data. To boost India's trade and competitiveness. The government had introduced the Foreign Trade Policy (FTP) in 2015 for increasing exports of goods and services along with creating employment. India's rank in 'trading across borders' by the World Bank has improved from 122 to 68 this year.

The minister added that the Interest Equalization Scheme on pre and post-shipment rupee export credit was launched in 2015 to give interest equalisation at 3 per cent for labour intensive and MSME sectors. The

rate was increased to 5 per cent for MSME sectors in November last year while the merchant exporters were covered under the scheme from January 2019 onwards. Goyal in the meeting with BRICS trade ministers in Brasilia, Brazil last month had lashed out at developing countries saying that the increasing trends of protectionism in the form of non-tariff barriers (NTB) are denying market access to MSMEs, particularly from the developing countries. The minister added that while developed countries talk about open and free trade by removing tariffs in developing countries but they themselves increase barriers in the form of NTBs. This is creating economic uncertainties and increasing the cost to carry out trade in developing and least developed countries.

Source: Financial Express

ReNew Power partners with GS E&C to execute solar project in Rajasthan

Clean energy firm ReNew Power on Wednesday said it has joined hands with South Korea-based GS E&C for execution of its 300 MW solar power plant in Rajasthan. ReNew Power announced a joint

ReNew Power will hold a 51 per cent equity under the partnership, while the balance will be held by GS E&C. "I expect the partnership to set new benchmarks in the Indian renewable energy space and look forward to executing more projects together," ReNew Power's Chairman and MD Sumant Sinha said. The project is part of the capacity auctioned by Solar Energy Corporation of India (SECI) under its tranche-IV auctions concluded earlier this year. GS E&C, is South Korea's leading construction and development firm and is part of the GS Group, with an asset base of over USD 58 billion

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This partnership will mark the entry of GS E&C in the Indian renewable energy sector. "GS E&C and ReNew Power will continue to play an important role achieving the country's ambitious target for the transition to cleaner energy," said Huh Yun Hong, the president and head of new business division of GS E&C. ReNew Power recently crossed the 5GW renewable energy generation milestone with the commissioning of a 250 MW solar plant in Bikaner. It has assets valued at over USD 6.5 billion.

Source: Financial Express

Reliance signs pact with ADNOC for development of chemical facility

Reliance Industries and Abu Dhabi National Oil Company (ADNOC) on Tuesday signed an agreement to explore setting up of a facility in UAE to produce ethylene dichloride, which goes into making of PVC that is commonly used in pipes, tubes and cable.

"Under the terms of the agreement, ADNOC and RIL will evaluate the potential creation of a facility that manufactures ethylene dichloride or EDC adjacent to ADNOC's integrated refining and petrochemical site in Ruwais, Abu Dhabi and strengthen the companies' existing relationship supporting future collaboration in petrochemicals," the companies said in a statement.

The signing of the agreement in Abu Dhabi was witnessed by UAE Minister and ADNOC Group CEO Sultan Ahmed Al Jaber and RIL Chairman and Managing Director Mukesh D Ambani. The agreement was signed by Abdulaziz Alhajri, Executive Director of ADNOC's Downstream Directorate, and Nikhil R Meswani, RIL Executive Director.

Ethylene dichloride (EDC) is used primarily for the production of vinyl chloride monomer (VCM), which is used mainly in the polymerization manufacture of polyvinyl chloride (PVC). PVC is commonly used in pipes, fittings, profiles, tubes, windows, doors, sidings, wire, cable, film, sheet, and flooring.

The vinyls industries include construction and infrastructure, agriculture, electrical products and healthcare. EDC is also used as an intermediate in the manufacture of chlorinated solvents and ethyleneamines, and as a solvent in the textile, metal cleaning, and adhesive industries.

The US is the largest producer and consumer of EDC in the world, accounting for approximately 30 per cent of global capacity, production, and consumption in 2018.

The US is also the largest EDC exporter, representing about 43 per cent of global exports, as a result of advantaged production economics and healthy demand for caustic soda.

The Indian subcontinent is expected to be the fastest-growing region for EDC demand, with a projected increase of about 17 per cent per year.

"ADNOC would supply ethylene to the potential joint venture and provide access to world-class infrastructure at Ruwais, while RIL will deliver operational expertise and entry to the large and growing Indian vinyls market, in which it is a key participant," the statement said.

Meswani said: "This is a significant step towards Reliance's commitment to pursue backward integration and will pave the way for enhancing PVC capacity in India to cater to the fast growing domestic market. This co-operation ideally combines advantaged feedstock and energy from the UAE with Reliance's execution capabilities and the growing Indian market."

Alhajri said: "The agreement with Reliance Industries Limited is a product of our strong relationship, spanning over two decades, and a testament to ADNOC's continued ability to cultivate smart and mutually beneficial international partnerships. We look forward to working closely with RIL to identify opportunities to capitalize on the strengths of the Ruwais ecosystem, while delivering a compelling new commercial platform for satisfying the large Indian PVC market, as well as demand for other fast-growing segments in the region."
Source: Financial Express

India's Paper industry likely to acquire 25% market share of single use plastics market by 2025

Amid a growing debate over impact of single use plastics on environment, paper offers a sustainable option and can capture a fourth of the Rs 80,000 crore single use plastics market by 2025, if its use is totally banned by the government, a new study said. India generated 26,000 tonnes per day of plastic waste in 2017-18, of that only 60 per cent was recycled and the rest ended up as litter on roads, in landfills or streams. Single use plastic industry is close to Rs 80,000 crore right now and growing. Packaging accounts for a third of India's plastic consumption, and 70 per cent of plastic packaging is turned into waste in a short span.

While uncollected plastic waste poses a huge threat to species on land and in water, single-use plastic bags and styrofoam containers can take up to 1,000 years to decompose, said the study released at the world's largest paper fair, PAPEREX organized by Hyve India, a 100 per cent subsidiary of Hyve Group Plc, London, last week.

Paper, on the other hand, is eco-friendly green product and bio-degradable, it said, adding it was a myth that the paper industries cut trees for production, and consumption of water and energy is high. Paper industry plants more trees than harvested and primary raw material are 100 per cent renewable like wood and agro-residues. The study said about a third of new paper comes from recycled paper and an equivalent amount from waste such as sawdust and scrap from lumber mills.

"In India, companies use 46 per cent raw material from recovered paper, 29 per cent from agro residue like bagasse, straw etc and 29 per cent from plantation wood," it said, adding paper promotes literacy, hygiene and reduce pollution by using bagasse.

For production of one tonne paper, 2.1 tonne of wood is required but "no forest wood is being utilised for paper manufacturing," it said. "All (paper) mills are fulfilling their requirement through social forestry plantation on its own or through farmers."

More importantly, average cost of recycling of paper is Rs 32 per kg — Rs 20 for cost of collecting paper trash and Rs 12 conversion cost. In comparison, the cost to collection of plastic waste is Rs 30 to 36 per kg and recycling is Rs 22 to Rs 35 per kg, it said, adding transporting one tonne of paper costs Rs 4.5 per kilometer as compared to Rs 6.2 in case of plastic.

Energy consumption for paper production is 0.59 to 1.19 tonne of oil equivalent per tonne as opposed to 1.48 to 2.58 a tonne in plastic, the study said, adding 55-60 per cent energy can be saved if paper is used in place of plastic. According to Sanjeev Batra, Director, Hyve India, due to the fundamental and technological revolution, 100 per cent paper produced is recyclable and biodegradable.

"Paperex 2019 impressed upon the common man to save the environment and how this essential commodity use in our everyday life can reduce pollution and promote recycling," he said. "Paper industry is going through the transformation phase and now the paper industry uses

less power and water due to technological changes. Cost of production of recycled paper is at least 30 to 40 per cent cheaper depending upon the location than the recycled plastic," J P Narain, VP, Indian Paper & Manufacturers Association and CEO of Century Paper said.

The requirement of better quality packaging products and the demand for other products, such as tissue paper, filter paper, tea bags and cardboard are expected to drive the paper and paper products market in India in the coming years, he said. "There is a big opportunity for paper industry as single-use plastic market in India is close to Rs 80,000 crore. Paper industry is ready to take 25 per cent market share of single-use plastic by 2025 if totally banned by the government," he said.

Of the 9.1 billion tonnes of plastic that the world has produced since 1950, 6.9 billion tons has become waste, and only 9 per cent of that has been recycled, the rest ends up in landfills and in the world's oceans, the study said.

India's plastic consumption at 11 kg per capita is less than half of global average of 28 per kg. The US has per capita consumption of 109 kg, while it is 65 kg in Europe and 38 kg in China. Prime Minister Narendra Modi wants India to eliminate single-use plastics by 2022, following on the footsteps of major nations around the world that are waging a war on them.

The study said chips and confectionery packets account for the largest share of plastic waste in India – 12 per cent of total plastic waste is bottle caps and lids, 19 per cent are chips and confectionery packets, 10 per cent are pet bottles, 8 per cent garbage bags and 8 per cent is packaging.

Source: PTI

REPUBLIC OF TURKEY

Economic overview

Republic of Turkey (or Turkey) is a large peninsula that bridges the continents of Europe and Asia. It is surrounded on three sides by the Black Sea, the Mediterranean Sea, and the Aegean Sea. Turkey's economy is driven by its service and manufacturing sectors. As per CIA, services sector constitutes 60.7% of GDP of Turkey, followed by industry (32.3%) and agriculture (7.0%). Until some time back, the Turkish economy was under a recession due to currency crisis (30% slide in Turkish Lira), soaring inflation, high interest rates and a tense political backdrop. However, latest GDP data indicates that this has now changed with Turkey's economy reporting a growth of 0.9% year-on-year in the third quarter. It is expected that Turkey's economy is likely to witness a growth of 0.5% in 2019, and 5.0% in 2020.

As of December 9, 2019, the S&P's rating for Turkey is B+; Moody's rating stands at B1; and Fitch has a reported rating of BB-.

Economic indicators		2016	2017	2018
Nominal GDP	*USD Billion*	863.4	852.6	771.3
Nominal GDP per capita	*USD*	10,817	10,551	9,405
Real GDP growth	*%*	3.2	7.5	2.8
Total population	*Million*	79.8	80.8	82.0
Average inflation	*%*	7.8	11.1	16.3
Total merchandise exports	*USD Billion*	142.5	157.0	167.9
Total merchandise imports	*USD Billion*	198.6	233.8	223.0

Source: IMF, TradeMap

Turkey has FTAs with Albania, Austria, Belgium, Bosnia-Herzegovina, Bulgaria, Chile, Croatia, Cyprus, Czech Republic, Denmark, Egypt, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malaysia, Malta, Mauritius, Moldova, Montenegro, Morocco, Netherlands, North Macedonia, Norway, Palestine, Poland, Portugal, Romania, Serbia, Singapore, Slovak Republic, Slovenia, Republic of Korea, Spain, Sweden, Switzerland, Syria, Tunisia, and United Kingdom.

Trade overview

Turkey and India share cordial trade relations, and engaged in bilateral merchandise trade worth USD 7.41 billion in 2018. During the year, India's exports to Turkey were valued at USD 5.38 billion in comparison to India's imports worth USD 2.03 billion resulting in a trade surplus of USD 3.35 billion to India.

Within plastics, India's exports to Turkey stood at USD 320 million in 2018 in comparison to India's imports worth USD 44 million from Turkey during the same year.

india's plastics exports to Turkey comprise of:

- Plastics raw materials (84.0%)
- Plastic sheets, films, plates etc (3.9%)
- Other moulded and extruded items (2.0%)
- All types of optical items (1.9%)

Turkey's annual plastics imports are valued between USD 15-16 billion. Its plastic imports are largely catered to, by Germany (11.4%), China (11.1%), Saudi Arabia (10.2%), Republic of Korea (8.2%), and Italy (5.6%). India meets 2.1% of all plastics imports of Turkey.
India has a good standing in some of the plastics product imports by Turkey:

- Ropes, twines and cordage - Market share of 24.2% share (Rank 1)
- Woven sacks / FIBC - Market share of 23.4% share (Rank 1)
- Brushes - Market share of 3.8% share (Rank 5)
- Plastics raw materials - Market share of 2.7% share (Rank 14)
- Human hair & products thereof - Market share of 1.1% share (Rank 3)

Trade potential

Our internal research indicates that India's plastics exports to Turkey has the potential to grow to USD 6.0 billion. Product categories, within plastics, that have immense export potential to Turkey include:

Product Category	Turkey's import from India	Turkey's import from world	India's export to world	Trade potential for India
	USD Million	USD Million	USD Million	USD Million
Plastics raw materials	274.63	10,142.17	4,498.11	3,103.86
Plastics sheets, films, plates etc	11.37	1,086.06	1,344.62	607.69
Other moulded and extruded items	7.47	703.30	619.88	589.17
Medical disposables	10.70	563.77	534.33	404.73
Packaging items	1.55	194.28	743.21	167.59
Electrical items	12.72	579.96	182.04	155.93
All types of optical items	7.22	331.16	470.52	126.85
Pipes, tubes, hoses etc	2.49	253.48	188.12	111.09
Leathercloth	0.01	188.65	127.54	96.12
Self-adhesive sheets/films etc	2.39	303.56	82.98	80.59

Source: TradeMap, Plexconcil Research

Industry Speak

Amit Puri,
Director, ALOK

Plastic Raw material export from India forms 80% of our total exports to Turkey with whom we share a healthy trade relation and export surplus. What are the drivers for success of your product segment in this market?

Turkey is a robust economy and a major re-exporter of raw materials and value-added plastics. Many companies from the EU have their supply chain and product outsourced from Turkey which makes it ideal for us as Raw Material exporters. The domestic manufacturing witnessed an estimated 8.5% growth in 2018, demonstrating an increase in consumption of raw materials. India, today, has emerged as a good source of Raw material owing to our value and suitable product offering advantage as compared to other exporting countries and this makes us competitive globally, which is reflected in our exports within this segment.

In the value-added segment, FIBC, Rope and Twines, enjoy good demand considering that these are labour intensive industries and India has an advantage compared with Turkey, when it comes to manpower costs. FIBC is another area which has good potential for growth.

Most Plastic finished products are voluminous in nature and freight costs can be quite high, especially in the case of distant countries such as Turkey. And since we are unable as an industry to proffer any distinct technological advantage, we probably lag in the finished product segment.

Turkey's Plastics Raw material imports stood at nearly USD 10.16 Billion in 2017. India's total Plastics exports to Turkey was USD 334 million (2018). What does this imply in terms of opportunity for growth?

India has a very skewed equation with Turkey as far as our exports is concerned. Turkish importers are liable to pay an Import Duty of 6.5% on import of Raw material and this can get quite challenging in the absence of an FTA. The duty structure, especially in the case of Raw Material is quite high and if not corrected, it can hamper growth of our exports. However, opportunities are good considering that Turkey has a high domestic demand as well as re-export industry. Nevertheless, it is important that we, as a country, can course correct if we are to grow in the market.

India does not have an FTA with Turkey, yet India has the opportunity to benefit from discounted tariffs on certain products for export to Turkey by making use of the Generalized Preferences System (GSP) applied by the EU. Does the GSP apply to your product category? If no, what could be the plausible impact on our exports? If yes, what is the advantage that it brings to your product category?

Until a few years ago, Masterbatches used to be covered under the Preferential system in Turkey, but this has ceased in the past few years now. The industry did face slackening in sales, especially as far as domestic use import was concerned. Subsequently, we have had to relook at our export strategy and as an industry, we have been making continued and renewed efforts by focusing on companies that re-export to Europe as they enjoy certain duty advantages that domestic importers do not. As a result, we expect FY 2020-21 to be better and are confident of sustained growth in coming times. Having said that, the importance of an FTA with Turkey cannot be stressed upon enough. It is the need of the hour.

Considering the recent political tension between India and Turkey, there have been talks of imposing curbs, both tariff and non-tariff on Turkish imports. What is the likely impact on our exports if it were to happen? What would be the impact on Plastics exports?

In my opinion, there are two ways to look at the situation. In the current scenario, the political skirmishes between the two countries could have an impact on perhaps Turkish investments in India and vice versa. The current negative sentiments would affect businesses as

they would be cautious about any new plans or investments in the immediate sense. However, the Turkish economy, despite having gone through several phases of highs and lows, remains very entrepreneurial and economy driven. The currency has been stabilizing after it dipped about two years ago and in the long term, India could look at once more stabilizing economic and political relations with Turkey. Turkey is one of the few countries with whom India enjoys a trade surplus and relations have remained otherwise stable over the years with focus on enhancement of mutual investments, diversification of bilateral cooperation, etc.

China, Germany, Italy, South Korea & France are the Top 5 exporters to Turkey whereas India ranks 43rd on the list? What, in your opinion, is the reason for India lagging so far behind?

As mentioned earlier, the two main factors that have hampered our growth in Turkey are lack of an FTA with Turkey and high import duty of 6.5% on raw material. As far as value added plastics are concerned, Turkey is very influenced by European standards and practices and this is something that is clearly visible in their import requirements. As we do not have the production capacities/ capabilities in many of the product segments within plastics that are compliant with EU standards, there is obviously the issue of acceptability of our value-added products.

However, with the right kind of strategies and initiatives, I would like to believe that our potential to grow our exports to Turkey can probably be 10-fold of our current exports.

In your opinion, how is the ease of doing business in Turkey? What are the typical challenges faced by exporters in Turkey?

Doing business in Turkey is fairly easy. One might want to consider language as a barrier, especially when one moves away from Istanbul/Ankara and into smaller cities. At such times, it becomes very imperative to have a local business associate or partner. Besides the same, as the country has had several periods of economic or political instability, one is likely to find many companies that aren't the most financially sound. For us as exporters, this can be a challenge as it is hard to have an accurate assessment of the financial health of a business counterpart in Turkey. And while Export Credit Cover is available to exporters, the focus for us as exporters is to have steady and stable businesses without having to face a situation where in we would need to claim insurance cover.

In India, we have the ECGC to check credit worthiness of importers from various countries importing from India. However, our businesses are dynamic, and their processes do not always keep pace or have been unable to adapt to the fast-paced nature of the industry. There ideally should be better facilities or responsible agencies who could assist exporters in verifying the credit worthiness of importers in any given country, including Turkey.

The impact on the currency given its fluctuations is also a factor. Recently, despite the Lira stabilizing, the depreciation of the Indian Rupee has helped exports overall, but this can change rapidly.

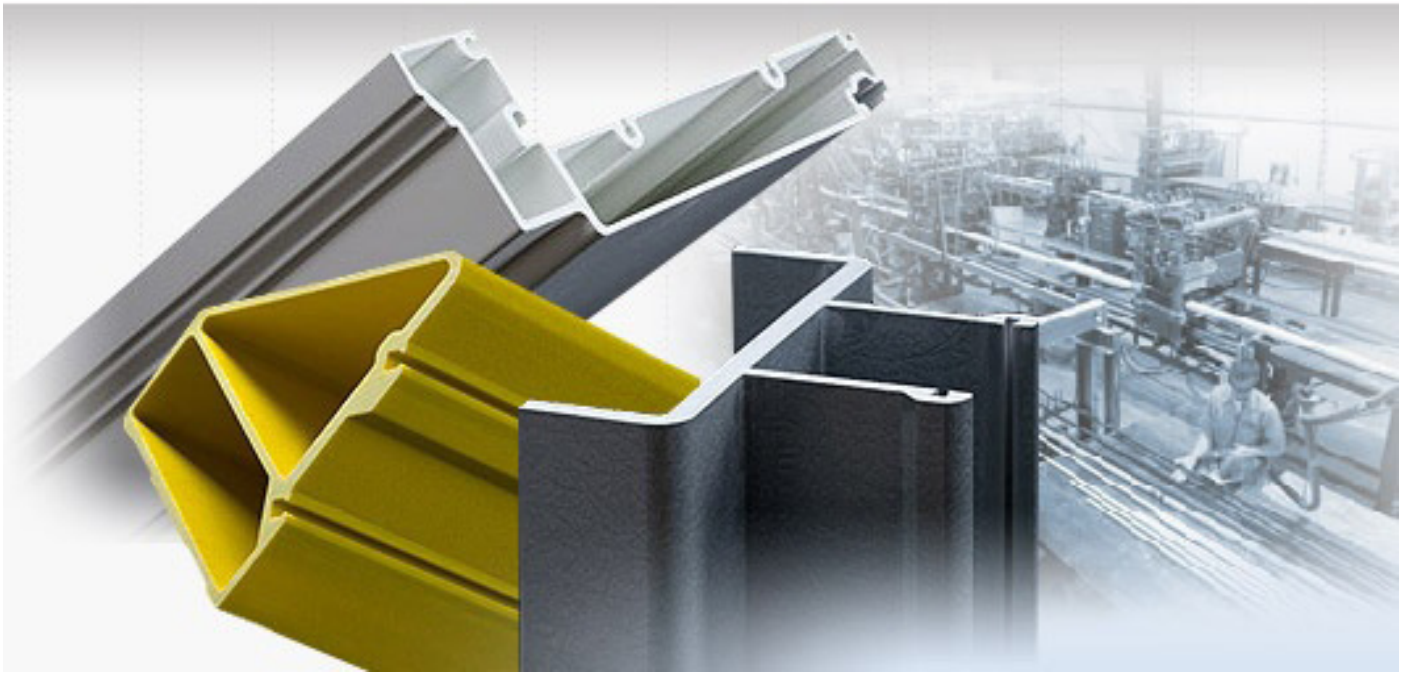
It could well be said that while doing business in Turkey is quite good, maintaining it can be challenging, all things considered.

What are the challenges faced by the industry members in India?

Issues relating to GST Refund and Logistics are two major hurdles faced by our exporters. While delayed refunds impact a company's capital flow, huge cost of transportation and delays in getting clearances have significant impact on our ability to deliver within our committed timelines. Reduction in paperwork is a necessity as these are cumbersome and a hindrance in a dynamic business environment.

What are the measures, policies, support, etc that you believe are critical to improve exports to the country?

The Government of India has been most supportive with numerous incentives and schemes for the growth of the export industry. Perhaps one area that should be looked into is the issue relating to the HS Codes. Often HS Codes in India do not match HS Codes used globally and this can be quite challenging as it could result in missed opportunities. This has been seen to occur a lot in the Masterbatches exports especially. And, an FTA would have far reaching impact on our growth prospect. To conclude, Turkey is an excellent market with immense opportunities for growth for our export segment. It is a rich economy and the industry has excellent exposure to and understanding of best practices, products and processes from across the world. They are also huge consumers and processors of plastics considering their domestic demand and demand in Europe. Everything possible must be done to therefore ensure that we do not miss on the chance to play a much bigger role in Turkey.



Bright Outlook for Fiber Reinforced Plastics (FRP)

Global Market Overview

Fiber-Reinforced Plastics are composite materials that typically consist of strong fibers embedded in a resin matrix. The fibers provide strength and stiffness to the composite and generally carry most of the applied loads. The matrix acts to bond and protect the fibers and to provide for transfer of stress from fiber to fiber through shear stresses. The most common fibers are glass, carbon, and synthetic fibers.

FRP composites have very high strength characteristics and are nonconductive, noncorrosive, and lightweight. According to its reinforced fibers, FRP can be classified as glass fiber reinforced, carbon fiber reinforced, aramid fiber reinforced and so on. According to the fiber length, FRP can be divided into long fiber, shore fiber and continuous fiber reinforced plastics. Glass fiber reinforced plastics are the most commonly one in the FRP market. In 2017, 97% FRP are glass fiber reinforced. However, carbon fiber reinforced type has attracted more and more interests in recent years due to its distinctive characteristics. The worldwide market for Fiber Reinforced Plastics (FRP) is expected to grow at a CAGR of roughly 3.0% over the next five years, will reach 38200 million US$ in 2024, from 31900 million US$ in 2019, according to a new Market Research study.

Indian Composites Market Outlook

The Indian Composites Industry has witnessed single digit growth in recent years and is expected to grow at a Compounded Annual Growth Rate (CAGR) of 8.2% in the next five years. The per capita consumption of composites in India is around 0.3 kg, against 2.5 kg in China and 11 kg in US.

While the most significant growth driver of Indian composites industry is the huge untapped potential of the domestic market (reflected in the very low per capita consumption of 0.3 kg of composites), there is a great scope for the Indian Composites fabricators and Raw Materials manufacturers to cater the global Export Market, which will boost India's Composites consumption in the next five to ten years.

The buoyant domestic demand for Composites provides a driving impetus for all stakeholders within the value chain; – Raw Materials suppliers and End Component fabricators, thus boosting employment prospects as well. Currently, the Indian Composites Industry is poised to provide a lucrative opportunity to the International Composites Community, and the still untapped markets will provide a platform for investments, both FII & DII.

The major driver for the Indian composites market growth is 'Make in India Initiative', the rise in demand of Composite Components is imminent for Renewable Energy, Oil & Gas, Mass Transportation, Electrical and Electronics, Chemical Industry, Infrastructure, Building and Construction (smart cities development, etc.) and Water Management.

Markets

Overall, the Indian Composites Industry has experienced a comparatively healthy growth over the last five years and caters to a wide assortment of raw materials, components, and sectors. The current (in 2018) Indian Composites Market is estimated at 3.4 lakh metric tonnes, this is up 6.3% over the previous year, and witnessed the highest growth since 2015.

The market is driven by growth in Mass Transportation, Electrical and Electronics, Infrastructure, Building and Construction.

Glass fiber continues as the preferred Reinforcement Material for fabricators, due to low cost and compatibility with the production processes. In 2018, glass fibers constituted markets share of around 98.5% (Fig. 2) and close to 20% of the domestic demand for glass fiber was catered by import supply.

Carbon and Aramid Fibers, with low cost to performance ratio, are the import dependent markets destined to grow. Aramid fiber is mainly used in production of Bullet-Proof Jackets.

Unsaturated polyester resin is the largest consumed resin, representing 83% of total Indian composites market. The total estimated consumption of UPR in India for the composite markets was around 155,210 MT in 2018. The Indian composites raw materials (UPR) industry is somewhat fragmented (around 60-70 manufacturers) & unorganized. Whereas the market for epoxy resin was around 18,700 MT in 2018.

Market Opportunities

There are six major industries where composites are mostly consumed in 2018 and these segments represented 82.1% of total volume. Mass Transportation sector was the largest user of Composite Components with a share of 20.5% followed by Building & Construction (14.2%) and Electrical and Electronics (13.8%). The substantial demand from these industries could provide excellent growth and profit opportunities to Market Leaders.

Calendar year (CY) 2017 was a historic year for the Indian Wind Energy industry because India added a record 4,148 MW of wind energy capacity, increases 20% over CY 2016. Indian Wind Energy Industry surpassed the previous highest installation (3,460 MW) added in 2016. The Government of India has recently increased targets of the installed wind capacity from the current level of 24 GWs to 60 GWs by 2022. As of now, India has cumulative installed capacity of 32 GW, which translates to add an average of 6,000 MW every year to meet the target. India plays an important role for Thermoplastics and Thermoset Composites penetration in the Automotive Industry because of demand and adoption by OEMs. With Government plans to promote electric vehicle, CNG based vehicle and hybrid vehicle, under the National Electric Mobility Mission 2020, opportunities for the segment are immense within the automotive industry.

The Indian Mass Transportation Industry also demonstrated growth for the sixth consecutive year. It is estimated that Indian railways consumes approximately 12,000 MT of Composites for Battery Boxes trays, Roof Ceiling, Glass Shutters, Window frames and other applications.

The Government of India regulation also states that 30% of components should be locally outsourced by the supplier in the Aerospace Industry.

In the last five years, the Indian composites industry has witnessed the increased use of mechanized processes. Still, hand lay-up process (40%) is the first choice among the composite fabricators due to its low operating cost and easy to handle. In addition to this, filament winding (15%) and injection moulding (13%) processes are widely used to produce composites components.

Challenges Ahead

The Indian Composites industry still faces constraints to moving ahead to cater to untapped markets. The fragmented structure comprising 3000 stakeholders in the value chain including small, mid-sized and large players across the country and market hierarchy within tends to cause intermediary uncertainties amongst various stakeholders with corresponding inhibitors to the growth rate.

The industry is less R&D intensive and poor IP protected (fewer patenting activity and scientific literature publications) and its products are marketed to OEMs and industrial users. In September 2017, Industrial Major, – Reliance Industries Ltd. (RIL) made a foray into

the growing Indian Composites market and today, the industry is projected to grow rapidly to reach 4.9 lakh metric tons by 2022 at a substantial CAGR of 8.2%. This scale of growth should result from rebounding Renewable Energy, growth in Mass Transportation, penetration of composites in the strategic sectors and modestly rising index of industrial production.

Some of the major challenges for the Indian composites industry are as follows:

- The need to eliminate a persistent "Lack of awareness" of Composites in the Indian Industrial World and a prevailing low knowledge base.
- Absence of solid and concrete Regulatory Framework/Bodies
- The need to promote Standardization of end-use products
- Recycling of Composites Waste and EoL
- Low IP activities and IP management
- Limited number of Scientific Publications
- Carbon Fibers dependency on Import markets
- Need to improve Quality Consciousness among small FRP/GRP Composites manufacturers
- Need to step up effort to develop New Products and Applications
- The exact nature of the growth recovery could vary for the Indian Composites Industry and be dependent on larger macroeconomic variables like Indian GDP growth, new infrastructure and Renewable Energy Projects, and Core Sector growth.

Source: ICERP

Industry Speak

Pradip Thakkar,
Director,
Mechemco Resins
Pvt. Ltd.

Research indicates 97% FRP are glass fibre reinforced. What is the reason for the same? What is the difference between Glass, carbon & Aramid fibres? How does their application/ use vary?

Most glass fibres display very high elasticity, are extremely strong, lightweight and possess robust mechanical properties. At a thickness of about 10-14 microns, these are nearly defect free. Also, as glass is an inert material, it is neither reactive in nature, nor impacted by external factors, making it ideal for use in a variety of applications. Although this industry is capital intensive, the raw material required for making glass fibers is sand which is cheap and abundantly available. Thus glass fibres are the most economical of the above 3 reinforcement options.

As compared to glass fibers, carbon fibers have very high strength to weight and very high modulus to weight ratios. This allows for making very light-weight yet very strong structures. They can be also used along with a wide variety of matrix materials allowing for flexibility in other properties like temperature resistance. Thus carbon fibres are used in high performance applications like Defense & Aerospace as they are light weight, have high strength, stiffness and can withstand temperature extremes. They are also extensively used in sports industry like Formula 1 which is the pinnacle of motorsport. Other sports applications include tennis racquets, golf clubs, etc.

Major advantage of Aramid Fibres over Glass Fibres is their high impact strength to weight ratios.These reinforcements allow for making light-weight bullet proof vests having very high impact strengths.

Carbon processing technology is also yet unavailable in India. Although attempts were made by NAL, HAL, IPCL, etc., they were unable to commercialize it. Also, carbon fibre technologies, owing to its application in extremely sensitive industries such as defense and aerospace, is heavily guarded and procurement becomes an arduous process. The major global manufacturer is Toray and they have taken over all other players within this segment.

In comparison, Glass Fibre is just a tenth of the cost of Carbon / Aramid Fibre and hencefinds application in a whole range of products. From commodity to specialized products, these are very commonly used in every sphere of our life.

Despite the vast opportunities in the Mass Transportation, Building & Construction, Electrical & Electronics, Automotive industries, India has a very low per capita consumption of 0.3 kgs compared to 2.5 kgs in China & 11 Kgs in USA. What are the reasons for the same?

When one looks at statistics such as these, one also needs to examine the circumstances around it. India was originally and majorly an agrarian economy and post-independence; the major focus of the Government spends were towards social upliftment rather than infrastructure investments. Today however, infrastructure development has greatly increased with the rise in population and income. However, despite the same, if we are to consider the vast population and corresponding per capita spending, it is still comparatively lower than global average. And hence, per capita consumption is low. This is true for any category of products, not just FRP.

On the other hand, visibility and awareness for FRP is low in India. FRP, globally has been replacing conventional materials such as steel, wood, aluminium, concrete, etc. For this to happen in India, foremost, requires a paradigm shift in the mindset of industries. The benefits of FRP are numerous as it improves performance and efficiencies. However, lack of knowledge is a major hurdle. With other industries also having strong lobbies, FRP has yet to reach its complete potential in India.

Renewable energy sectors in India, both wind and solar, have been receiving an increased push for growth. Suitable raw material for these sectors continue to be imported due to lack of availability of the right grade/ quality within the country. What inhibits the composites industry from investing in R&D for manufacturing the required composites, considering the vast opportunities that the sector presents?

Solar energy is a very fast changing and dynamic industry and with technologies changing at the pace that they do, the requirements also keep changing. In India, renewable energy mostly comprises private projects. While there is a push towards greater renewable capacities in coming years, initiatives such as “Make In India” are needed to give the allied industries a major thrust and for further investments in the sector to make them happen and be commercially viable too. The Wind energy sector on the other hand is fairly straight forward. Technologies in this sector are about upgrading and improving. There is no major breakthrough other than blades getting larger, better. In India, we have ample raw material resources and technologies for this sector. Wind turbine blades are glass fibre and India is the largest exporter of Wind Turbine blades.

Besides Reliance Industries, who are the major players in the segment? What are the measures needed to further organize the segment, encourage R&D investment and protect IP rights?

In 2018, Reliance acquired the assets of Kemrock Industries to enter the composites business and is focusing on thermoset composites such as glass and carbon Fibre-Reinforced Polymers. Other industries such as Tata, Mahindra & Mahindra, Godrej, L&T have also been investing in the segment. The composites sector is an immense one and the industry has been prioritizing its investments. As the range of application is so diverse, from simple to the most advanced, it covers a whole spectrum.

Products of the future are what the industry needs to focus towards as High tech products will require investments and technologies as we move ahead. As FRP products have high chemical resistance and longevity, these will find continued and much demand in industries that require long shelf life and lasting performance. Furthermore, the industry is majorly lacking in skills and we are in pressing need for skill development programmes. Currently there are no entry-level education programmes in composites. Only some post-graduate programmes and even these are limited. The industry needs to focus on skill development, technical education and training at an ITI or CIPET level. Technical skill development is critical to the growth of this industry.

The Government, in any country, is the biggest driver of growth as it is the biggest spender. The Government needs to incentivize growth by encouraging use of newer/ better materials against conventional material.

What is the export potential for the segment? Who are India’s major competitors?

The Export potential for this segment is immense. The basic raw material is abundantly and easily available and as a low investment industry, it makes it easier for new entrants into the industry. Technologies are simple, we have an and well developed too as processing requires basic engineering/ technical knowledge and we have an abundance of the same as well. Some of the other major advanatges that we have include:

- availability of a wide range of process equipment
- adequate design and engineering skills
- the composites industry is well located geographically
- we have the largest design and engineering force
- many products require to be custom moulded /designed involving a lot of human capital, which we have as well

India does not currently have any major competitors as Composites is a B2B segment and orders are usually tailored to suit the requirement of the buyers. China is stronger in the B2C segment.

While the export potential is immense, being B2B, testing for quality/compliance is a major hurdle as not only is it an extensive process, but one that is expensive too as globally standards vary from region to region. However, it is an opportunity for the sector, especially for those who have the wherewithal to push the envelope. For example, the marine industry, and especially leisure segments such as yachts, boats, ships, etc. are a huge market for Fibre Glass. Not only globally, but in India itself it is an untapped market.

What are the major challenges faced by exporters of composites?

One of the major challenges that our industry faces is the fact that it is unorganized. Being a low investment segment, there are numerous smaller players, but they do not have the capacities to meet huge demand.

Furthermore, considering that the products are completely customized and expertise in design limited to a few people. The field is not highly paying and so people would not venture in it.

We do not have adequate globally accepted testing facilities for strength, quality and longevity. This is especially significant in exports as different countries have their own standards. Investing in prototypes/ samples, in cases where there has been no precedence, and having these tested at international labs is a very expensive proposition. This is a very common problem faced by the industry.

As the products are voluminous in nature, this leads to high logistics and shipment costs. Sometimes the products are so large that they require facilities close to port in order to avoid internal transport hassles, especially when there is a shortage of same. Furthermore, export of resins is treated as DG cargo so HAZ approval takes time. This increases the lead time for export orders. We need the Government to take a lead on approvals by having adequate facilities, subsidizing approvals and within reasonable time frames.

India does not have international standard facilities in India. International laboratories and agencies must be encouraged to set up in India and investment must be made in R&D.

What are the strategies that need to be adopted to reduce import of raw material and increase export of composites from the country?

As far as Glass fibres is concerned, we are not dependant on imports. However, in terms of specialized fibres, we are highly import dependant. High modulus fibres such as carbon fibre are not available as controlled by a few countries as restricted and guaranteed technology. India has the some of the best minds in science, engineering and technology. However, if we had the raw material made available, we have the capabilities to grow our potential to a vast degree. It is a sensitive area, but the Government must look for solutions to overcome these barriers and not lose out on opportunities or development.

Improved financial facilities, easing bank credit facilities and rationalisation of Anti-dumping duties are also integral to export growth.

Some of the products that have high export potential include:

- FRP building parts – domes, fascia, ornamental & architectural products, pergolas, security cabins, statues
- Automobile components- body parts, under bonnet
- Automobile components – thermoplastic based
- Playground equipment, water park slides
- Cable tray insulators and switchgear
- Wind mill blades and nacelle covers
- Optic fibre tension members
- Sewage treatment plants (public and in-house)
- Composites gas cylinders

The industry has projected a growth of 8.2% from the current rate of 6% in the next 5 years. What are the measures being taken to achieve this growth?

One of the most significant measures that we need to take and which is a huge challenge, is the lack of data. FRP comprises a whole spectrum of products with various HS Codes. However, in order to develop a comprehensive strategy, we need to have the right data and classification based on HS Codes. This is critical and needs to be done immediately.

Participation at various international shows and organizing RBSMs for the segment are critical to knowledge sharing, keeping up with latest technologies, networking and promoting businesses. We have been leading exporters to various product shows globally and the numbers are gradually but surely increasing.

Suggested measures to boost exports of composites include:

- Skill development programs through technical institute (may be with support of education ministry to create – a separate course / diploma on composite industry- this can also create higher employment
- Set up composites testing programs with test institutes
- Provide assistance for seeking international testing and Accreditation / approvals. Convince approval bodies to start testing facilities in India at a reduced cost. Also ensure global acceptance of India based testing.
- Work closely with OEMs to become their global source
- Indigenisation program for make in India should be fast tracked. Government and corporates should encourage buying of composites for local projects so that vendors capabilities and performance are established.
- Make advanced fibres and materials available for research and design programs and for non defense manufacturing
- Provide land extremely close to port for manufacture of oversized equipment

Industry Speak

Dr. A. Selvam, Executive Secretary, FRP Institute, Chennai

Research indicates 97% FRP are glass fibre reinforced. What is the reason for the same? What is the difference between Glass, Carbon & Aramid fibres? How does their application/ use vary?

Composites market is dominated by fibreglass reinforced products because of its lower cost compared to other reinforcement fibres. The glass fibres also posses excellent mechanical properties and other characteristic features like chemical resistance, electrical insulation etc and these features makes it as a attractive reinforcement fibre for many commercial applications.

The difference between glass, carbon and aramid fibres are that glass and carbon are inorganic fibres whereas aramid is an organic fibre.

1. There is difference in specific gravity among these fibres and the aramid fibre has lower specific gravity compared to other two mentioned fibres.
2. Thermal stability wise aramid has lower thermal stability compared to other two fibres.
3. When comparing the mechanical properties wise we can rank in the following order Carbon, Aramid and glass fibre. The same is also true by cost wise.

Application wise, when the strength and stiffness are prime criteria, carbon fibre is the first choice that is the reason most of the aerospace and defence applications, carbon fibre based composites are being predominantly used.

One of the important characteristics of aramid fibre is its excellent toughness and because of that it is being widely used for many bullet proof applications and also where impact resistance is one of the major requirements. As mentioned earlier, glass fibres coupled with their low cost and attractive characteristic features are widely used for applications like wind mill blades, electrical insulation products, boats and in chemical applications like chemical storage tanks, etc. These are the few points that makes glass fibre to dominate the polymer matrix composites market. Considering the composites as an alternate materials system for steel, aluminium, wood, the fraction of partial replacement for the above materials is possible only by glass fibres.

Despite the vast opportunities in the Mass Transportation, Building & Construction, Electrical and Electronics, Automotive industries, India has a very low per capita consumption of 0.3 kgs compared to 2.5 kgs in China & 11 Kgs in USA. What are the reasons for the same?

The lower per capita usage in India is due to various factors such as

1. The lack of awareness about composites.
2. Higher initial cost of composites one of the drawback so that consumer prefer conventional materials like wood, aluminium, steel and most often the lifecycle cost benefits offered by composites are ignored.
3. Lack of quality consciousness among the few product manufactures in the industry gives negative impression to the end users about the composites materials system itself. Few failures create untrustworthiness about composites among the end users.
4. Higher raw materials price and lack of availability of certain raw materials are one of the other reasons for limited usage of these materials in India compared to the developed countries.
5. Among the composites manufacturing process, hand lay up is still most widely practiced in India and the process has lower productivity and slower adoption to mechanisation could also be one of the reasons for the lower per capita usage of composites in India.

Renewable energy sectors in India, both wind and solar, have been receiving a increased push for growth. Suitable raw material for these sectors continue to be imported due to lack of availability of the right grade/ quality within the country. What inhibits the composites industry from investing in R&D for manufacturing the required composites, considering the vast opportunities that the sector presents?

The wind energy sector in particular look bright at present, however over the years there have been fluctuations in the wind energy market and there is no steady growth, so investors are hesitant to invest considering the volatility in the market. Various factors have contributed to the volatility in the wind energy market such as the increased land cost, higher labour cost, reducing unit price of power generated, etc and these are some of the problems faced by the wind energy companies, however, there is progress in blade technology, improved manufacturing processes, energy storage options, etc and we can anticipate higher growth for wind energy in coming years.

For large scale use of composites, the lack of technology is one of the major barriers, and also lack of interactions among the industry, academia, and government organization to overcome this barrier. Lack of funding,

skilled manpower, technology, machinery, tools and accessories, likewise many factors are responsible for the untapped potential of composites. The advanced composites programme of TIFAC was very useful for the industry, however the industry didn't utilized it constructively and due to the fact that few industries misused the funds given by the TIFAC and the funding opportunities were then stopped by TIFAC for these programmes, so the industry suffered because of that.

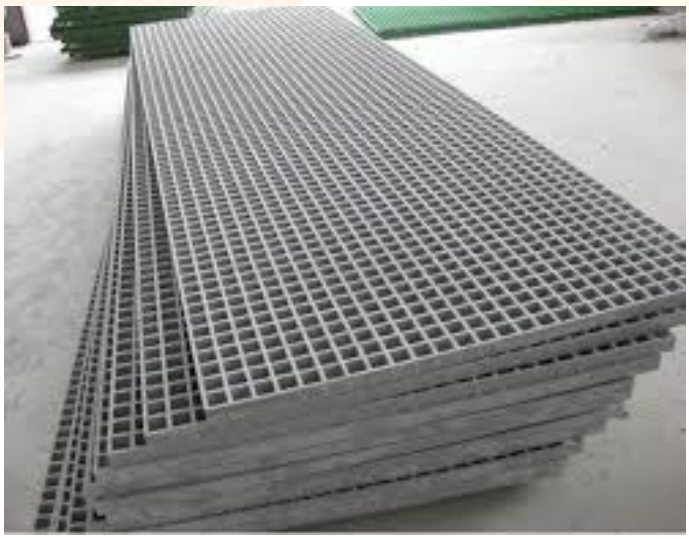
In general, the Materials Science and Technology did not get due attention like information technology in India and composites being one of the materials science branch and due to lack of attention there is not much growth as anticipated. However in the past few years, there is increased focused on indigenisation in defence and aerospace sectors, we can anticipate growth in composite sector and major industrial players are entering this field and with government support and academia-Industry co-operation the future looks bright for this sector.

Besides Reliance Industries, who are the major players in the segment? What are the measures needed to further organize the segment, encourage R&D investment and protect IP rights?

Besides, Reliance Industries, the major players in the segment are TATA Advanced materials, TATA Advanced systems, L&T, Godrej Aerospace, Lakshmi machine works, Suzlon, Siemens Gamesa, GE, Vestas, TACO, Mahindra Composites, Tech force composites, Sintex plastics division, Devi Ploymers, Permali Wallace, Sumip composites, Chemical Process Equipments, Megha Engineering, etc, just to mention a few. The Indian composites industry is predominantly composed of medium and small scale Industries. The measures needed to further organize the segment are like creation of a CIPET (Central Institute for Plastics Engineering and Technology) like government organization will be one option. Although a Centre of Excellence on Composites was created at ATIRA (Ahmedabad Textile Industries Association), considering a country like India, few institutions are not sufficient considering the vast geographical spread of our country. Such a government organization is necessary to upgrade testing, Standards, Certification and as a regulating body to ensure right materials and products enters the market and this will help in ensuring quality composites products are in the market and this can lead to increased confidence on this materials system by the end-users.

Lack of safety considerations during manufacturing, materials handling and in general awareness on safety is lacking and industry should focus on these aspects. The safety standards should be improved through experts and also through government guidelines. Industries which get renowned certificates like NADCAP, UL certificates should be encouraged by giving incentives to them for getting these certifications and these incentives can be by providing them part of the cost incurred in going through these certification programmes and these expenses can be reimbursed to these industries.

To Encourage R&D investment: Collaborative research and product development work between Industry and academia & government organization can be encouraged. Government can fund projects that have impact societal and long term benefits for country as well as environment should be encouraged.



Protect IP rights: Regarding IP rights, awareness can be created in the engineering colleges and also in the industries about the various schemes that are currently available and these are not known to many young entrepreneurs. Government organization like MSMDI has many programmes and schemes which encourages innovation, new product development, commercialization of innovative ideas are not known to many start ups. The projects which has highest impact factor for growth and progress of the country and for the environment should be given higher financial incentives based on impact factor which can be job generation, import substitution, saving foreign exchange and many other factors that can be decided by a panel experts and their recommendation can be implemented.

What is the export potential for the segment? Who are India's major competitors?

Export potential is good because Indian industry has capability to produce world class product at very reasonable cost. India is also strategically located geographically with good reach to neighbouring countries that are having higher business potential in the field of composites e.g. Middle East, African countries and Southeast Asian countries.

China is the major competitor for export of composites, however considering the transportation cost and time saving in reaching out to neighbouring countries, still India has an opportunity in composites. Some of the technologies adopted by Chinese companies are very matured so by attracting investments and collaborating in certain sectors, it will be win-win situation for both the countries.

Exporting form India to North America and Europe could be very attractive feature if some of high quality products can be made in India through collaboration with global leaders without affecting each countries strategic interest. One of the major challenges faced by exports of composites is higher raw materials price, lack of availability certain high grade raw materials like carbon fibre etc and most of these materials are being imported and are expensive, delay in getting the materials leads to lowering our competitiveness at global level.

Testing standards, certification is one other major challenge faced by the industry. The testing facilities currently available in India are minimal and some test facilities are not available and some tests have to be performed aboard. These are more time consuming and are expensive.The lack of awareness on the export opportunities for composites in the neighbouring countries as well as at global level is another factor for lower export of composites from India.

What are the major challenges faced by exporters of composites?

Composites Export: Raw Materials cost

High raw materials price in India compared to International price, Lack of awareness and lack of information on export opportunities, High cost involved (also longer duration) in getting/meeting globally accepted quality standards/certifications/approvals, High cost involved in testing and lack of widespread test facilities for composites in India, High cost of speciality chemicals and materials (add to total cost), Detailed information and guidance on Logistics, Hurdles, Procedures, Financials, Business help and interaction with foreign buyers will help to overcome the problems and increase the export.

Composites Export: Machinery

Inspite of more than 3000 composites product manufacturing units in India, the Composites product output is about 3,80,000 tonnes only. Hand lay up is still most widely practised manufacturing process for composites and hence the Composites output is comparatively lower and also Hand lay up process has also have limitations in ensuring quality, consistency and in mass production capability and hence not able to explore export opportunities in a bigger way. High cost of machinery especially sophisticated machinery/equipment (Mat Cutting, Tape laying, Continuous product making, Autoclave etc).

Opportunities: Process machinery development/research is lacking, Huge opportunities exists as these machineries can be developed in India at much lower cost. Global opportunities exist for such high quality, low cost machinery (in Domestic as well as Foreign Market).

Composites: Design, Analysis and Simulation:
***Hurdles*:** Lack of experts in Design, Analysis of Composites is major hurdle in new product development and testing. The software used for Design, Analysis and Simulation are very expensive and not affordable by medium and small scale composites Industries

Opportunities: Being a white collar job it will be easier to attractive talent, however, training, resources and facilities have to be created with investment from Industries/government. These kind of services can be given to global industries at a fraction of cost at what is available globally today and it can earn huge foreign exchange for India

Composites Test facilities: ***Hurdles:*** Lack of testing facilities and implementation of standards affects the product quality and the growth of the Industry. The government should set up Testing centres at four major Cities one each at West Zone, South Zone, North Zone and East Zone

What are the strategies that need to be adopted to reduce import of raw material and increase export of composites from the country?

To reduce import: An expert committee's recommendation can be analysed why raw materials used for composites made in India are expensive compared to imported one on the basis of input raw materials cost, availability, its cost of transportation, energy cost, technology, labour, mass production and global market reach, logistics, etc. The industry inputs can be supported if it can bring down imports substantially and government can support where-ever it is necessary.

Increase Export of composites from India:

To increase the export of composites from India, collaboration with global leaders should be encouraged and the product exported from India through such collaborations should be given financial incentives recommended by an expert committee.

1. Global certifications should be encouraged.
2. Projects which leave lower carbon foot print should be encouraged.
3. Export potential from India to neighbouring countries, avenues and awareness can be created.

Opportunities: Creation of testing facilities at affordable costs can help Indian Companies to meet global standards at a faster pace and help in exploring export opportunities. Such facility can cater to global multinationals requirements also and these kind of facility can be a source of knowledge generation.

Composites Industry is a knowledge driven Industry like Information Technology and hence constant update is needed as variety of materials developments and process technologies and improvements on machinery and innovations are happening globally at faster pace than the conventional materials system and Indian Composites Professionals must keep themselves of abreast of these new developments to be competitive in the global composites market. Composites Technology Centres should be set up to provide academic and research programme on Composites offering a degree, diploma, ITI and certificate course on Composites technology. Government funding for bringing together academic Institutions, Industry and government research organizations for effective utilization of resources, knowledge and information for progress of composites Industry and as a country to take leadership in this critical technology in this region. Govt recognized approved agency for export of composites products and certified man power for the industry

Advanced Carbon Fibre Composites Sector

Hurdle: Non availability of carbon fibre in India and high cost of imported carbon fibre and import restrictions has restricted their development activity, growth and progress.

Opportunities: These high value and high performance products has lot of potential for exports. Govt funded Research and Development Projects on Composites. Overall Government support for the composites Industry can be similar to the policy of USA government for composites like creation of Institute for Advanced Composites Manufacturing Innovation (IACMI www.iacmi.org), National Composites Centre, UK, www.nccuk.com, Government can support formation of Composites Clusters with government supported and Industry partnership product development/ knowledge centres for Composites in various parts of the Country and it will create new job opportunities

The industry has projected a growth of 8.2% from the current rate of 6% in the next 5 years. What are the measures being taken to achieve this growth?

Opportunities and Awareness: First we would like to create awareness on the opportunities available in the domestic market and also the export opportunities available globally.

Technology upgradation: Another focus area would be technology upgradation and for that joint venture with global leaders for making the materials, product, machinery in India in line with Govt of India's intitaitve on Make in India and with a long term view of Make in India and Make for the World.

Skilled Man power for Composites Industry: Lack of skilled manpower affects the growth of composites Industry and Government schemes like skill India should be effectively utilized by the Indian Composites Industry and Consultants can play a crucial role in the skill development programmes and also to get the necessary financial support for such skill development programme for the composites industry.

Recycling of Composites: Govt should financially support projects on recycling of composites which is one of the problems faced by the Industry

Government Support for transformation of Industry : Indian Composites industry need government support to transform with focused approach on

- Mechanization
- Faster production.
- Consistent quality
- Less man power requirement
- Automation

Even in mechanized process automation can be applied wherever possible. Improved Consistency and quality. Innovation It is the key for continues improvement. Variety of materials combination and process methods open up opportunities to create cost effective solutions for customers. Composites should be considered as a value addition materials not just as an alternate materials and with government support, the Indian Composites Industry can be a global player and it can create value in terms faster, easier, better and cost effective solutions in composites for global needs leveraging knowledge and IT resources.

As a body that represents FRP industries and exporters, what are your key goals to promote growth of the segment?

As an industry body, our aim is to bring together all stakes holders in the composites value chain under one platform and highlight the opportunities as well as the challenges faced by the composites industry. The next target is to make India a global player in this technology and to achieve that target we organize the event called "ICERP" (International Conference and Exhibition on Reinforced Plastics) once in two years. It is a platform for showcasing Indian capability to the outside world and also to bring in collaborations between global leaders and Indian companies.

We also organise National conferences, training programmes and also "India pavilion" in some of the global composites events like JEC world etc. We are well connected with some of the leading global associations for exchange of information, promoting innovations and strengthening co-operations for betterment of business and technological innovations.

One of the focus areas is export and indigenization. Our view is that if we can make product of global standards, there is huge requirement for our own usage. To make it happen, we need to focus on quality of raw materials, availability of raw materials at reasonable cost, improved process knowledge, adoption of mechanization to minimize errors, defects and to enhance productivity. Innovation is the key to sustainability though it is applicable everywhere, it is very important for composites field as there stiff competition among all the stake holders and they have to also compete with conventional plastics, wood, steel, Aluminium, etc, which are available at lower cost. We feel that by working together and effectively utilizing our resources, we can contribute to the country's progress and we can make India as one of the finest hub for composites in the world.

How Invoice Factoring Can Bridge the Trade Finance Gap

By Pushkar Mukewar, Co-Founder and Co-CEO, Drip Capital

Lack of working capital is one of the most common problems among MSME exporters. Even after raising invoices in time, buyers often delay payments to exporters for multiple reasons. Since the exporters have limited to no access to working capital, it has a direct impact on their businesses, wherein exporters end up delaying payments to their suppliers and sometimes even have to let go of an opportunity to tap new markets.

However, this problem has a relatively simple solution – invoice factoring. With invoice factoring, an exporter can sell invoices or account receivables to a 'factor' for cash.

Better than Bank Loans?

The trade finance gap is estimated at US$1.5 trillion in emerging markets, which includes countries like India and China, among others. If an SME exporter is seeking a credit line from a bank, they usually need to provide collateral, which may not always be feasible. Additionally, even if the bank relaxes its collateral requirements, it will still need the company's financial records and other documentation because of how it is set up operationally. Further, after everything is submitted, a decision on whether the exporter gets a credit line will take another 20-30 working days. All these factors work together to make financing from banks a difficult task for most SME exporters.

On the other hand, many fintech companies leverage data and tech-enabled systems that eliminate paperwork and make credit availability and disbursal faster and smoother. Fintech startups are thus well-positioned to leapfrog traditional hurdles and solve the working capital woes faced by MSMEs.

Fintech startups have pioneered simple lending solutions based on invoice factoring as a business model. Take an example of Drip Capital's collateral-free post-shipment finance offering for Indian exporters, with instant approvals and minimal documentation. Drip works with over 400 Indian exporters and several buyers from across 80+ countries. To date, the fintech company has financed over US$600 million worth of trade and by 2020, Drip aims to fund US$1 billion of trade.

The Drip Capital Solution

Drip Capital's invoice factoring can be a one-stop solution for SME exporters. It solves the working capital needs of the exporters while the company's credit-related risk is mitigated. SMEs that have exported goods worth US $300K in last 12 months and have sent six shipments in last 6 months (both originating from India) are eligible to avail Drip's finance solution

To discount their receivables, an exporter just needs to upload their invoices to the company's automated platform. Once approved, Drip pays 80% of the value upfront while the remaining amount is transferred to the SME (minus processing and other fees) when the company receives the payment from the buyer.

This works as a win-win situation both for the SME exporter and their buyer, with the former getting access to credit they need when they need it the most, while the latter continues to enjoy a convenient credit period. However, for the model to work smoothly, SMEs need to have a very healthy relationship with their buyers. Drip Capital analyses each invoice and transaction individually on a shipment-by-shipment level, generating a continuously evolving offering for the customer based on their needs and performance. For example, if a buyer is based out of a high-risk country or has successive issues with their payment history, Drip Capital is likely to skip factoring invoices to them.

Having said that, invoice factoring is one of the most convenient and fastest ways for an SME to infuse capital in his/her business. It cuts through the red tape needed to get receivables financed on time from traditional financiers and allows exporters to seek fresh opportunities and grow their business.

Pushkar Mukewar

Over the last decade, Pushkar Mukewar has worked across a variety of roles and verticals. He gained first-hand knowledge of how technology can help fill credit gaps for underserved sections of society at Capital One, solved strategic and operational issues faced by large companies across different sectors and geographies with Oliver Wyman, and worked in social investing with the Acumen Fund in India.

For the first four years after completing an MBA from the Wharton School at the University of Pennsylvania in 2011, he worked as an investor with Indian entrepreneurs at Saama Capital, understanding the formula for what makes great companies.

Since 2015, he has used this knowledge and experience to start and run Drip Capital, where his ultimate vision is to solve all problems faced by SMEs in emerging markets, starting with trade finance. As the Co-founder and Co-CEO of Drip Capital, Mukewar's vision is driving the growth story of the company, building positive impact and transformational change in the international trade ecosystem.

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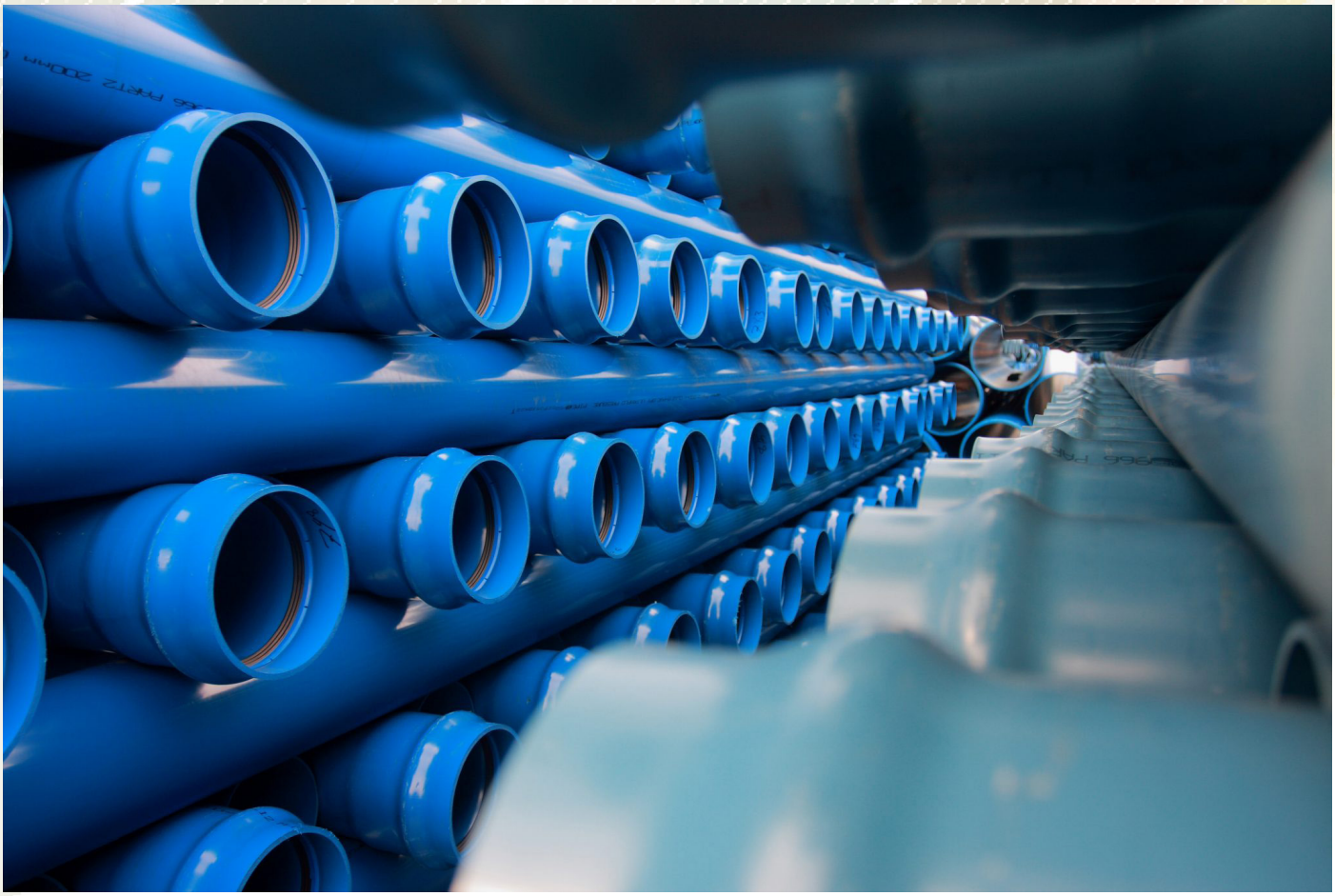


Pipes & Fittings Panel

Pipes & fittings, of plastics, have gained immense prominence over the years. They can be classified into four categories: Unplasticised Polyvinyl Chloride (or UPVC), Chlorinated Polyvinyl Chloride (CPVC), High Density Polyethylene (HDPE), and Polypropylene (PP) pipes. Pipes & fittings panel comprises of 22 commodities at 8-digit HS code level. Major product segments within this panel include – Rigid tubes of polymers of vinyl chloride: Other; Fittings, e.g. joints, elbows, flanges, of plastics, for tubes, pipes and hoses; Flexible tubes, pipes and hoses, having a minimum burst pressure of 27.6 MPa; and Rigid tubes of polyethylene.

World-wide import of Pipes & fittings, of plastics, is above USD 26 billion.

- In 2018, top-5 exporting countries of Pipes & fittings were: Germany (16.7%), United States (11.6%), China (10.4%), Italy (6.4%), and Poland (4.2%).
- Likewise, top-5 importing countries of these products were: United States (10.2%), Germany (7.5%), Mexico (5.6%), France (4.8%), and China (4.4%).

India was ranked as the 25th largest exporter as well as the 36th largest importer of Pipes & fittings, of plastics, in the world. During 2018, major destination countries for export of Pipes & fittings from India are: United States (10.4%), United Arab Emirates (6.7%), Sri Lanka (6.0%), United Kingdom (3.8%), and Tanzania (3.7%).

India's export of products under the Pipes & fittings panel were valued at USD 188.82 million in 2018. The segment witnessed an impressive annual growth rate of 9.3% during 2015-18. Product categories within the panel that are the key growth drivers are listed below:

HS Code	Product Description	2015	2016	2017	2018
		USD Mn	USD Mn	USD Mn	USD Mn
39172110	Rigid tubes of polymers of ethylene: polyethylene	27.33	29.54	19.31	26.33
39172190	Rigid tubes of polymers of ethylene: Other	6.71	5.62	8.38	7.85
39172310	Rigid tubes of polymers of vinyl chloride: Seamless tubes	2.96	2.55	3.71	8.75
39172390	Rigid tubes of polymers of vinyl chloride: Other	30.39	34.17	33.47	42.37
39172990	Rigid tubes, pipes and hoses, and fittings therefor, of plastics (excl. tubes of polymers of ethylene, propylene and vinyl chloride): Other	14.01	8.48	6.39	11.74
39173100	Flexible tubes, pipes and hoses, having a minimum burst pressure of 27.6 MPa	24.79	23.54	28.58	29.56
39173990	Flexible tubes, pipes and hoses, and fittings therefor, of plastics, reinforced or otherwise combined with other materials (excl. those with a burst pressure of >= 27.6 MPa): Other	11.01	9.09	11.49	15.16
39174000	Fittings, e.g. joints, elbows, flanges, of plastics, for tubes, pipes and hoses	19.59	24.87	27.92	33.79

Source: Ministry of Commerce & Industry, Plexconcil Research

While India exported Pipes & fittings, of plastics, worth USD 188.82 million to the world, it also imported them in huge quantity, worth approx. USD 190.84 million in 2018 from the world. China has been a major supplier of Pipes & fittings, of plastics, to India. The country supplied 21.1% of all such goods imported by India in 2018.

Product categories within the Pipes & fittings panel that have contributed to import growth in India include:

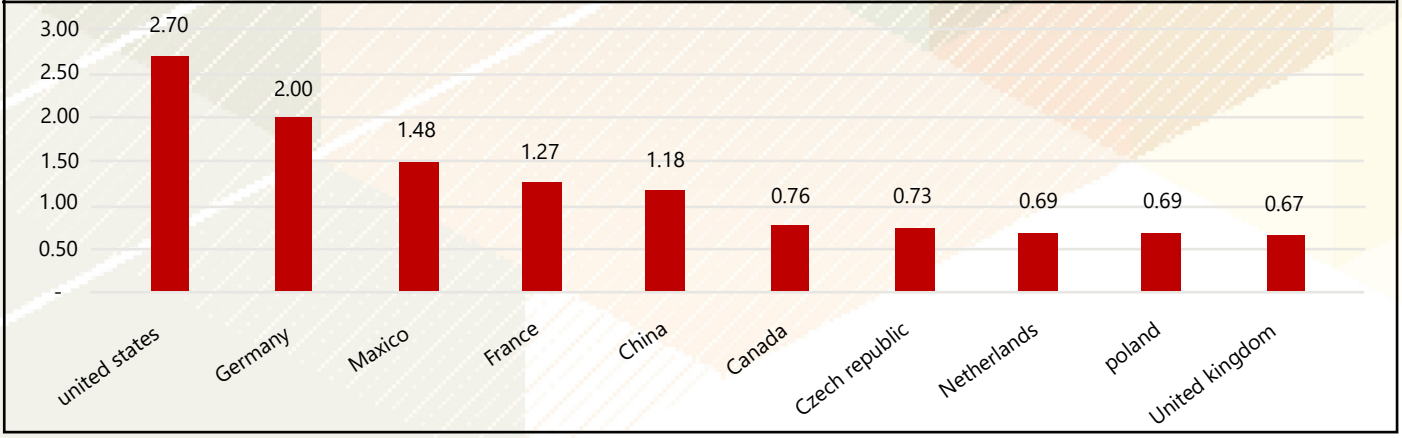
HS Code	Product Description	2015	2016	2017	2018
		USD Mn	USD Mn	USD Mn	USD Mn
39172990	Rigid tubes, pipes and hoses, and fittings therefor, of plastics (excl. tubes of polymers of ethylene, propylene and vinyl chloride): Other	25.66	27.60	28.38	39.81
39173290	Flexible tubes, pipes and hoses of plastics, not reinforced or otherwise combined with other materials, without fittings: Other	14.81	12.95	17.07	21.16
39173300	Flexible tubes, pipes and hoses of plastics, not reinforced or otherwise combined with other materials, with fittings, seals or connectors	2.76	3.00	3.18	5.05
39173990	Flexible tubes, pipes and hoses, and fittings therefor, of plastics, reinforced or otherwise combined with other materials (excl. those with a burst pressure of >= 27.6 MPa): Other	28.91	25.31	32.25	36.79
39174000	Fittings, e.g. joints, elbows, flanges, of plastics, for tubes, pipes and hoses	37.99	44.01	49.46	59.85

Source: Ministry of Commerce & Industry, Plexconcil Research

Panel of the Month

Our internal research indicates that India's Pipes & fittings exports have immense potential for growth in destinations like United States, Germany, Mexico, France, China, Canada, Czech Republic, Netherlands, Poland and United Kingdom.

Import of Pipes & Fittings in USD Million - 2018



Source: Trade Map, Plexconcil Research

Industry Speak

Er. P. Mohan, B.E, PGD., PE, Proprietor, Sakkthi Polymers

The PVC Pipes industry globally is expected to nearly double its growth from USD 62 Billion in 2017 to USD 114 Billion by 2025. In India, it is also expected to grow from USD 3.1 billion to USD 6.2 billion by 2023. What are the key drivers for this projected growth?

In developed countries like Europe & North America, aging infrastructure usually dictates the growth of the PVC pipes segment. Furthermore, typically, when the economy stagnates or unemployment increases, Governments tend to stimulate the economy by investing in infrastructure and make it the key component for growth. In India, development over the last few decades have mainly focused on building infrastructure, modernizing of agricultural practices, modernizing water supply systems and management, electricity, and transportation systems. Safe drinking water and improved sanitation depend on expansion and modernization of water utilities. However, water needs to be carried where it is needed and this is where PVC pipes come into the picture. Compared to any other material, PVC pipes are low-maintenance, easy to install, corrosion-proof, abrasion resistance and as a result, provide longer service life. PVC pipes are becoming more popular in the West and rightly so because they are not affected by disinfectants such as chlorine. In light of these factors, the segment has good potential to grow at both domestic and international levels, considering the vast application of the segment, especially in infrastructure.

Changing environmental conditions have resulted in improvised techniques in Agriculture, Water Management & Distribution, etc. What has been the significant impact of the same on the pipes industry?

Water is a scarce commodity. You don't want to lose it. Most times, due to corrosion of the piping material, water is often lost through seepage and leaking. In light of that, plastics pipes offer immense advantage over other materials in water management considering there are corrosion-proof and resistant to abrasion and in many cases resistant to chemicals such a chlorine that is added to water. However, current misperception about plastics in general, could have a huge impact on the decision makers. As an industry, we need to educate all stakeholders including the public of the benefits and advantages of polymer/ plastic-based products in various segments.

There needs to be greater awareness of the benefits to the environment and health that PVC/ HDPE pipes etc have brought into applications. Some of these include replacing lead stabilizers with Tin based stabilisers in PVC pipes to ensure greater safety, increasing usage of HDPE in water management and distribution with larger diameter pipes of 1200 mm, 1600mm, HDPE/PP -Dual wall corrugator (DWC) pipes to replace conventional cement pipes for gravity applications, amongst others.

What are the advantages of HDPE/ ABS over PVC pipes? Are these competing? What are the other materials that are commonly used in the segment?

Different plastics have different physical and chemical properties. The choice of plastics all depends on its applications and availability. Yes, there could be applications where HDPE and PVC both could be used and could lead to competition. However, in such cases, it depends on customer's requirements or preference. HDPE offers the advantage of flexibility, large diameters, ease of use and cost-effective transportation, and a shelf life up to 100 years! One could also use PP, ABS, PVDF or CPVC.

Construction industry, globally, is said to be the largest consumer of pipes. What are the opportunities in non-traditional markets such as Energy, Industrial, etc?

There are numerous market opportunities such as Energy, Natural gas distribution, Liquefied Petroleum Gas (LPG), oil & gas gathering, hydro fracturing, telecommunication, ship building, sour gas conveying & cross country distribution mostly – it's all in one's imagination. Even nuclear industry is using plastic pipes. On the industrial side, it could food, Pharma, beverage, pneumatics, HVAC, chemicals – you name it. The opportunities are vast for the segment, especially for HDPE/PP products.

Which regions/ countries have witnessed the most demand for the segment?

Mostly developed countries in North Americas, Europe, South America, Africa, Middle East, Far East, as well as China, Russia, New Zealand have demonstrated good demand for the segment and this continues to grow.

What is India's export potential globally? Which countries are our major competitors? And why?

The global PVC pipes market reached a volume of 22.8 Million Tons in 2018, growing at a CAGR of 5.4% during 2011-2018. The market is further projected to reach a volume of 30.5 Million Tons by 2024, expanding at a CAGR of 4.9% during 2019-2024. HDPE Pipes Market is expected to reach US$ 28.9 Bn by 2025, expanding at a CAGR of 4.7% during the forecast period 2017 to 2025 with growing application of HDPE in end use applica-

tion industries. As production of PVC pipes consumes around four times lesser energy, incurs lower losses of the raw material in comparison to concrete pipes, has complete recyclability, PVC pipes find applications in water systems, underground wiring and sewer lines. All these factors and more indicate that globally, as the demand grows, so is India's export potential. India's exports were valued at USD 188.82 million in 2018, an impressive annual growth rate of 9.3% during 2015-18. Today we are the 25th largest exporter in the world and our industries have the best of technologies and facilities to meet an increasing global demand.

Major competition is from China on the price front & Europe considering the technology advancement and new innovations in applications.

What are the new innovations/ technology that have taken place in the industry recently, globally and in India?

Both on the process side as well as on the materials side, a lot of new things are happening but often remain unannounced. Globally, pipe manufacturing companies are competing to make large diameter pipes. For instance, today you could have 60 inch (1500mm) diameter rigid PVC pipes in the North America which was not there a year ago. Today HDPE solid pipe could be made up to 138 inches (3500mm) outside diameter. Then there is the oriented PVC (O-PVC) pipe that allows increased hydraulic capacity. Innovations taking place in plastics pipe material allow pipes to withstand high temperature and high pressure. There has been material development in areas where only metal pipes are earlier used due to stringent flame and smoke requirements. Graphene, the wonder material is finding applications in plastics pipe where conductivity or sensing is required. Continuous technology improvement takes place in the areas of additives such as antibacterial, UV etc.

PVC has been found to contain carcinogenic/ toxic properties and is yet the most preferred in Water distribution systems. What are the measures taken by the manufacturers to counter the same? What has been the impact on the industry's growth?

As I mentioned earlier, we need to educate our users. PVC stands for Poly Vinyl Chloride i.e., polymerized vinyl chloride. Vinyl Chloride has been listed as carcinogenic compound if one is exposed at certain level, for a prolonged period of time. But PVC is not vinyl chloride. In a few parts per million (ppm) level, residual vinyl chloride could be present in PVC resin. However, when processed at hundreds of degrees of temperature, residual vinyl chloride does not exist in PVC pipe. Moreover, current resin manufacturer's processes have advanced so much that residual vinyl chloride barely exists.
Having said that, Resin manufacturers have to do a better job in education. Yes, some additives such as lead stabilizer are not safe and its use should be minimized. However, when processed lead is embedded in the PVC matrix, there is no chance of being released. Hence users need not be concerned. There are other food grade plumbing systems like PPR/PPRCT, composite pipes, PERT, PEX for domestic plumbing, floor heating, room heating etc. PPR, PPH, PE, PVDF, PERT have a lot of industrial applications due to their chemical resistances.

What are the typical challenges faced by exporters in the segment?

When compared to major exporting country like China, our infrastructure much smaller and are mostly utilised for domestic market needs and some for exports. China has huge production capacities across product segments and 80% of their productions are exported worldwide.

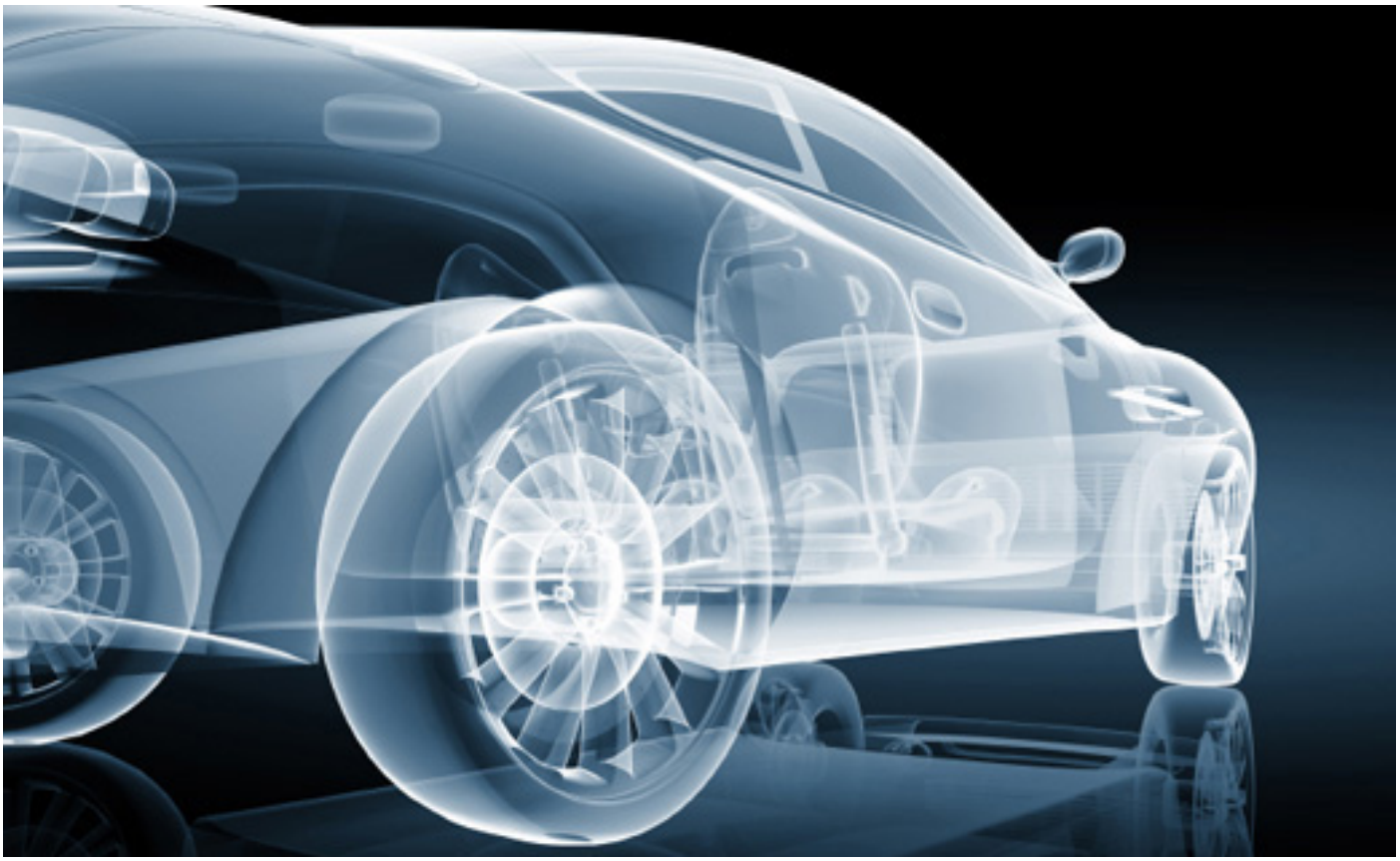
We need to create lots of focused product clusters with all vendors under one roof.

We need to strengthen our infrastructure facilities such as Ports, ICDs & reduce cost of local transportations. Currently it is very high.

Government has to restructure export benefits by returning back the Duties & taxes on exported products.
Human resources – as a country, we have one of the largest populations of youth that is perhaps comparable only to China. However, our labour force is scattered and not organised in proper way, not adequately trained, and completely underutilised under Government subsidies. Hence while we have the resource, we lack in the right skills and structure for effective utilization.

Globally, the PVC pipes market is an intensely competitive one. What are the strategies adopted by Indian exporters/ manufacturers to strengthen their position while also aiming grow their market share?

Quality improvement, identification of new markets, development of innovative new products based on global market needs are areas that we need to focus on today. The export industry should be supported by the Government in reaching out to developed regions such as like Europe, north Americas and understanding their needs and practices as well as learn about their new technologies. The industry also needs support for technology upgradation funding as this will surely lead to an increase in exports.



Automotive Plastics

Taking over the Driver's Seat

Today's automotive plastics make up approximately 50% of the volume of a new light vehicle but less than 10% of its weight.

The role of plastic in the design and manufacturing of automotive vehicles has never been more essential, with stringent regulations and changing consumer habits driving demand for more affordable, lightweight, and fuel-efficient vehicles. Fuel efficiency has become one of the most important features in automotive vehicle design due to the rising fuel prices and stricter environmental regulations.

Common Applications of Plastics

Safety advances in today's materials save countless lives. Air bags, windshields, sunroofs plus energy absorbing innovations reduce vehicle fatalities. Plastic front-end modules, modular seats and energy-absorbing bumpers help save lives every year.

Plastics represent only about 10% of the weight of today's vehicle but about 50% of the volume. Lightweight seats, instrument panels, durable upholstery, sound control fabrics, the headliner, dash and door panels are made with modern polymer combinations.

Plastics are crucial to vehicle exteriors. Lights, bumpers, hoods, liftgates, trim, it's all right there for you to see. Plastics resist extreme weather while helping reduce emissions, improve safety and increase savings at the pump.

Plastics are crucial in the chassis market, including structure and hardware. Innovations in plastic technology display successful structural applications each year. It would not be possible to achieve many of these enhancements as efficiently and with the same performance using other materials. See today's chassis, structures, and hardware. Plastics are strong and lightweight — bolstering the chassis/structure of the vehicle.

As underhood conditions become more challenging, automakers and their suppliers are increasingly relying on high-temperature plastic car parts to help reduce weight and cost, increase parts integration and provide for longer service life. Plastics can also improve "de-burring". This is a step in manufacturing that smooths the insides of airflow parts. Smooth non-turbulent airflow is crucial to engine efficiency. Common applications include Powertrain, Transmission, Drive Shaft, Fuel Systems and Engine Components.

In the last 20 years, a car's electrical anatomy has undergone major changes. Today, application of plastics within an automobile include switches & sockets, connectors, lighting as well as circuit boards and wiring

harnesses. Electrical components now automate systems from ABS to satellite radios and Plastics make that possible.

High Performance Plastics used in the Automotive Segment

High performance plastics are playing an important role in the automotive industry these days as they make vehicles more fuel efficient. It is estimated that every 10% reduction in vehicle weight results in a 5% to 7% reduction in fuel usage. Current economic and environmental concerns make the creation of more fuel efficient cars a top priority in the automotive industry. The use of modern materials like aluminum and carbon fiber are helpful, but the wise allocation of plastics are making an increasing difference.

Some other advantages of high performance plastics used in transport vehicles include:

- minimal corrosion, allowing for longer vehicle life
- substantial design freedom, allowing advanced creativity and innovation
- flexibility in integrating components
- safety, comfort and economy
- recyclability.

While there are various types of top high performance plastics used in automotive hardware and all may be used in a single vehicle, it is just three types of plastic make up approximately 66% of the total high performance plastics used in a car: Polypropylene (32%), Polyurethane (17%) and PVC (16%).

Polypropylene (PP)

Polypropylene is a thermoplastic polymer used in a wide variety of applications. A saturated addition polymer made from the monomer propylene, it is rugged and unusually resistant to many chemical solvents, bases and acids.

Application: automotive bumpers, chemical tanks, cable insulation, gas cans, carpet fibers.

Polyurethane (PUR)

Solid Polyurethane is an elastomeric material of exceptional physical properties including toughness, flexibility, and resistance to abrasion and temperature. Polyurethane has a broad hardness range, from eraser soft to bowling ball hard. Other polyurethane characteristics include extremely high flex-life, high load-bearing capacity and outstanding resistance to weather, ozone, radiation, oil, gasoline and most solvents.

Application: flexible foam seating, foam insulation panels, elastomeric wheels and tires, automotive suspension bushings, cushions, electrical potting compounds, hard plastic parts.

Poly-Vinyl-Chloride (PVC)

PVC has good flexibility, is flame retardant, and has good thermal stability, a high gloss, and low (to no) lead content. Polyvinyl chloride molding compounds can be extruded, injection molded, compression molded, calendered, and blow molded to form a huge variety of products, either rigid or flexible depending on the amount and type of plasticizers used.

Application: automobile instruments panels, sheathing of electrical cables, pipes, doors.

Others include ABS (automotive body parts, dashboards, wheel covers), Polyamide - PA, Nylon 6/6, Nylon 6 (gears, bushes, cams, bearings, weather proof coatings), Polystyrene - PS (equipment housings, buttons, car fittings, display bases) Polyethylene – PE (car bodies (glass reinforced), electrical insulation), POM – Polyoxymethylene (interior and exterior trims, fuel systems, small gears), Polycarbonate – PC (bumpers, headlamp lenses), Acrylic – PMMA (windows, displays, screens), PBT - Polybutylene terephthalate (door handles, bumpers, carburettor components), Polyethylene Teraphthalate – PET (wiper arm and gear housings, headlamp retainer, engine cover, connector housings and ASA - Acrylonitrile Styrene Acrylate (housings, profiles, interior parts and outdoor applications).

Changes in Polymer Demand Patterns

The increase in consumption of plastics such as polypropylene (PP) and polyurethane (PU) in recent years has partially been offset by the decline in consumption of engineering plastics, with PP and PU accounting for about 50% of total plastic consumption in vehicles.

The consumption of engineering plastics is expected to decline due to lesser requirement of these plastics in under-the-hood applications for electric vehicles, as the high temperature resistance of engineering polymers is not required to the same extent as with internal com-

bustion engines. Instead, polyamides will be used for battery brackets and housings in the EVs.

Polypropylene (PP) demand will continue to grow as it finds new applications in car interior and exterior, and under the hood replacing some metal parts. In addition, growth will also be spurred by increased production of EVs, which will require lighter parts to help offset the weight of the heavy batteries.

PE consumption has also stayed flat as HDPE gas tanks have already penetrated into the gasoline tank market, displacing steel in developed countries. Electric vehicles may, however, use more PE in the engine parts as the high temperature performance of engineering polymers is not required in electric battery engines.

ABS consumption is expected to decline as Polystyrene (PS) and PP composites with improved properties continue to replace ABS in decorative parts in the interior, which was traditionally dominated by ABS due to the material's gloss. The high price of ABS has also supported the substitution with lower priced Polypropylene (PP). In some high-end automobiles, the consumption of ABS will increase for the interior with consumers requiring a higher quality design. However, the overall consumption, will be counterweighed by a reduction in the size of certain modules, such as the front grill, in turn decreasing the consumption of ABS. The growth in Polycarbonate will be driven by the emerging application in car sensors (lenses) in autonomous vehicles, supported by continued electrification and lighting requirements in traditional vehicles.

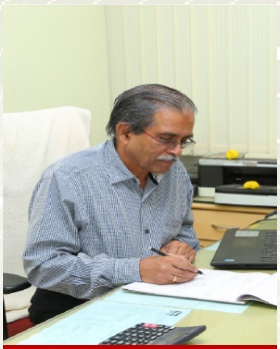
The Road Ahead

Plastics are well on their way to becoming an integral part of a sustainable future. They will be especially vital to new modes of transportation, particularly the ACES (Automated, Connected, Electric, and Shared) cars of the future. Plastics will be an essential part of the ACES cars of the future, as well as essential to the transformative infrastructure necessary for their operation.

For example, with autonomous vehicles, thermoplastics and plastic films will be integrated into front grills and bumpers, enabling engineers to mount LIDAR detection sensors into the design of a vehicle's grill, side panels, or bumpers without aesthetic differences. Connected cars of the future that communicate with one another using data connectivity will also require more plastics in them, but that's not all. The data warehouses which run on networked servers will be plastic-coated or protected by PVC, PTFE, and other plastics. As for electric vehicles, they will benefit greatly from lightweighting with plastics. This allows them to offset added autonomous technology weight and preserve their battery over long ranges.

It is expected that when in future, plastics are fully and completely integrated into ACES, they will used in more places that you may realize. From comfortable new vehicle interiors, one will easily find plastics right in front of you, as they will be used to build safety sensors that are seamlessly integrated into panels, lights, mirrors, windows, tops, logos, emblems, and laser headlamps to increase visibility and decrease energy use. Behind you and above you, plastic will be used in backup cameras and fold away video displays for on-road entertainment. They will also be beneath you, as LIDAR light-based radars will transmit through panel buttons with class A finished films. And finally, plastics will be beside you when you pull up to quick charging stations, where insulated plastics protect against high voltages.

Industry Speak



M.N. Kamath (Proprietor), Micro Plastics, Bangalore

India is one of the major manufacturers of all automotive plastic parts, aesthetic and non-aesthetic. The automotive and mass transit segments in India today has been witnessing immense growth and in order to meet this increasing demand, today, the need of the hour is to focus on capacity build up. The Government has been considering FDI in the sector, which we believe is one key way to help with capacity build up, boost MSMEs/ allied industries as well as boost both domestic consumption as well as exports. The setting up of plants and increasing production capacities by world leaders such as the world's largest air bag suppliers Toyoda Gosei Company, TRW Automotive Inc. Autoliv Inc., and Takata Corporation are sure to further result in additional take offs from local MSMEs as well.

While the industry in India today has gone through a sea change in the automotive and mass transit segment, I would like to believe that our industry is ready for giant leaps ahead in terms of both technical developments and innovation. All the global standards of quality are maintained by Indian Industry & testing facility is available in India and that implies not only a huge step up in terms of quality supply within India, but also to boost exports. At present, our exports largely cater to USA, Europe, Mexico and Turkey, but there is potential to grow much more. While China, as in many segments, is a world market leader, our competition from China and some countries from the Ex-communist blocs are mainly due to the fact that these countries provide huge subsidies to their industries. Benefits in the IT Act against exports without any upper/ lower limit is probably one of the ways to boost MSME exports in the segment. As we are keenly aware, currently there is a slump in the Global market which reflects in the Indian Market. However, we are optimistic that it is a phase and is likely to pass.

In India, there has also been a strong focus on reducing carbon emissions and improving air quality index that we have seen has been hazardous in cities such as New Delhi, especially. Globally too, there is a strong emphasis to move towards electric vehicles (EVs), hybrids, etc. Having said that, the Government's decision to switch over from BS 1V to BS V1 is not clear and implementation of electric car and life of BS 1V vehicle is not clearly defined.

Increase in road tax and unstable fuel price causes delay end user decision making. The car maker don't have the cheapest solution to meet the BS V1 regulation which results the end users to spend more money to buy a car. These factors have a domino effect on all allied industry too. Having said that, the ultimate aim of reducing the environmental emission by moving from IC engines to electric car will not solve the purpose alone. To produce the power, we rely on power plants which will emit more emissions when compared to engine. May be on the road, it will be less but overall it will have more emission. Hence, while it EVs may be the way forward, it is also critical to consider suitable infrastructure and very importantly, alternate sources of energy to make this a viable solution in the future.

Export Credit Insurance Support for Indian Exporters

ECGC, a premier Export Credit Agency (ECA) of Government of India (GOI) established in 1957, provides credit insurance covers to exporters against non-payment risks by the overseas buyers due to Commercial and Political reasons. It also provides insurance covers to banks against risks in export credit lending to the exporter borrowers. ECGC endeavors to support Indian Export Industry with its experience, expertise and underlying commitment to progress and advance of India's exports. ECGC promotes both Short Term (ST) exports (i.e. export realization within one year) and Medium and Long Term (MLT) exports (i.e. export realization extending over a period of more than one year).

In all, there are 19 insurance products for exporters, 11 insurance Products for banks and 12 insurance products for Medium and Long-term Exporters/Banks. Further, ECGC also provides Customized Covers to meet specific requests of exporters. ECGC also assesses the credit worthiness of buyers for the policyholders of declaration based policy and single buyer exposure policy. It has also introduced Factoring facility to MSME Sector and cover in foreign currency to Special Economic Zone Exporters.

Risks Covered

Broadly, under policies the commercial risks covered are insolvency of the buyer, protracted default by the buyer to pay for the goods and the failure of the buyer to accept goods subject to certain conditions. The coverage also includes default and insolvency of overseas banks that open L/C as well as losses arising on account of non-payment due to discrepancies which do not materially alter the terms, subject to certain conditions.

The political risks covered are imposition of restriction on remittances by the Government in the buyer's country or any Government action which may block or delay payment to the exporter, war, revolution or civil disturbance in the buyer's country, new import licensing restrictions or cancellation of a valid import license in the buyer's country after dispatch of goods by the export-

er, cancellation of export license or imposition of new export licensing restrictions in India after the effective date of contract (under Contracts Policy) and payment of additional handling, transport or insurance charges occasioned by interruption or diversion of voyage which cannot be recovered from the buyer.

Risks Not Covered

Risks not normally covered are commercial disputes including quality disputes, those which can be covered by general insurers, causes inherent in the nature of goods, buyer's failure to obtain necessary import or exchange authorization in his country, insolvency or default of any agent of exporter or buyer, loss or damage to goods, losses due to exchange fluctuation and discrepancy in documents.

Some of the major policies for Short Tem Covers are as follows:

Shipments (Comprehensive Risks) Policy: For Exporters whose anticipated annual export turnover is more than Rs.500 lakhs will be eligible for this Policy. This is a Standard Whole-turnover Policy wherein all shipments are required to be covered under the Policy.

Exports (Turnover) Policy: Turnover Policy is for the benefit of large exporters who contribute not less than Rs.20 lakhs per annum towards premium. The policy envisages projection of the export turnover of the policyholder for a year and the initial determination of the premium payable on that basis, subject to adjustment at the end of the year based on actual. This is a Standard Whole turnover Policy wherein all shipments are required to be covered under the Policy.

Single Buyer Exposure Policy: This policy is provided to insure exporters having a large number of shipments to a particular buyer with simplified procedure and rationalized premium. An exporter can choose to obtain exposure based cover on a selected buyer. The cover would be against commercial and political risks. The option to exclude L/C shipment is available.

Multi-Buyer Exposure Policy: This policy is suitable for exporters who export to a large number of buyers and the number of shipments made by them is quite high. If the transaction is on L/C terms, failure of the L/C Opening Bank in respect of exports against L/C will also be covered.

Small Exporters Policy: An exporter whose anticipated annual export turnover for a period of one year does not exceed Rs.500 lakhs is eligible for this Policy. This is a Standard Whole turnover declaration based Policy wherein all shipments are required to be covered under the Policy.

ECGC's Export Factoring Facility:

Under this policy, ECGC will enter into an agreement with the exporter to purchase the export receivables without recourse and assume credit risks on the overseas buyer. If the buyer defaults, the payment for undisputed liability will be made by ECGC. This is designed for exporters who fall under the category of MSME as per MSMED Act 2006 and have minimum three years experience in exports with good track record.

For more information, please contact, marketing@ecgc.in or visit www.ecgc.in

Know Your COA Member

Know Your COA - Interview with Amit Pal, Director, Kolor Impex, Member – Plexconnect Editorial Advisory Board

Kolor Impex was first established in 2009 to manufacture and export fine writing instruments, keeping in mind the affordability of the common man. Understanding the market for highest quality writing instruments, maintaining a competitive pricing and need for customization for overseas orders, the company has continued to remain focus on creating international standard products for the consumption of its markets. Using Swiss machine-made ball point tips, from 0.6 mm to 1.00 mm for a smooth writing experience, over 50 designs in the disposable category of DF pens, use of world class High Shine and Smooth ink pens for longer shelf life, the company has ensured consistency in the manufacturing and export of the best quality products from India.

Kolor Impex is an exporter of Ball Point Pens, Disposable Pens and Plastic made Ball Pen Refills from India and a member of The Plastics Export Promotion Council & Federation of Indian Export Organisation (FIEO), Eastern India, Under Ministry of Commerce, Govt. Of India.

Founded by Amit Pal, Founder and Director, the company is today, one of the most respected names in the export of the writing instruments product segment. A determined, knowledgeable and driven entrepreneur, he is a first-generation businessman, resonating his success and achievements, by taking a small business set up to become one of the most respected names in the industry today.

Amit Pal is a Member of Plexconcil's COA as well as a Member of Plexconnect's Editorial Advisory Board.

Describe your journey since you first started your company?

Kolor Impex was established in the year 2009. Having quit a well-paid job in 2007, I wanted to explore my options and after having met numerous people and considered many different options, I came upon the idea of exporting the cheapest ball pen from India. Ball pens are the most commonly used products and these entry level writing instruments are recession proof and have huge demand throughout the year, across markets, income segments, etc. I commenced by operations with a modest capital of Rs.1.15 crores and today, Kolor Impex has earned the good repute for its quality and pricing. The journey has not been easy though it has been one filled with a lot learning. Technologies in the business have evolved in terms of the quality of inks, fineness and smoothness of the tips, designs and packaging, etc. Hence it has always been a balancing act of providing high quality products at costs that are sustainable and competitive. As a first-generation entrepreneur, it has been exciting and challenging.

As a first-generation entrepreneur, what motivated you to enter into the business of Writing Instruments specifically?

Autonomy, desire to make more money, reorganization and also desire to maintain certain expensive hobbies. And, who does not require a pen? Everybody needs it. I have always wanted that poorest of the poor shall be able to afford it. Hence, I had started exporting with low cost pens and today, we have a wide array of products.

What are the typical challenges that budding entrepreneurs face when starting their own enterprise?

The biggest challenge that any budding entrepreneur faces is 'capital crunch'. Absence of liquidity, shortage of capital, lack of credit facilities is perhaps the single biggest challenge that they face. In most cases, one has to extend 10-15% advance to clients, while banks insist on huge collateral before extending business loans. Pa-

perwork for financing can be tedious and often discouraging for those who have great business ideas and are sincere in their plan and goals.

Furthermore, in my own experience too, I have come across some unscrupulous suppliers who compromise on the quality of the supply, whether raw materials or finished goods, this can have a huge impact on the standards that one is trying to establish. It makes it more challenging if you do not have the technical knowledge, expertise or prior experience.

In your opinion, what are India's strengths in the Writing Instruments product segment? What is its growth potential?

Huge indeed! In the writing instruments industry, number is the biggest factor. India has huge population. Growing literacy rate also caters to great demand in writing instruments. Hence, the consumption is very high. Similarly, globally too, besides perhaps the luxury/ refined or crafted writing instruments segment, pens, even the best quality ones are mostly single use. Hence the demand is huge as one cannot count the number of pens that you may have used in one lifetime. From schools to offices, everybody uses a pen. In fact, it is very difficult for a single company to cater to all kinds of pens simply because of its enormous market size. India as country is very well respected for the quality of the pens we use. We have the technologies and capabilities to manufacture from cheap to high quality pens. The tips, inks, etc are all comparable to even European or Japanese standards. However, for the MSME sector, perhaps meeting voluminous orders can be daunting considering their production capacities, cost of logistics, amongst others. How significant is the role of technology/ innovation/ R&D in the growth of the segment? Where does India stand today in this context?

In the low-cost ball pen segment, India has already taken a giant leap. We import machines from China, Taiwan or for that matter from Korea, to manufacture good pens. India has also started making good quality moulds for ball pens. Daman & Kolkata are the hubs for the pen moulds in India. India also produces high quality ball pen ink. Many tips' makers are importing Swiss LX machines to make tips and we are also suppliers to some of the European countries in addition to all other pen making countries of the world.

Many Indian companies manufacture injecting moulding machines and extruder for ball pens. However, as far as machines are concerned, China, Korea and Europe are quite advanced and ahead of us.

What are the most recent innovations that has been witnessed in this segment? What can we expect in years to come?

Ultra-low viscosity ink-oriented ball pens at a cheaper cost is perhaps the most recent innovation in the industry. This technology allows our ink manufacturers to produce best quality inks at competitive prices.

What, in your opinion, are the kind of policies/ support needed by growing or fledgling businesses who wish to enter exports?

As mentioned earlier, MSME industries are mostly challenged by availability of adequate capital or liquidity. Finance is the backbone of any industry. Being smaller/proprietary firms, obtaining finance/ loans can be a daunting and tedious exercise. This results in loss of opportunity or loss of business as orders cannot then be taken and fulfilled in time. Hence it is imperative that loans are made available to the MSME sector in a most lucid and simplified way.

Writing instruments, especially entry level products, are single-use and disposable in nature. In your opinion, how could changing environmental policies regarding SUP impact the product segment? What measures is the industry taking in this regard, if any?

Pens, ideally cannot be termed as "single use plastics". A pen is used for 2-3 months unless lost. If it is made in virgin plastic (PP), the same pen, can be recycled. The directive on single use plastics are mainly on carry bags of less than 50 microns, or other disposables such as plastics cups, spoons plates, etc. We wrongly term direct filling ball pens as disposable ball pens. Once the inside ink is used up, the pen cannot be used. But surely the pen body (barrel) can be recycled. Recycled pens do not have any diverse effect on environment except the fact ink inside these pens tend to lose the shelf life. However, we do not encourage buyers to buy recycled plastic made pens for obvious reasons.

What do you believe are the key drivers of your success in establishing Kolor Impex as a respected brand in writing instruments?

We have tried to blend economy & ethics into our business. We had to prove ourselves over the years and that has been quite challenging for us. There is no rocket science for success. Ethics is synonymous to honesty and many customers tested us in different ways. But we crossed all barriers with flying colours. There will always be challenges in the export market for newcomers especially. But the only challenge I feel lies in the quality of your product. If the product is good, then the journey becomes easier.

Where do you see your company's growth in the coming years? What are your plans for expansion?

We are going to implement ISO 9001 as we are planning to export to Brazil and that makes having an ISO 9001 a must (as conveyed by our customer). We will subsequently introduce the cheapest gel pen made with ultra low viscosity ink - in the entry level segment. This will be a game changer in South-east Asian and African markets.

We are also planning for diversification, not expansion in the perfume industry. But we shall exhibit our product & explore South African market very soon.

The MSME sector has immense potential for new entrepreneurs and opportunities for self-employment versus traditional employment. What are your views on the same?

The MSME sector contributes significantly to the economic and social development of the country by fostering entrepreneurship and generating largest employment opportunities at comparatively lower capital cost, next only to agriculture. MSMEs are complementary to large industries as ancillary units and this sector contributes significantly in the inclusive industrial development of the country. The MSMEs are widening their domain across sectors of the economy, producing diverse range of products and services to meet demands of domestic as well as global markets. MSME sector, in other word, is the backbone of the country, especially in terms of employment generation in the country that is in turn, critical to the country's economic growth trajectory.

What is your message to the upcoming generation who wish to enter into the export industry?

The following are the motivation for the new comers in exports:

1. There is unlimited scope of earning in foreign currencies.
2. Your image or reputation in overseas market is a matter of global recognition.
3. Reduce business fluctuations.
4. Take advantage of foreign market opportunities.
5. Respond to unsolicited orders.
6. Overcome a stagnant or declining home market.

Industrial Entrepreneur Memorandums Update

IEMs signed in the Plastics segment during September 2019.

IEM No.	Company Name	State	Item of manufacture
1648	Kamakshi Flexiprints Private Limited	Gujarat	Flexible packaging material
1666	Deep Plast Industries	Gujarat	Masterbatches
1701	Finolex Industries Limited	Gujarat	PVC pipes and fittings
1636	Lamifab Industries	Gujarat	Geomembrane liner
1601	Shreepriya Auto Parts Private Limited	Karnataka	Auto parts of plastics
1770	Motherson Sumi Systems Limited	Maharashtra	Auto parts of plastics
1728	Kingfa Science & Technology (India) Limited	Maharashtra	Modified thermoplastics
1702	Finolex Industries Limited	Gujarat	PVC pipes and fittings
1686	Reichhold India Private Limited	Maharashtra	Polyester resin
1755	Reichhold India Private Limited	Maharashtra	Polyester resin
1756	Motherson Sumi Systems Limited	Maharashtra	Auto parts of plastics
1697	Finolex Industries Limited	Gujarat	PVC pipes and fittings
1650	Ori Plast Limited	Odisha	PVC pipes and fittings
1713	Shree Malani Foams Private Limited	Odisha	Polyurethane foams
1760	Pegma Resources Private Limited	Rajasthan	Woven bags
1638	Alisha Torrent Closures India Private Limited	Rajasthan	Caps and closures
1675	TPI Composites India LLP	Tamil Nadu	Engineering parts of plastics
1665	Solar Soles Private Limited	Tamil Nadu	Plastic footwear
1740	Joaquin India Private Limited	Uttar Pradesh	Bags of leathercloth
1747	DSM India Private Limited	Uttarakhand	Engineering plastics
1694	Arvind Chemi Synthetics Private Limited	Uttarakhand	HDPE / PP bags
1738	TPAC Packaging India Private Limited	Dadra & Nagar Haveli	PET and PP containers
1716	Bhim Polyfab Industries	Daman & Diu	PP woven sacks

Name	: Julia Pichugina
Company	: Polyform Group
Address	: Komsomolskaya str., 116l, 601900, Kovrov, Russia
Email	: pichuginays@gk-gw.ru
Contact	: +7 9101739952
Enquiry	: Buyer is interested in importing Polypropylene and polyethylene from India.

Name	: Trevor C Day
Company	: Michael Day Enterprises, LLC
Address	: 9774 Trease Rd, Wadsworth, Ohio, 44281, United States
Email	: tday@mday-llc.com
Contact	: +1 3303313129
Enquiry	: Buyer is interested in importing plastics raw materials from India.

Name	: Ing. Michele Busato
Company	: Arcopolimeri SRL
Address	: Via Galileo Galilei, 10/12 35012 Camposampiero, Padova, Italy
Email	: michelebusato@arcopolimeri.com
Contact	: +39 3346646893
Enquiry	: Buyer is interested in importing plastics raw materials from India.

Name	: Shunsuke Kobayashi
Company	: Daisaku Co. Ltd
Address	: 1-39-6, Ayase, Adachi-Ku, Tokyo, Japan
Email	: export@daisakutrading.com
Contact	: +81 356296768
Enquiry	: Buyer is interested in importing FIBC (HS code 630532) from India.

Name	: Hidenori Onodera
Company	: Honda Trading
Address	: Tang 8, Toa nha Mat troi song Hong, So 23 Phan Chu Trinh, Hanoi, Viet Nam
Email	: hidenori-onodera@hondatrading.com.vn
Contact	: +84 936567780
Enquiry	: Buyer is interested in importing plastics raw materials from India.

Name	: Nguyen Tan Thong
Company	: Namdan Ever Growing
Address	: 11 Le Binh St, W.4, D.Tan Binh, HCMC, Viet Nam
Email	: tanthong@namdan.com.vn
Contact	: +84 977778177
Enquiry	: Buyer is interested in importing masterbatches from India.

Business Inquiries

Name	: Duong Thi Thanh Thuy
Company	: Trieu Du Bon Plastics Production Co. Ltd
Address	: Lot 15-17, No. 1 Street, Tan Tao Industrial Zone, Binh Tan, Ho Chi Minh City, Viet Nam
Email	: thuygl1202@gmail.com
Contact	: +84 961666638
Enquiry	: Buyer is interested in importing plastics raw materials and plastic pipes.

Name	: Cindy
Company	: Perchem Vietnam Co. Ltd
Address	: 75/5 Nguyen Cuu Van Street, Ward 17, Binh Thanh District, Ho Chi Minh City, Viet Nam
Email	: pcsupervisor@perchemvn.com
Contact	: +84 909803849
Enquiry	: Buyer is interested in importing Black Masterbatches from India.

Name	: Simon Boakye
Company	: Simb Fabrics Designing & Trading Enterprise
Address	: PO Box 9226, Kumasi, Ghana
Email	: simbgh80@yahoo.com
Contact	: +233 272114352
Enquiry	: Buyer is interested in importing PVC floorcoverings from India.

Name	: Benjamin Osei Tutu
Company	: Standard Logistics Solutions Company Limited
Address	: PO Box 112, Accra, Ghana
Email	: standardlogscoltd@gmail.com
Contact	: +233 244816344
Enquiry	: Buyer is interested in importing kitchenware items of plastics from India.

Name	: Michael Asare Asiedu
Company	: KS Tech Solutions Limited
Address	: PO Box 87, Akropong, Koforidua, Ghana
Email	: kstechsolutionsltd@gmail.com
Contact	: +233 544064797
Enquiry	: Buyer is interested in importing writing pens from India.

Name	: Bridget Prempeh
Company	: Freddy Bebeto Enterprise
Address	: PO Box 158, Adum, Kumasi, Ghana
Email	: freddybebetoent@gmail.com
Contact	: +233 242703943
Enquiry	: Buyer is interested in importing floorcoverings from India.

Established since 1955, the Plastics Export Promotion Council, PLEXCONCIL, is sponsored by the Ministry of Commerce and Industry, Department of Commerce, Government of India. PLEXCONCIL is a non-profit organization representing exporters from the Indian plastics industry and is engaged in promoting the industry exports.

The Council is focused on achieving excellence in exports by undertaking various activities and initiatives to promote the industry. The Council undertakes activities such as participation at international trade fairs, sponsoring delegations to target markets, inviting foreign business delegations to India, organising buyer-seller meets both in India and the overseas etc.,

The Council also routinely undertakes research and surveys, organizes the Annual Awards to recognize top performing exporters, monitors the development of new technology and shares the same with members, facilitates joint ventures and collaboration with foreign companies and trade associations as well as represents the issues and concerns to the relevant Government bodies.

The Council represents a wide variety of plastics products including – Plastics Raw Materials, Packaging Materials, Films, Consumer Goods, Writing Instruments, Travel ware, Plastic Sheets, Leather Cloth, Vinyl Floor Coverings, Pipes and Fittings, Water Storage Tanks, Custom made plastic Items from a range of plastic materials including Engineered Plastics, Electrical Accessories, FRP/GRP Products, Sanitary Fittings, Tarpaulins, Laminates, Fishing Lines/Fishnets, Cordage/ Ropes/Twines, Laboratory Ware; Eye Ware, Surgical/ Medical Disposables.

Membership Benefits

- Discounted fees at International Trade Fairs and Exhibitions
- Financial benefits to exporters, as available through Government of India
- Disseminating trade enquiries/trade leads
- Instituting Export Awards in recognition of outstanding export performance
- Assistance on export financing with various institutions and banks
- Networking opportunities within the plastics industry
- Listing in PLEXCONCIL member's directory

New Members

The Plastics Export Promotion Council added the following companies/firms as new members during November 2019. We would like to welcome them aboard!

S. No.	Company Name	Communication Address	Director	Email
1	METALIC IMPRESSIONS INDIA PVT. LTD.	A-24/1, NARAINA INDUSTRIAL AREA, PHASE-I, NEW Delhi-110028	SATINDER PAL SINGH KALRA	accounts@metalic-impressions.com
2	TORIS POLYFAB LLP	S.No. 158P2, Nr. Tathastu Spinning Mill, Vill. Hirapar, Tal. Tankara Dist. Morbi 363650	VIVEK N DADHANIYA	torispolyfab@gmail.com
3	MITTAL TECHNOPACK PVT. LTD	"2nd Floor, Gujrat Mansion, 14, Bentinck Street, 14 BENTINCK STREET "KOLKATA-700001	NIKUNJ AGARWAL	mtplho@mittaltechnopack.com
4	GEBI PRODUCTS PVT LTD	UNIT NO. 4/5 MEWAD BLDG, PATANWALA COMPOUND, GHATKOPAR WEST,MUMBAI 400086	CHIRAG R MEHTA	sales@gebiproducts.com
5	PIOLAX INDIA PRIVATE LIMITED	No.200, North Belerica road, PO Box No.1, Sri City DTZ, Chittoor, 517646	TETSUJI HIRANO	finance@piolax.co.in
6	RAMA SACKS N BAGS PRIVATE LIMITED	DEEWANA ROAD, SIWAH PANIPAT,132103	SURESH KUMAR JINDAL	accounts@ram-abags.com
7	SUNSHINE LIQUID STORAGE PRIVATE LIMITED	PLOT NO. 220, SECTOR 1/A, AKSHAT HOUSE, SECOND FLOOR, GANDHIDHAM, KACHCHH 370201	HEMANT R SHAH	ambaji.import@gmail.com
8	RAJOO INNOVATION CENTRE LLP	SURVEY NO. 209, PLOT NO. 3, INDUSTRIAL AREA VERAVAL (SHAPAR) RAJKOT-360024	PALLAV K DOSHI	lakshmi@rajooic.com
9	CRAFTLINK MEDICAL DEVICE PRIVATE LIMITED	6 BAGHAJATIN ROAD, BARANAGAR , KOLKATA-700036	ALISHA BASAK	anshurabasarkar@craftlink.in
10	CORONA INDUSTRIES	SURVEY NO 207, PLOT NO 7, TAL - KOTDA SANGANI, VERAVAL, SHAPAR, RAJKOT 360024	VIMALKUMAR D BAROCHIA	coronaindustries@ymail.com
11	SMART PVC LAMINATE	8TH KM STONE, SAMPLA-BERI ROAD BEHRANA,BERI JHAJJAR-124107	RAKESH JAIN	infosmartpvc@gmail.com
12	SHREE RADHEKRISHNA EXTRUSIONS PVT LTD	PLOT NO. C-1,/4509, PHASE-IV, B/H: TEXPRINT, VATVA, AHMEDABAD 382445	TEJAS PATEL	mail@radhekrishna-exports.com
13	AKHANDJYOTI FLEXIBLE PACKAGING PRIVATE LIMITED	WARD NO 14 DAK BANGLA, PITHAMPUR 454775	CHANDRA B MISHRA	cbmishra1963@gmail.com
14	SHREE UMIYA IMPEX PVT LTD	PLOT NO. 4002, PHASE-4, G.I.D.C. INDUSTRIAL ESTATE, VATVA AHMEDABAD PRATIK K PATEL	PRATIK K PATEL	pratik@mediplusindia.com
15	INDIAN R L HAIR COMPANY	"Vill& Po: Takipur Ps: Rejinagar-Murshidabad ,"KOLKATA-742189	RABIUL SEKH	irlhcompany@gmail.com
16	SARAH TRADING	"BARUA POWER HOUSE BARUA,-BELDANGA, MURSHIDABAD WB ."MURSHIDABAD- 742189	SOURAV HOSSAIN	cacsgaurav02@gmail.com
17	SAMARO GLOBAL INDUSTRIES PRIVATE LIMITED	Office No. 213, 214 and 215, 2nd Floor, Hub Town Solaris, N.S. PhadkeMarg, ANDHERI (E),MUMBAI400069	PARESH V PAREKH	paresh@samaro.in

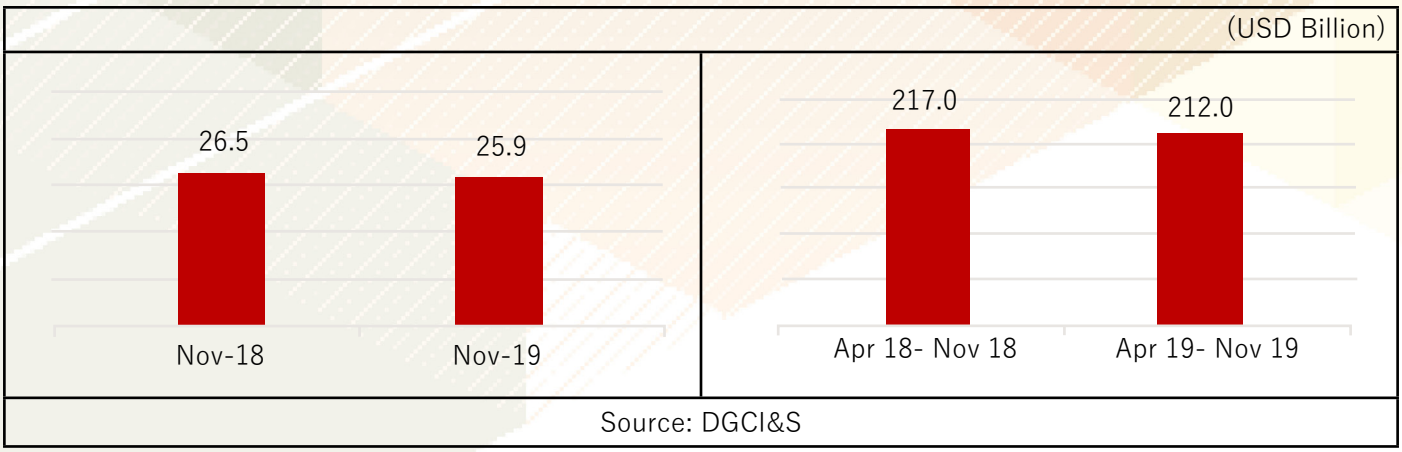
18	MAHAVIR PACKAGING INDUSTRIES	PLOT NO 7, SURVEY NO 274/1, GALAXY INDUSTRIAL ESTATE, SHAPAR-VERAVAL, RAJKOT-360024	NILESH H TURAKHIYA	mahavirpi12@gmail.com
19	ATLANTIC POLYMERS PRIVATE LIMITED	4-A, SEJAL ENCASA, 4TH FLOOR, S.V. ROAD, KANDIVALI WEST, MUMBAI 400067	KETAN H THAKKAR	info@atlanticpolymers.net
20	MELRONE HAIR FACTORY	"PLOT NO. 24, VISHNU NAGAR, MAIN ROAD, PONNIAMMAN MEDU,CHENNAI-600110	MATHEW PAUL	mpnilgiries@yahoo.com

Export Performance

TREND IN OVERALL EXPORTS

India reported merchandise exports of USD 25.9 billion in November 2019, down 2.0% from USD 26.5 billion in November 2018. Cumulative value of merchandise exports during April 2019 – November 2019 was USD 212.0 billion as against USD 217.0 billion during the same period last year, reflecting a decline of 2.3%.

Exhibit 1: Trend in overall merchandise exports from India

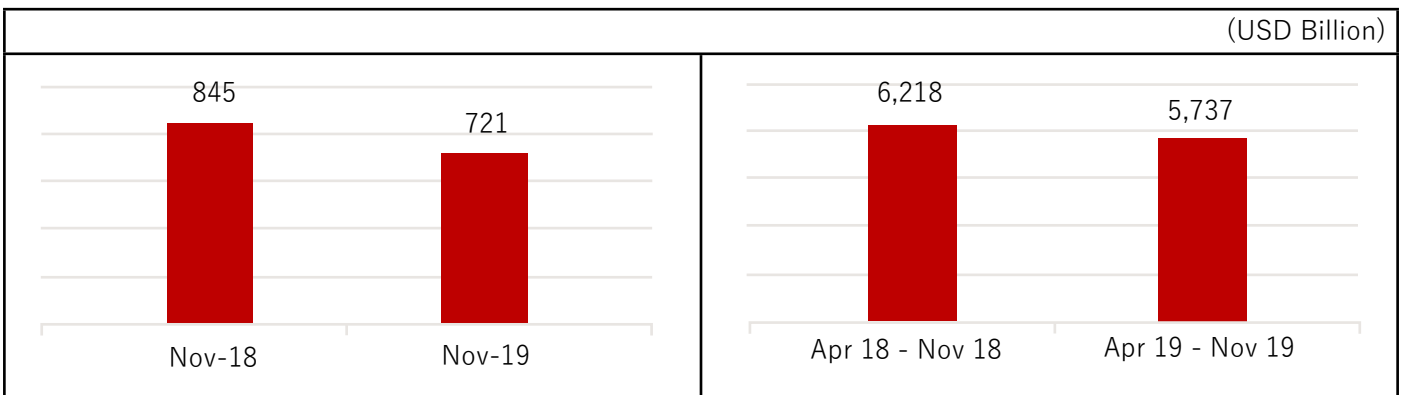


Source: DGCI&S

TREND IN PLASTICS EXPORT

During November 2019, India exported plastics worth USD 721 million, down 14.8% from USD 845 million in November 2018. Cumulative value of plastics export during April 2019 – November 2019 was USD 5,737 million as against USD 6,218 million during the same period last year, registering a negative growth of 7.7%.

Exhibit 2: Trend in plastics export by India



Source: DGCI&S

PLASTICS EXPORT, BY PANEL

In November 2019, packaging materials witnessed year-on-year growth of 15.3%; followed by human hair, products thereof (+10.4%); moulded & extruded goods (+8.0%); and other plastic items (+20.2%). Product categories that reported negative growth include plastic raw materials (-29.3%); optical items (-25.1%); plastic sheet, film, plates (-1.7%); and stationery/office/school supply (-1.2%).

Exhibit 3: Panel-wise % growth in plastics export by India

Panel	Nov-18	Nov-19	Growth	Apr 18-Nov 18	Apr 19-Nov 19	Growth
	(USD Mn)	(USD Mn)	(%)	(USD Mn)	(USD Mn)	(%)
Plastic raw materials	469.84	332.06	-29.3%	3,093.87	2,421.01	-21.7%
Plastic sheet, film, plates etc	116.46	114.52	-1.7%	971.92	993.96	2.3%
Moulded & extruded goods	87.09	94.07	8.0%	731.19	828.51	13.3%
Packaging materials	61.13	70.49	15.3%	550.26	575.37	4.6%
Optical items (incl. lens etc)	37.97	28.43	-25.1%	314.92	289.62	-8.0%
Other plastic items	26.76	32.16	20.2%	239.33	290.91	21.6%
Stationery/Office/School Supply	18.06	17.85	-1.2%	161.61	154.55	-4.4%
Human hair, products thereof	28.11	31.04	10.4%	154.60	183.42	18.6%
	845.42	720.60	-14.8%	6,217.70	5,737.35	-7.7%

Note: Plastics are segregated under eight panels by DGCI&S
Source: DGCI&S

PLASTICS EXPORT, BY REGION

India's plastics export in November 2019 was positive in three territories including Commonwealth of Independent States (+13.0%); Africa (+7.6%); and North America (+4.0%). Export growth was negative in Latin America & Caribbean (-32.2%); South Asia (-30.8%); European Union (-27.4%); Middle East (-19.0%); North-East Asia (-15.9%); and ASEAN + 2 (-0.1%).

Exhibit 4: Region-wise trend in plastics export by India

Region	Nov-18	Nov-19	Growth	Apr 18-Nov 18	Apr 19-Nov 19	Growth
	(USD Mn)	(USD Mn)	(%)	(USD Mn)	(USD Mn)	(%)
European Union (EU)	153.14	111.18	-27.4%	1,227.70	1,079.86	-12.0%
Middle East	192.59	156.04	-19.0%	982.47	918.83	-6.5%
North-East Asia	117.44	98.77	-15.9%	944.14	880.90	-6.7%
North America	96.38	100.20	4.0%	816.94	894.18	9.5%
Africa	86.58	93.13	7.6%	742.95	706.76	-4.9%
South Asia	79.66	55.08	-30.8%	576.96	500.56	-13.2%
ASEAN + 2	63.42	63.38	-0.1%	494.88	421.68	-14.8%
Latin America & Caribbean (LAC)	45.64	30.93	-32.2%	341.85	239.83	-29.8%
CIS	8.51	9.61	13.0%	62.00	74.17	19.6%
Others	2.06	2.28	10.8%	27.81	20.59	-26.0%
	845.42	720.60	-14.8%	6,217.70	5,737.35	-7.7%

Source: DGCI&S

Export Performance

PLASTICS EXPORT, BY DESTINATION COUNTRY

During November 2019, six out of the top 25 destination countries recorded year-on-year growth in plastics export from India. Export to Saudi Arabia witnessed a high growth rate of 76.3% during the period.

On a cumulative basis, during April 2019 – November 2019, seven out of the top 25 destination countries recorded year-on-year growth in plastics export from India. Exports to Saudi Arabia and South Africa, witnessed high growth rates ranging between 25-40%, during the above period.

Exhibit 5: Top 25 destinations of plastics exported by India

Country	Nov-18	Nov-19	Growth	Apr 18-Nov 18	Apr 19-Nov 19	Growth
	(USD Mn)	(USD Mn)	(%)	(USD Mn)	(USD Mn)	(%)
China	168.23	137.33	-18.4%	815.82	761.94	-6.6%
United States	76.54	81.75	6.8%	656.15	739.36	12.7%
United Arab Emirates	33.11	29.47	-11.0%	292.59	299.00	2.2%
Italy	30.40	19.79	-34.9%	256.07	186.29	-27.3%
Germany	24.15	16.77	-30.6%	211.67	190.52	-10.0%
Bangladesh	29.35	21.02	-28.4%	227.58	186.70	-18.0%
Turkey	27.07	17.87	-34.0%	194.53	141.05	-27.5%
United Kingdom	21.62	20.79	-3.8%	173.52	176.32	1.6%
Nepal	20.44	20.28	-0.8%	156.20	167.61	7.3%
Vietnam	18.75	21.25	13.3%	139.61	105.05	-24.8%
France	15.54	8.73	-43.8%	124.39	107.19	-13.8%
Indonesia	18.44	10.47	-43.2%	126.20	71.61	-43.3%
Egypt	13.25	9.41	-29.0%	114.47	68.23	-40.4%
Belgium	11.70	7.50	-35.9%	88.79	73.79	-16.9%
Japan	16.03	10.03	-37.4%	97.65	75.69	-22.5%
Nigeria	8.62	13.84	60.5%	103.19	83.91	-18.7%
Pakistan	16.74	0.41	-97.6%	87.17	41.58	-52.3%
South Africa	7.84	8.28	5.6%	73.64	94.71	28.6%
Israel	15.36	9.08	-40.8%	90.49	76.82	-15.1%
Mexico	9.94	7.80	-21.5%	88.17	70.95	-19.5%
Kenya	14.84	10.73	-27.7%	88.45	83.92	-5.1%
Spain	9.72	7.40	-23.8%	80.49	71.17	-11.6%
Sri Lanka	9.79	8.94	-8.7%	79.93	68.44	-14.4%
Canada	9.90	10.65	7.5%	72.63	83.87	15.5%
Saudi Arabia	6.51	11.48	76.3%	59.07	81.64	38.2%

Note: Top 25 destinations based on 2018-19 plastic exports by India
Source: DGCI&S

India exported plastics to 189 countries in November 2019 as compared to 179 countries in November 2018.

Exhibit 6: Panels with details of % growth seen in top 10 export destinations

Panel	Country	Apr 18-Nov 18 (USD Mn)	Apr 19-Nov 19 (USD Mn)	Growth (%)
Plastic raw materials	China	677.42	581.05	-14.2%
	Italy	181.51	110.04	-39.4%
	Turkey	168.93	122.04	-27.8%
	Bangladesh	162.28	121.34	-25.2%
	United Arab Emirates	138.49	110.26	-20.4%
	United States	119.51	89.23	-25.3%
	Vietnam	122.99	89.65	-27.1%
	Nepal	95.67	101.90	6.5%
	Indonesia	101.03	47.14	-53.3%
	Pakistan	79.97	38.33	-52.1%
Plastic sheet, film, plates etc	United States	147.80	177.16	19.9%
	United Arab Emirates	40.38	43.57	7.9%
	Germany	47.83	44.48	-7.0%
	South Africa	42.40	45.99	8.5%
	Nigeria	45.50	25.74	-43.4%
	Italy	33.67	30.41	-9.7%
	United Kingdom	32.69	39.94	22.2%
	Bangladesh	31.69	24.47	-22.8%
	Mexico	32.15	25.31	-21.3%
	Spain	25.39	25.02	-1.5%
Moulded & extruded goods	United States	165.43	231.38	39.9%
	United Arab Emirates	44.46	63.87	43.7%
	United Kingdom	37.12	38.26	3.1%
	Germany	35.88	32.26	-10.1%
	Canada	32.58	43.23	32.7%
	Sri Lanka	16.76	9.10	-45.7%
	Spain	15.08	12.79	-15.2%
	Nigeria	12.44	14.76	18.6%
	Saudi Arabia	10.13	16.09	58.8%
	Brazil	13.02	16.23	24.6%
Packaging materials	United States	105.18	123.20	17.1%
	United Kingdom	45.87	42.06	-8.3%
	United Arab Emirates	28.36	33.25	17.2%
	Netherland	21.04	19.53	-7.2%
	Germany	16.71	12.79	-23.5%
	Belgium	14.75	6.20	-58.0%
	France	13.19	11.67	-11.5%
	Spain	12.53	11.92	-4.8%
	Djibouti	9.65	9.27	-3.9%
	Nepal	10.10	9.06	-10.3%

Note: Top 10 destinations based on India's 2018-19 exports under the eight plastic product panels
Source: DGCI&S

Export Performance

Panel	Country	Apr 18-Nov 18 (USD Mn)	Apr 19-Nov 19 (USD Mn)	Growth (%)
Optical items (incl. lens etc)	France	79.97	70.65	-11.7%
	Germany	33.20	30.33	-8.6%
	United Kingdom	28.75	27.44	-4.5%
	United States	18.01	7.58	-57.9%
	United Arab Emirates	8.96	12.48	39.3%
	Netherland	13.08	15.44	18.1%
	Poland	10.54	12.28	16.6%
	Italy	8.56	15.80	84.6%
	Russia	8.33	6.33	-24.0%
	Israel	5.97	5.25	-12.1%
Other plastic items	United States	54.87	63.38	15.5%
	Belgium	22.89	17.57	-23.2%
	United Arab Emirates	19.34	25.07	29.6%
	South Africa	6.23	20.07	222.2%
	United Kingdom	8.38	11.11	32.6%
	Italy	9.28	10.01	7.8%
	Germany	7.63	10.12	32.7%
	Poland	5.75	5.95	3.4%
	Nepal	6.32	6.38	0.9%
	Saudi Arabia	5.56	6.47	16.3%
Human hair, products thereof	China	87.47	126.30	44.4%
	Myanmar	17.31	5.80	-66.5%
	United States	10.41	10.36	-0.5%
	Tunisia	6.94	9.06	30.5%
	Hong Kong	6.58	8.71	32.3%
	Bangladesh	3.57	4.40	23.3%
	United Arab Emirates	3.73	2.84	-23.8%
	Vietnam	2.10	2.44	16.4%
	Indonesia	2.72	1.91	-29.6%
	Italy	2.43	1.68	-30.9%
Stationery/Office/School Supply	United States	34.93	37.08	6.1%
	United Arab Emirates	8.86	7.65	-13.7%
	United Kingdom	9.42	7.32	-22.3%
	Thailand	7.92	6.70	-15.4%
	Algeria	4.14	5.15	24.4%
	Bangladesh	4.12	4.99	21.0%
	Germany	4.25	3.55	-16.3%
	Mexico	3.57	2.59	-27.4%
	Latvia	3.67	1.88	-48.7%
	Nepal	3.56	3.24	-9.0%

Note: Top 10 destinations based on India's 2018-19 exports under the eight plastic product panels
Source: DGCI&S

ANNEXURE-I

Trend in overall exports by India

Month	2018-19	2019-20	Growth
	(USD Bn)	(USD Bn)	(%)
April	25.95	26.07	0.5%
May	28.78	30.01	4.3%
June	27.15	25.01	-7.9%
July	25.89	26.32	1.7%
August	27.87	26.13	-6.3%
September	27.90	26.11	-6.4%
October	26.98	26.43	-2.1%
November	26.46	25.94	-2.0%
	216.99	212.02	-2.3%

Source: DGCI&S

ANNEXURE-II

Trend in plastics export by India

Month	2018-19	2019-20	Growth
	(USD Mn)	(USD Mn)	(%)
April	742.66	702.53	-5.4%
May	741.65	830.55	12.0%
June	769.08	732.57	-4.7%
July	730.46	709.33	-2.9%
August	830.05	699.40	-15.7%
September	780.35	649.17	-16.8%
October	778.02	693.21	-10.9%
November	845.42	720.60	-14.8%
	6,217.70	5,737.35	-7.7%

Source: DGCI&S

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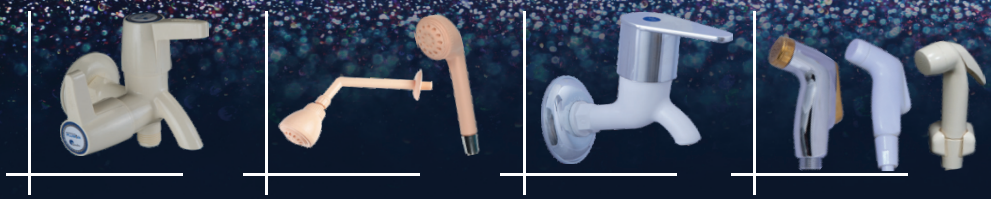

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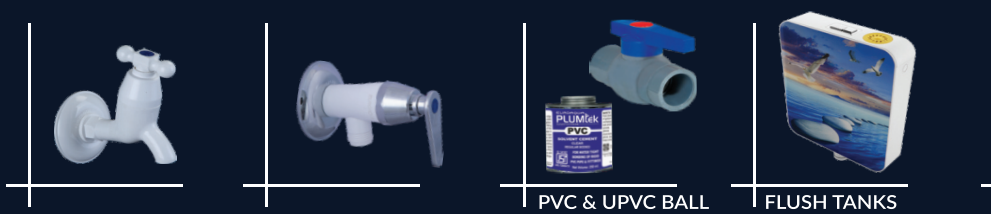

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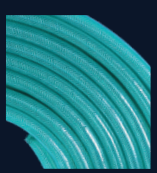

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