PLEXCONCIL - The Plastics Export Promotion Council

PLEXCONNECT

Edition 32, February 2022

Paradigm shift from LIBOR to Alternative Reference Rates (ARRs)

Product of the Month- Lavatory Seats & Covers of Plastics

Innovations in Plastics Manufacturing: Carbon dioxide flexes its muscle

Countryscape – Focus on ISRAEL

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Despite the turmoil of the past two years, the global pandemic has especially taught us to reimagine global trade, fast tracking digital and technology transformation and bringing about great shifts in supply chains. Along these lines, India's exports have been growing at a steady pace and we are on course to achieve the targeted USD 400 billion in exports.

In terms of plastics exports, the past 10 months have seen excellent growth and plastics exports have exceeded expectations. We anticipate that based on the export performance for the past 10 months, by the end of this fiscal year, we hope to reach USD 13 Billion, that would probably be the highest so far for our industry. And icing on the cake is that such achievement is taking place despite all the challenges of the past months! Should we continue to keep this momentum and dynamism, we are confident that together, we can achieve USD 50 Billion in exports by 2025 and USD 100 Billion by 2030.

Speaking about our targets, let us not forget that despite our rising achievements, India holds just about 1% of the global market share and hence, opportunities for growth are manifold. In the past months, the GOI has been taking serious note of our export potential, launching many strategies and initiatives to grow this segment. However, a hard look needs to be taken and swift measures are needed to make the processing industry more lucrative for new entrepreneurs. Expansion and capacity building in terms of raw material production are critically needed to boost not just exports but the domestic industry that is hugely import dependent. Aggressively pursuing FTAs and encouraging MSME to enter exports, promoting State and District levels as export hubs and the creation of a single window clearance are definitely moves in the right direction and most conducive to export growth. The single window clearance will help FDIs and exporters must take advantage of the facility for greater investments in the growth of their business.

With a robust ecosystem, rapid growth is well within reach. The Council has also been proactively working on several fronts including engaging with State and District Level authorities as well as organizers of international levels to encourage and promote Indian participation at physical as well as virtual exhibitions, and more. We are buoyed by the success of our industry participation at exhibitions in the past 2 months are look forward to greater confidence in the months to come.

During December 2021, India exported plastics worth USD 1,223 million, up 50.5% from USD 813 million in December 2020. Cumulative value of plastics export during April 2021 – December 2021 was USD 9,985 million as against USD 7,107 million during the same period last year, registering a positive growth of 40.5%.

On 31st December 2021, LIBOR ceased to remain in effect and as per RBI guidelines, businesses dealing in international trade have been asked to transition to ARR. In this issue, we have tried to bring you information that will help gain better understanding about the subject. In other information, we bring you features that touch upon the all-important Inventory Management, developments on reducing CO2 in your processing, a look at Israel in the Countryscape section as well as the export scenario of Lavatory seats and covers under our Product of the month section.

As we know, while some setbacks and apprehensions remain on account of the present third wave, let us not lose our optimism. There has been a paradigm shift in focus from Europe and America to SE Asia and India has been at the forefront of the change. This is our opportunity to showcase our best and go full throttle on our growth plans.

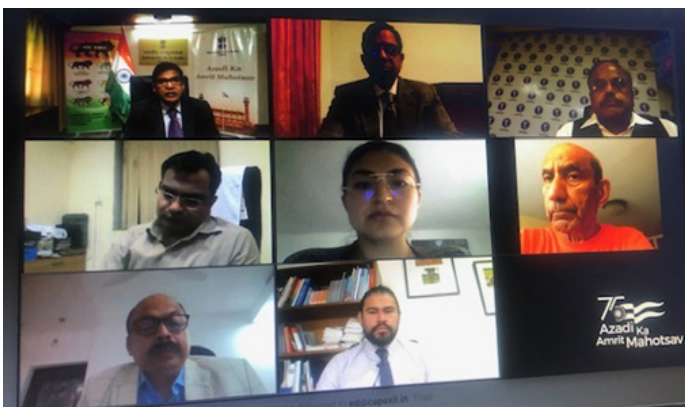
Until then, stay safe and healthy.

Warm regards,

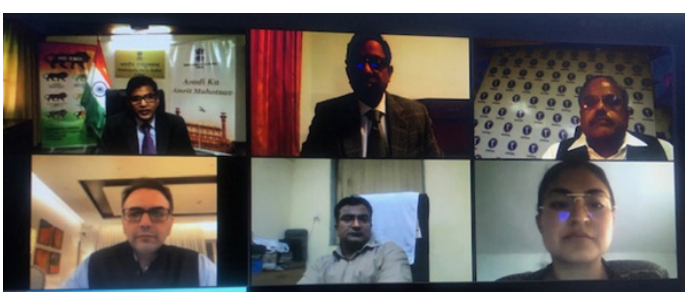
Arvind Goenka
Chairman

Online session on "Plastic & Rubber Products of India: Trade & Business Opportunities with Peru & Bolivia" on 1st December 2021

The Embassy of India, Lima in association with Plexconcil, Capexil, Binational India-Peru Chamber of Commerce (INCHAM PERU), Peruvian Association of the Plastic Industry (APIPLAST) and National Chamber of Industries (CNI) organised the online session on 1st December 2021. The prime objective of the programme was to further explore the trade and business opportunities in area of Plastics & Rubber products. HE Mr.



Mandarapu Subbarayudu, Ambassador of India to Peru and Bolivia delivered the welcome address. Mr Arvind Goenka, Chairman, Plexconcil delivered an address on 'Indian Plastic overview'. There was also a presentation by Mr. Hemant Minocha, Vice Chairman on 'India's strength and potential sectors for trade and business in Peru and Bolivia'. Mr. Shrikrishna Amlekar, Panel Chairman - POLYESTER FILMS, PLEXCONCIL spoke about the India's strength of polyester film sector. This was followed by a presentation from Mr. Javier Dávila, Consultant at Apiplast -Business Opportunities in Peru and Mr. Manuel Laredo Garnica, CEO, Mamut, CNI, Bolivia – Business Opportunities in Bolivia. A vote of thanks delivered by Mr. Rohit Rao, President, INCHAM Peru.



Participation at Plast Eurasia, Istanbul, Turkey – December 1st – 4th, 2021

The Council facilitated Indian participation at the 30th International Istanbul Plastic Industry Fair Plast Eurasia 2021, the largest industry fair held every year in Europe. The fair was organized by M/s. Tuyap in co-operation with PAGE V (Turkish Plastics Industry Foundation) in Tuyap Fair Convention and Congress Centre, Istanbul from 1st– 4th December, 2021. Plast Eurasia 2021 bought together 852exhibitors from 39 countries and 60,742 professional visitors from 99 countries.

Seven (7) Indian companies participated through the Council. Ms. Sudhi Choudhary – Consul General of India in Turkey visited the exhibition and interacted with the Indian participants.

L: Ms. Sudhi Choudhary – Consul General of India in Turkey interacting with Indian exhibitors.
R: Ms. Sudhi Choudhary – Consul General of India in Turkey at Plexconcil stall

5th Meeting of Gujarat Regional Committee held on 01st December 2021

A virtual session of the 5thMeeting of Gujarat Regional Committee was held on 1st December, 2021. Export promotion activities being undertaken by council as well as export related concerns were discussed during the meeting. Deliberations were also made regarding initiatives for increasing engagement for the benefit of prospective plastic exporters.

IPLEX COCHIN, December 3-5, 2021

The Council participated in the 11th edition of International Plastics Exposition (IPLEX) 2021 which was held at the Adlux International Convention Centre, Cochin from December 03-05, 2021.

The event was Inaugurated by Sri. V.D Satheesan MLA, Honorable Leader of Opposition, Kerala Legislative Assembly in the presence of Prof. Dr. Shishir Sinha, DG – CIPET, Sri. Kishore P. Sampat, President AIPMA, Sri. VKC Mammed Koya, Ex-MLA, Sri. Biju P. Abraham, General Manager - DIC, Sri. P.J. Jose, President KSSIA – Ernakulam, Sri. Balakrishna Bhat Kakunje, President KPMA and Sri. P.J. Mathew, Convenor, IPLEX20.

The Promotional booth was used to disseminate information on the Council's services, events and on the export potential and opportunities for Plastic products from India.

Meeting of Hooghly District Export Promotion Committee on 7th December 2021

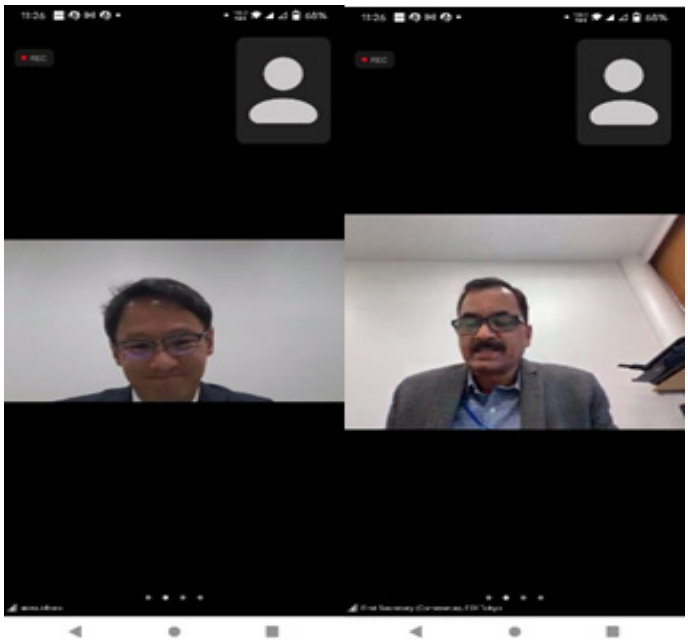
The above meeting was held at Chinsurah, Hooghly District (WB) on 6.12.2021 under the chairmanship of Hon'ble District Magistrate. This was the first meeting of the District Export Promotion Committee of Hooghly.

Meeting under chairmanship of Shri M.Thennarasan,IAS, Vice Chairman & Managing Director, Gujarat Industrial Development Corporation, Gandhinagar – 07th December 2021

A meeting regarding the upcoming event- Local Goes Global: Export Led Growth" Pre-Summit event, Vibrant Gujarat Global Summit 2022 under the chairmanship of Shri M. Thennarasan, IAS, Vice Chairman & Managing Director, Gujarat Industrial Development Corporation at Gandhinagar on 7th December, 2021 was organized with Export Promotion Councils and other stakeholders. Plexconcil was represented by Mr Naman Marjadi, Assistant Director, Regional Office- Ahmedabad and inputs were shared by Plexconcil during meeting for organizing event so that maximum benefits can be made available to exporters as well as prospective exporters.

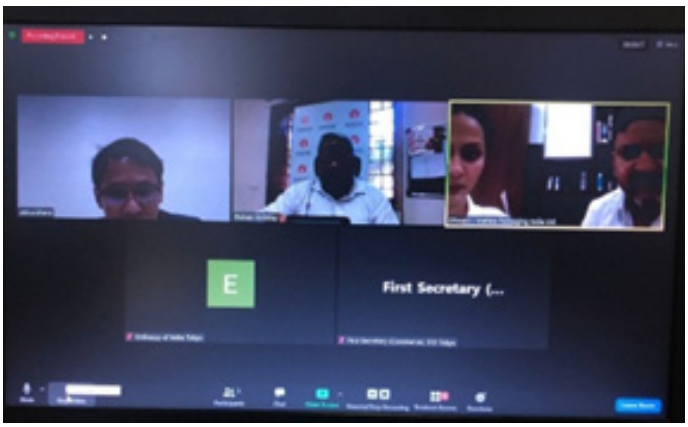
Japan VBSM with M/s. Daito Co, Ltd, Japan on 8th December 2021

Plexconcil organized the virtual Buyer-Seller Meet on 8thDecemebr 2021 jointly with the help of the Embassy of India, Tokyo, Japan for one buyer from Japan M/s. Daito Co, Ltd.



The Embassy of India, Tokyo approached Plexconcil to assist in organizing the B2B with the buyer from Japan who was keen to source suppliers from India for his 15 HS Codes which fall under the preview of Plexconcil.

The buyer is an established organisation having multiple business interests with a good reputation in Japan and customers who are into manufacturing and retailing business across the nation.



Plexconcil shortlisted 14 Indian Companies who matched the requirements of the buyer and held the virtual BSM on 8th December 2021 providing each company a time slot to meet the buyer in a separate virtual room. Post a brief introduction by the First Secretary (Commercial) Mr Manoj Singh Negi about the event and the efforts taken by the Plexconcil in organising the event, the buyer represented by their Sr. Executive Director Mr. Akira Kihara thanked the Indian Embassy highlighting that only the Indian Embassy had responded well. Mr. Rajesh Duggal, Attache (Commercial) guided the Council in making the interaction a success in terms of business and concept.

The event promoted by the Council and Embassy of India, Tokyo was very well appreciated by the Indian Companies and the Buyer who was keen to get more suppliers for his requirement from India.

Training on e-RCMC on 9th & 21st December 2021

Above training programme was organised by the O/o DGFT. Mr Nilotpal Biswas, RD along with other Officers & Staff Members (HO & Regional Office) attended the programme.

VC Meeting to Review Export Target for LAC Region on 10th December 2021

The above meeting was organised by the Department of Commerce mainly to review export performance in order to achieve the export target set the Department. Mr. Vipul Bansal, Joint Secretary, FT-LAC chaired the meeting. Mr Nilotpal Biswas, RD represented the Council at this meeting.

Member in Foreign Trade Committee of SICCI Meeting on 10th December 2021

Mr. Ruban Hobday, Regional Director, Plexconcil has been nominated in the Foreign Trade Committee of Southern Indian Chamber of Commerce & Industry (SICCI),one of the reputed Chambers in South India, as their committee member. The first meeting was organized on 10th Dec 2021 through a video conference. The meeting was chaired by Mr. Raja Vaidiyanathan and Co-Chaired by Mr. Irshad Ahmed, Regional Chairman, FIEO.

PLEXCONNECT-Webinar on Introduction to National Logistics Portal (Marine) – 10th December 2021

The Plastic Export Promotion Council (PLEXCONCIL) organized a Webinar on Introduction to National Logistics Portal (Marine) on 10th December, 2021 (Friday)

Ministry of Ports, Shipping and Waterways (MOPSW) and Ministry of Commerce & Industry (MOCI) has entrusted the work of developing the National Logistics Portal (Marine) to Indian Ports Association (IPA). National Logistic Portal (NLP) Marine is a project of national importance aimed at connecting all the stakeholders of the logistics community using IT, to improve efficiency and transparency by reducing costs and time delays. This project will have a significant impact on the 'Ease of Doing Business' Index of the country.

Mr. Sachin Shah, Panel Chairman – Merchant Exports, Plexconcil

Mr Rajiv Puri – Indian Ports Association (IPA)

Mr. Sachin Shah, Panel Chairman - Merchant Exports, Plexconcil gave the welcome address during the webinar and said that exports were showing a steady growth, indicating visible positivity among the industry and and initiative such as PM GatiShakti will infuse India's manufacturing exports with greater dynamism in times to come. Speakers from Indian Ports Association, EY, PMU team for NLP Marine and M/s Portall, Implementation team gave detailed presentation on ambitious NLP Marine Project. The presentation was followed by Q & A session which was moderated by Ms Bharti Parave, Asst. Director, Plexconcil. The webinar ended with Vote of Thanks by Naman Marjadi, Asst. Director, Plexconcil Ahmedabad.

Launch Function of IPLAS (International Plastics Exhibition) 2022, June 10-13, 2022 held at Chennai on 15th December 2021

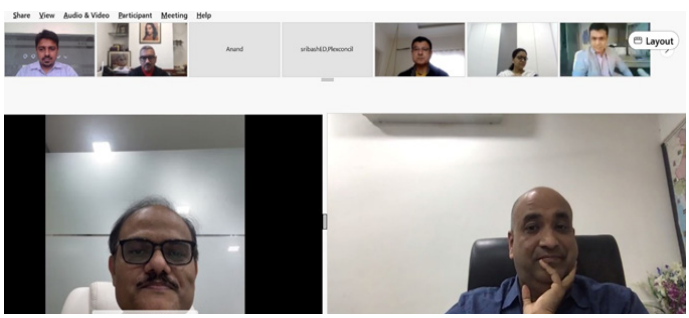
The Launch Function of IPLAS (International Plastics Exhibition) 2022 was formally inaugurated by Mr. M. Kumar, Managing Director, M/s. Shibaura Machine India Pvt Ltd on 15th December 2021 at Hotel GRT Grand, Chennai.

IPLAS, organized by The Tamil Nadu Plastics Manufacturer's Association will showcase the complete range of Plastics processing Machinery, Raw Materials, Auxiliaries, Moulds & Dies, and Products. During the Launch Function itself few of interested companies made on-spot stall bookings. The launch function witnessed trade members in large attending the event.

The Council being an Export Partner to the IPLAS event was represented by Mr. Y.V. Raman, Regional Chairman-South, Mr. Ruban Hobday, Regional Director-South and Mr. R. Dayanidhi, Assistant Director. The IPLAS Committee has requested the Council to consider their proposal for RBSM with 100 Buyers for which the Regional Chairman informed them that it will be taken for consideration accordingly with the respective Committee of the Council.

PLEXCONNECT-Webinar on Guidance on equity IPO planning on BSE SME Exchange – 17th December 2021

The Plastic Export Promotion Council (PLEXCONCIL) in association with Falcon Business Energisers organized a Webinar on Guidance on equity IPO planning on BSE SME Exchange on 17th December, 2021.



(Mr. Ajay Thakur, Head - BSE SME & Start-up and Mr Alpesh Patel, Chairman, Gujarat Regional Committee, Plexconcil)

The Welcome address for the webinar was given by Mr Alpesh Patel, Chairman of Plexconcil Gujarat Regional Committee and Director of M/s. Knack Packaging Pvt Ltd. Mr. Ajay Thakur, Head - BSE SME & Start-up guided participants on equity IPO planning on BSE SME Exchange to raise funds. CA Gaurav Jain from Hem Securities deliberated on IPO essentials during the webinar.

Pre Vibrant Gujarat Summit: 'Local Goes Global: Export Led Growth' – 20th December 2021

The Government of Gujarat is organising the 10th edition of Vibrant Gujarat Global Summit from 10 to 12 January 2022 at Mahatma Mandir, Gandhinagar. A Pre-summit event "Local Goes Global: Export Led Growth" was organised on 20th December, 2021 by Government of Gujarat with focus on the following aspects/areas:

- Preparing India as Export Economy of US $1 Trillion per annum: Opportunities & Way Forward
- Augmenting Export Infrastructure and Decoding Financial Access for Exporters to establish India as the Global Supplier
- Export Potential in Traditional and Sunrise Sectors

The Pre-summit was inaugurated by Hon'ble Chief Minister of Gujarat Shri Bhupendra Patel.

Plexconcil Members were invited to attend this summit. The dedicated summit on Exports helped the industries involved in export related activities to gain relevant knowledge about various schemes and the forum provided a platform for acquiring knowledge, sharing of ideas, networking and forging new partnerships for exporters as well as those who are looking forward to start exporting. Plexconcil was represented by Mr Alpesh Patel, Gujarat Regional Committee Chairman, Plexconcil, committee members of Gujarat Regional Committee and Mr Naman Marjadi, Assistant Director, Regional Office- Ahmedabad. The Council also interacted with participants through exhibition stall set up on the side-lines of the summit.

Meeting with Shri Bhupendrabhai Patel, Hon'ble Chief Minister, Government of Gujarat – 20th December 2021

A courtesy meeting with Shri Bhupendrabhai Patel, Hon'ble Chief Minister, Government of Gujarat and Gujarat Regional Committee Members was organized at Chief Minister's Office, Gandhinagar on 20th December, 2021. Committee Members discussed priorities for the growth of Plastic Industry in the Gujarat State and Plexconcil committee members expressed willingness to work alongside the Government of Gujarat and contribute to achieving the State's growth objectives. The meeting was attended by Mr Alpesh Patel, Chairman, Gujarat Regional Committee, PLEXCONCIL, Mr Ramesh Patel, MD, Deep Polymers Limited, Mr Bhagwanbhai Patel, President, GSPMA, Mr Darshan Shah, Bhumi International and Mr Naman Marjadi, Asst. Director, PLEXCONCIL, Ahmedabad

Inaugurationl of Plexconcil's New Southern Regional Office & 2nd Sub Committee Meeting of SR – Chennai on 22nd December 2021 at 4.00 pm

Shri. Y.V. Raman, Regional Chairman – South, Plexconcil inaugurated the relocated office of the Plexconcil Southern Regional Office on 22nd December 2021. The reopening of the office was attended by many Govt Officials and the members mostly from Chennai.

The members congratulated the Regional Office and the efforts taken to move to a new and better location with facilities enabling more members to reach out to the office. The inauguration of the office was followed by a brief meeting with the Southern Regional Sub Committee meeting attended by the invitees.

Shri. Sudhakar, Past Chairman, Plexconcil was very pleased with the change in the location of the office which he said will pave way for more members and encourage the industry to visit and reach out to the office for all their services and needs.

Shri. Benjamin Cherian, Convener, Human Hair Panel appreciated all the efforts taken by the Plexconcil team at the RO and Shri. YV Raman for making the right move in shifting the office to a more visible approachable and modern office. He said that this office would bring more responsibilities and expectations from the Industry to grow exports and to provide service to the industry.

Shri. Anil, Southern Regional Committee Member congratulated the entire team and he was more forthcoming expressing his keenness of supporting the RO in whatever way they need the industry to support in the future to promote exports. He said to utilize the synergy created by the new team at the RO to unify the industry in the South which has huge potential for exports.

Shri. Rakkappan, President, TAPMA was glad that the new office has been equipped with the latest facilities to cater to the industry. He thank the Regional Chairman for making this happen to move out from the old building which was not approachable to the industry. He assured of all the support to the Council in the future.

Shri. Chandrasekhar, Southern Region Committee Member expressed his appreciation to the entire team especially to the Secretariat team for making the move at the right time. He said that the Regional Office was quite effective even during the tough 2 years and was making things happen with webinars and information.

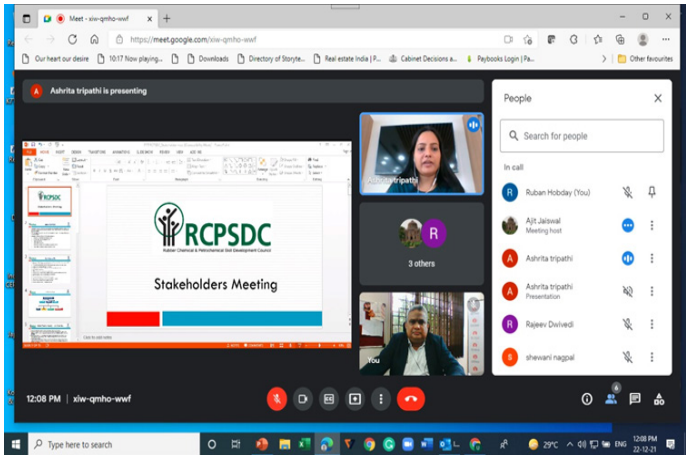
Industry leaders, members from other associations, officials from ECGC, CCAPEXIL attended the event and congratulated the Council on its new beginning.

Shri. YV Raman, Regional Chairman, South – Plexconcil expressed his thanks to all the committee members and others who had attended the inauguration and he assured that the Southern Regional Office would be more effective and prominent in servicing its members for the growth of exports.

Shri. Ruban Hobday, Regional Director, South made a presentation about the activities, statistics of the Southern Region expressing his thanks to the Regional Chairman and the committee. He thanked his colleagues, especially Mr. R. Dayanidhi, Assistant Director who had put in a lot of hard work along with Ms. Devi, Jr. Executive. The meeting ended with a hi-tea.

RCPSDC Virtual Stake Holders Meeting on 22nd December 2021:

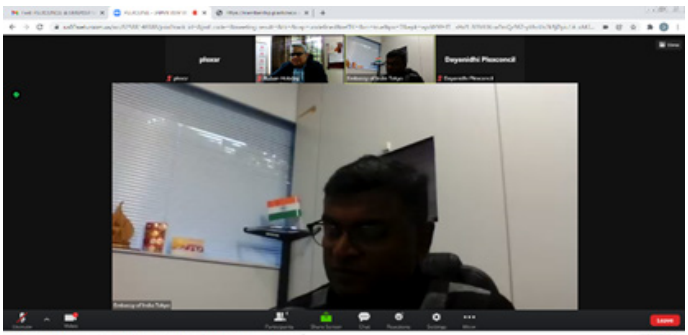
A Virtual Stake Holders Consultation meeting was held on 22nd December 2021 with regard to NOS Qualification Standards of Rubber Chemical & Petrochemical Skill Development Council. The Council was represented by Mr. Ruban Hobday, Regional Director – South.

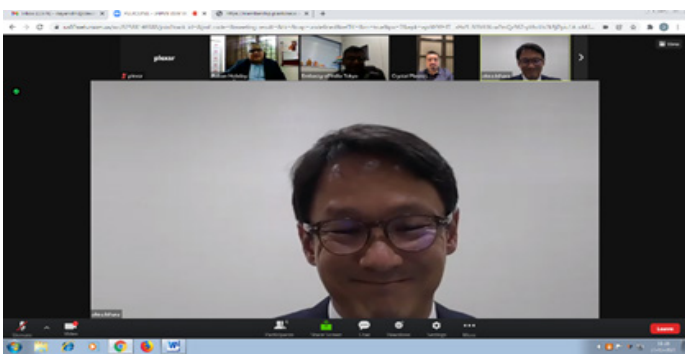


Japan VBSM with M/s. Daito Co, Ltd, Japan organized by the Embassy of India, Tokyo, Japan with the Short Listed Indian Companies on 23rd Dec 2021.

The Plexconcil organized the VBSM with short-listed (7) companies with the Japanese Buyer M/s. Daito Co, Ltd, Japan on 23rd December 2021. The buyer earlier had met 15 companies and short listed 7 as per their requirement. The Embassy of India, Tokyo was represented by Mr. Rajesh Duggal, Attache Commercial and Mr. Ruban Hobday, Regional Director, South, Plexconcil representing the Council.

The BSM was organized by the Southern Regional Office.





(Mr. Dhruv Sayani, Panel Chairman of Consumer & Housewares Products, Plexconcil)

Speaker CA Mr. Sunil Pandey

PLEXCONNECT- Webinar on CFO services for SMEs with ambitious growth plans – 23rd December 2021

The Plastic Export Promotion Council (PLEXCONCIL) in association with Falcon Business Energisers organized a Webinar on CFO services for SMEs with ambitious growth plans on 23rd December 2021.

Ms Bharti Parave, Assistant Director, Plexconcil gave opening remarks of the webinar. Mr. Dhruv Sayani, Plexconcil Panel Chairman of Consumer & Housewares Products and director of M/s. Crystal Plastics & Metallizing Private Limited gave the welcome address for the webinar. Speaker CA Sunil Pandey explained Role of a CFO in achieving 10X growth and discussed on good quality Senior Finance leadership or CFO Level Board Advisor can be a game changer for overall sustainable growth. The Session was moderated by Mr. Sooraj Dhawan from Falcon Business Energisers. The webinar ended with Vote of Thanks by Naman Marjadi, Asst. Director, Plexconcil Ahmedabad.

Meeting on State (Odisha) Export Award for the Year 2019-20 on 24th December 2021

The meeting was organised virtually by the O/o Directorate of Export Promotion & Marketing, Odisha. The objective of the meeting was to encourage more and more exporters to participate and apply for the export award. Mr Nilotpal Biswas, RD joined this online meeting.

Webinar on important changes in GST Law with effect from 1st January 2022 on 29th December 2021

A Webinar was organised by the O/o Kolkata CGST & CX Zone. Objective of the webinar was to make aware of taxpayers/stakeholders on important changes in GST Law with effect from 1st January 2022. Senior officers from the O/o Kolkata CGST & CX Zone attended the Webinar and clarified various queries after their presentation. Mr Nilotpal Biswas Regional Director joined this online webinar.

PLEXCONNECT-Webinar on Raising Debt Finance for SMEs – 29th December 2021

PLEXCONCIL in association with Falcon Business Energisers organized a Webinar on Raising Debt Finance for SMEs on 29th December 2021. The webinar was organized with objective to make participants aware about Raising Debt Finance for SMEs.

A Welcome address was given by Mr Alpesh Patel, Chairman of Plexconcil Gujarat Regional Committee and Director of M/s. Knack Packaging Pvt Ltd. Speaker CA Sunil Pandey explained about planning options between Equity and Debt. He also guided participants on essential considerations for debt raising and also directed on reducing debt cost. Session was moderated by Mr. Sooraj Dhawan from Falcon Business Energisers.

Mr Alpesh Patel, Chairman, Gujarat Regional Committee,

Speaker CA Mr. Sunil Pandey

Paradigm shift from LIBOR to Alternative Reference Rates (ARRs)

The financial world is going through transition away from LIBOR to Alternate Reference Rates (ARR) tackling the core issue that LIBOR is a term rate while ARRs are overnight rates. This article covers various parameters of transition and payment structures for ARRs which facilitate some certainty with respect to cash flows and discussion regarding the transition in an Indian context.

Basics of LIBOR:

London Interbank Offered Rate (LIBOR) was one of the most important Interbank Offered Rates (IBORS) and was a benchmark that was determined using input data which was provided by a panel of banks. The various currency LIBORs were interest rate benchmarks using which banks would lend to each other on an unsecured basis.

The rate was quoted in five different currencies and for seven different maturities generally administered by the ICE [earlier to this it was administered by the BBA]. These rates were in existence for 52 years and were the most used benchmarks for any borrowing and lending decisions among all market participants

Why shift from LIBOR to ARR:

Post the 2008 global financial crisis there were heightened concerns that IBORs possess a systemic risk. Since then, the underlying market from which LIBOR was derived was no longer used in any significant volume. Hence the submissions made by the panel banks often relied on expert judgement rather than actual transactions.

The Financial conduct authority (FCA) stated that the LIBOR computation no longer complied with internationally accepted standards of a robust interest rate benchmark and in 2017 announced its intention to stop the usage of LIBOR after the end of 2021.

FCA announced that all LIBOR settings for all currencies will cease or no longer be representative after the following dates:

- 31 December 2021, for GBP, EUR, CHF and JPY LIBOR in all tenors, and USD LIBOR 1-week and 2-month; and
- 30 June 2023, for USD Overnight, 1-month, 3-month, 6-month and 12-month.

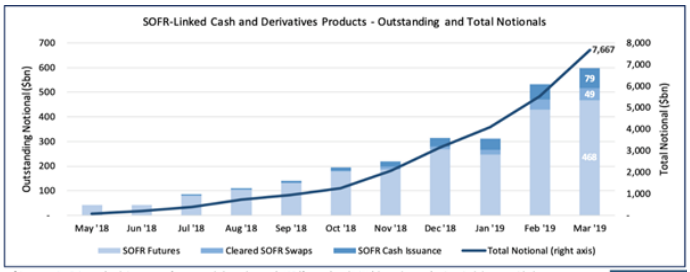
Alternate Reference Rates (ARRs):

Many alternative reference rates have been used by financial markets. Here are some key differences between RFRs/ARRs and LIBOR/IBOR rates:

- LIBOR is a forward-looking term rate while RFR/ARRs are backward looking overnight rates.
- Derivation: LIBOR is derived using quotes by panel bank submission meant to be estimates of where funds can be borrowed. While RFR/ARRs are benchmark based upon actual transactions.

- Credit Risk: LIBOR is an unsecured borrowing rate and includes implied credit risk of panel banks and liquidity premium with respect to length of interest period. RFR/ARRs do not include counterparty bank credit risk element and a liquidity premium as they are overnight rates and most of them backed by security.

ARRs are not new products and transition to them has been an ongoing process for several years. The volumes of such products have been increasing as shown in the image:



[1] Sources: CME Group (cash issuances, futures and cleared swaps), ICE (futures) and LCH (cleared swaps). Historical data provided as of March month-end.
[2] SOFR cleared swaps are based on consolidated outstanding notionals provided by LCH and CME

ARRC

Size of LIBOR Market

Table 1: USD LIBOR Market Footprint by Asset Class[1]

		Currrently Outstanding ($TN)	Maturing After June 2023 ($TN)
Over-the-Counter Derivatives	Interest rate swaps	81	46
	Forward rate agreements	47	0
	Interest rate options	20	12
	Cross currency swaps	23	8
Exchange Traded Derivatives	Interest rate options	32	0
	Interest rate futures	11	2
Business Loans	Syndicated loans[2]	2.0	1.1
	Nonsyndicated business loans	1.3	0.4
	Nonsyndicated CRE/Commercial mortgages	1.5	0.8
Consumer Loans	Retail mortgages[3]	1.3	0.8
	Other Consumer loans	0.1	0.1
Bonds	Floating/Variable Rate Notes	1.1	0.3
Securitizations[3]	Mortgage-backed Securites (incl. CMOs)	0.8	0.8
	Collateralized loan obligations	0.5	0.5
	Asset-backed securities	0.2	0.2
	Collateralized debt obligations	0.1	0.1
Total USD LIBOR Exposure:		**223**	**74**

[1] Source: Federal Reserve staff calculations, BIS, Bloomberg, CME, DTCC, Federal Reserve Financial Accounts of the United States, G.19, Shared National Credit, and Y-14 data. Data are gross notional exposures as of 2020Q4. [2] The figures for syndicated and nonsyndicated business loans do not include undraw n lines. Nonsyndicated business loans exclude CRE/commercial mortgage loans. [3] Estimated amounts maturing after June 2023 based on historical pre-payment rates

Table 1 shows the prevalence and dominance of LIBOR rates for interest rate derivatives. Since, business loans are long term in nature, the variability of LIBOR rates for shorter tenure affect cash flows. Interest rate derivatives are good hedging tools to fix interest rates.

For example: If corporate has borrowed 10 years variable rate loan with a 6-month LIBOR as reference rate (plus some spread), every six months a new 6-month rate will be fixed for that payment.

The corporate is exposed to interest rate risk of a higher LIBOR, while interest rate derivatives can be executed to fix the rate and hedge the interest rate risk.

ISDA Fallback Protocol for Legacy Contracts:

ISDA or International Swaps and Derivatives Association 2020 IBOR fallback protocol and IBOR fallbacks supplement both came into effect on January 25, 2021. It is protocol adopted in the derivative industry's transition from using IBOR rates to risk free rates. These protocols were specific to contracts referencing LIBOR and transition from LIBOR referencing to a move towards other ARRs.

If the benchmark rates are not published (permanent cessation) then certain references to the benchmark will change. Benchmark rates will fall back to the new benchmark which is governed by the master ISDA agreements. RFRs or ARRs are alternatives that have been developed to be used instead of LIBOR. Regulators for 5 LIBOR currency jurisdictions have published their alternative reference rates as shown in Table 2.

Table 2:

LIBOR Currency	Administrator	RFR	Secured/ Unsecured
USD	Federal Reserve Bank of New York (Fed)	Secured Overnight Financing Rate (SOFR)	Secured
GBP	Bank of England (BoE)	Sterling Overnight Index Average (SONIA)	Unsecured
EUR	European Central Bank (ECB)	Euro Short Term Rate (€STR)	Unsecured
CHF	SIX Swiss Exchange	Swiss Average Overnight Rate (SARON)	Secured
YEN	Bank of Japan (BoJ)	Tokyo Overnight Average Rate (TONA)	Unsecured

Methodology:

LIBOR and RFR/ARRs are calculated using different methodologies. To solve the differences, industry suggests usage of a credit spread adjustment.

Spread adjustment: Historical median with 5 years look back period that calculates the difference between Libor and the ARR over 5 years' worth of daily data points. This is added to the adjusted RFR/ARR which is RFR/ARR compounded in arrears for the relevant term to reflect the fact that IBORs are term rates while RFRs are overnight rates.
The value of the spread adjustment is calculated till the cessation of IBOR is announced post which it becomes fixed at the last calculated value.

The main challenge in this transition is the fact that IBORs are term rates meaning if an entity decides to borrow on 15th March for a duration of 3 months, the 3-month IBOR as benchmark provides certainty to the entity regarding the cash outflow at the end of 3 month as the 3-month IBOR will reflect borrowing rate till 15th June. These are forward looking rates, while RFRs/ARRs are overnight rates based on actual transactions,

so if an entity wants to borrow from 15th March to 15th April, the entity using the overnight rate as benchmark will not know the actual cash flow till the RFR/ARR is published on 15th April causing challenges of managing cash flow. To solve this problem, there are various methods developed and to understand them we need to understand the type of payment structures.

Types of payment structures:

There are two kinds of payment structures:

- Rates at the beginning of the period (In advance): Floating rate payment due is set in advance at the start of the interest period. It references a rate which are observed before the interest period began.
- Rates at the end of the period (in arrears): This kind of structure references a rate which is observed during the interest period.

Term Specific:

Corporate borrowers in India use foreign currency loans for their short term/long term requirements and most of the borrowing is done in USD.

Most exporters used to borrow their working capital requirements in USD using single term fixing like the 3 month or 6-month LIBOR because of which they were aware of the amount to be paid on maturity. Since SOFR is daily rate, which is a complete shift from term rates, borrowers are looking for options like the term structure which was provided by LIBOR. During transition period, banks and corporates should negotiate in such a way that total cost during LIBOR regime and new ARRs should remain same.

In USA, derivatives are available for long term on basis of daily SOFR. It is expected that long term borrowing will be executed on basis of daily SOFR compounded over the interest paying frequency. Interest rate (Overnight SOFR based swaps) would be used to hedge the variability of SOFR in the longer term.

Forward Looking SOFR term rates:

The Alternate Reference Rates committee (ARRC) recently recommended the CME group's SOFR term rates. CME term SOFR rates provide an indicative and forward-looking measurement of SOFR rates based on market expectations implied from leading derivatives market. These rates are derived on basis of futures on interest rates on CME. ARRC recommends usage of overnight SOFR rates wherever possible and usage of term SOFR rates only in cases where payment must be known in advance. Most of Indian Bankers are offering USD working capital loan on the following benchmark.

Table:3

DATE	CME TERM SOFR (%)			
	1 MONTH	3 MONTH	6 MONTH	12 MONTH
14 Jan 2022	0.05605	0.13671	0.27569	0.5103
13 Jan 2022	0.05835	0.13149	0.26437	0.49456
12 Jan 2022	0.05936	0.12432	0.25722	0.49616
11 Jan 2022	0.06345	0.12478	0.25063	0.47671
10 Jan 2022	0.0595	0.11685	0.24318	0.47116

Source: CME website

Like term SOFR rates, the Sterling Risk Free Rate Working Group (RFRWG) invited interested benchmark administrators for development of term SONIA. Term SONIA is available in 1 month, 3-month, 6 month and 12-month tenors but the working group recommends use of SONIA compounded in arrears with use of term SONIA being limited.

Understanding the transition in the Indian Context:

On July 8th 2021, RBI issued guidance to banks for the transition from LIBOR to ARRs post Dec 31st, 2021. In the guidance issued by RBI, the usage of ISDA fallback clause for all financial contracts using LIBOR linked rates was recommended.

The Financial Benchmarks India PVT LTD or FBIL used to publish MIFOR or Mumbai Interbank Forward Outright Rate which was a mix of LIBOR and forward rate premium derived from the Indian forex market.

It was computed for 6 tenors: Overnight, 1-month, 2-month,3-month, 6-month, and 12-month.

Since the cessation of LIBOR was announced, RBI had started advising a shift away from MIFOR and FBIL further started publishing the modified MIFOR which is computed using adjusted SOFR and FBIL forward rate premia.

RBI has further permitted banks to extend working capital finance to exporters using widely accepted Alternate Reference Rates in the currency concerned.

Conclusion:

The financial world is going through a big transition moving away from IBOR structures. Regulators all around the world have been active to ensure that this transition is smooth. Like in case of all transitions, it comes with its own set of challenges, confusions which are only solved over time. All the interested participants such as Banks, Regulators, Data Intermediaries, Central Bankers and Exchanges are prepared for transition while Systems, Corporates and Individuals will take some time to absorb all of these.

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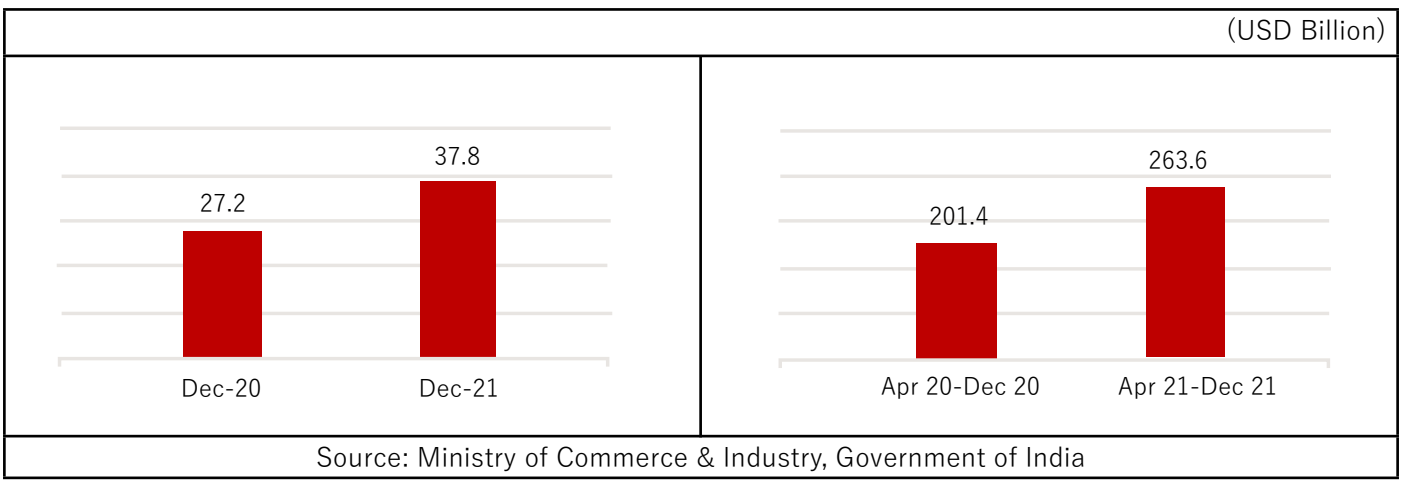
Export Performance December 2021

TREND IN OVERALL EXPORTS

India reported merchandise exports of USD 37.8 billion in December 2021, up 38.9% from USD 27.2 billion in December 2020. Cumulative value of merchandise exports during April 2021 – December 2021 was USD 301.4 billion as against USD 201.4 billion during the same period last year, reflecting a growth of 49.7%.

Exhibit 1: Trend in overall merchandise exports from India

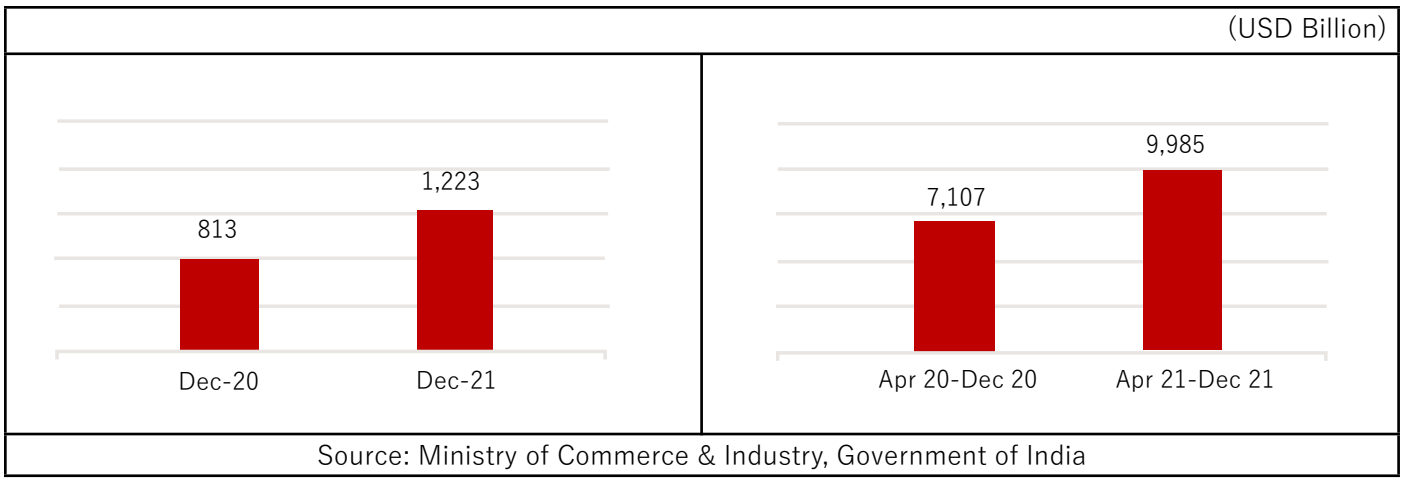


Source: Ministry of Commerce & Industry, Government of India

TREND IN PLASTICS EXPORT

During December 2021, India exported plastics worth USD 1,223 million, up 50.5% from USD 813 million in December 2020. Cumulative value of plastics export during April 2021 – December 2021 was USD 9,985 million as against USD 7,107 million during the same period last year, registering a positive growth of 40.5%.

Exhibit 2: Trend in plastics export by India



Source: Ministry of Commerce & Industry, Government of India

PLASTICS EXPORT, BY PANEL

In December 2021, most of the product panels, especially Plastic raw materials; Plastic films & sheets; FIBC, woven sacks, woven fabrics, tarpaulin; Human hair & related products; Packaging items - flexible, rigid; Plastic pipes & fittings; and Miscellaneous products reported a strong positive growth in exports. Export of Floorcoverings, leathercloth & laminates, however, was in the negative.

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

Panel	Dec-20	Dec-21	Growth	Apr 20- Dec 20	Apr 21- Dec 21	Growth
	(USD Mn)	(USD Mn)	(%)	(USD Mn)	(USD Mn)	(%)
Consumer & houseware products	61.5	71.7	+16.7%	399.9	597.0	+49.3%
Cordage, fishnets & monofilaments	19.7	26.9	+36.6%	146.5	198.0	+35.1%
FIBC, woven sacks, woven fabrics, & tarpaulin	128.8	151.6	+17.7%	858.5	1,271.2	+48.1%
Floorcoverings, leathercloth & laminates	55.5	53.8	-3.0%	332.7	464.9	+39.8%
FRP & Composites	32.7	44.4	+35.8%	210.1	334.3	+59.1%
Human hair & related products	48.2	68.5	+42.2%	264.6	650.5	+145.8%
Medical items of plastics	32.8	36.9	+12.5%	253.6	303.4	+19.6%
Miscellaneous products & items nes	48.9	81.9	+67.6%	352.0	639.4	+81.6%
Packaging items - flexible, rigid	42.2	55.9	+32.6%	348.1	456.0	+31.0%
Plastic films & sheets	124.1	198.6	+60.1%	1,129.2	1,500.3	+32.9%
Plastic pipes & fittings	16.9	29.2	+72.5%	128.9	206.8	+60.4%
Plastic raw materials	187.0	384.0	+105.3%	2,562.9	3,208.1	+25.2%
Writing instruments & stationery	14.8	19.6	+32.9%	119.5	155.5	+30.1%
	812.9	1,223.1	+50.5%	7,106.6	9,985.3	+40.5%

Source: Ministry of Commerce & Industry, Government of India

Export of **Consumer & house ware products** increased by 16.7% in December 2021 due to higher shipment of Other household articles of plastic (HS code 39249090); Other builders ware of plastic (HS code 39259090); and Tooth brushes of plastic (HS code 96032100).

Cordage, fishnets & monofilaments export were also up by 36.6% in December 2021 aided by improved sales of Other twine of polyethylene or polypropylene (HS code 56074900).

Export of **FIBC, woven sacks, woven fabrics, & tarpaulin** gained 17.7% during December 2021 as sales of Flexible Intermediate Bulk Containers or FIBCs (HS code 63053200) remained strong.

In case of **Floor coverings, leather cloth & laminates,** exports in December 2021 were lower by 3.0% as Indian exporters reported a decline in sales of Textile fabrics, impregnated, coated, covered or laminated with polyurethane (HS code 590320); Other textile fabrics coated with plastics (HS code 590390).

Export of **FRP & Composites** was up by 35.8% due to increased sales of Articles of plastics and articles of other materials of heading 3901 to 3914, n.e.s (HS code 39269099).

Export of **Human hair & related products** was higher by 42.2% due to strong sales of Human hair, unworked, whether or not washed and scoured (HS code 05010010); and Human hair, dressed, thinned, bleached or otherwise worked (HS code 67030010).

Export of **Medical items of plastics** witnessed an increase of 12.5% in December 2021 due to higher sales of Catheters for urine and stool (HS Code 90183910); and Cannulae (HS Code 90183930).

Export of **Miscellaneous products & items nes** increased by 67.6% in December 2021 due to higher sales of Polypropylene articles nes (HS code 39269080); and Optical fibres, optical fibres bundles and cables (HS code 90011000).

Packaging items - flexible, rigid export increased by 32.6% on higher sales of Sacks and bags of polymers of ethylene (HS code 39232100); and Other articles for conveyance or packing of goods (HS code 39239090).

Plastic films & sheets witnessed an increase of 60.1% in exports during December 2021 due to higher shipments of Self-adhesive films and sheets of plastics, whether or not in rolls (HS code 3919); Sheets and films of polymers of propylene (HS code 392020); Flexible films and sheets of polyethylene terephthalate (HS code 39206220); and Other plates, sheets, film, foil and strip, of plastics (HS code 392190).

Export of **Plastic pipes & fittings** witnessed a growth of 72.5% due to improved sales of Tubes of polyethylene (HS code 39172110); Other tubes of polymers of vinyl chloride (HS code 39172390); and Flexible tubes, pipes and hoses, having a minimum burst pressure of 27.6 MPa (HS code 391731).

Plastics raw materials export was up 105.3% in December 2021 due to higher sales of Linear low-density polyethylene (HS Code 39014010); Polypropylene (HS Code 39021000); and Polyethylene terephthalate in various forms (HS Code 39076190 and 39076990).

Export of **Writing instruments & stationery** witnessed an increase of 32.9% in December 2021. This product segment, especially Ball point pens (HS Code 960810), is limping back to growth after a period of difficult sales due to closure of schools and offices.

Exhibit 4: Details of % change seen in top 50 items of export

HS Code	Description	Apr 20 – Dec 20 (USD Mn)	Apr 21 – Dec 21 (USD Mn)	Growth (%)
63053200	Flexible intermediate bulk containers, for the packing of goods, of synthetic or man-made textile materials	476.8	751.3	+57.6%
39021000	Polypropylene, in primary forms	549.5	500.5	-8.9%
39076190	Polyethylene terephthalate: Other primary form	394.4	609.6	+54.6%
39232990	Sacks and bags, incl. cones, of plastics (excl. those of polymers of ethylene): Other	263.9	374.8	+42.0%
67030010	Human hair, dressed, thinned, bleached	250.8	487.7	+94.4%
39269099	Articles of plastics and articles of other materials of heading 3901 to 3914, n.e.s: Other	206.9	328.9	+59.0%
39012000	Polyethylene with a specific gravity of >= 0,94, in primary forms	254.7	170.4	-33.1%
39014010	Linear low-density polyethylene, in which ethylene monomer unit contributes less than 95 % by weight of the total polymer content	196.0	197.0	+0.5%
90011000	Optical fibres, optical fibre bundles and cables (excl. made-up of individually sheathed fibres of heading 8544)	151.8	332.4	+119.0%
48239019	Decorative laminates	145.8	195.8	+34.3%
39206220	Plates, sheets, film, foil and strip, of non-cellular polyethylene terephthalate, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles: Flexible, plain	153.7	192.2	+25.0%
39269080	Articles of plastics and articles of other materials of heading 3901 to 3914: Polypropylene articles, nes	134.2	215.7	+60.7%
39202020	Plates, sheets, film, foil and strip, of non-cellular polymers of ethylene, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles: Flexible, plain	141.1	244.3	+73.1%
39232100	Sacks and bags, incl. cones, of polymers of ethylene	113.5	163.5	+44.0%
39076990	Polyethylene terephthalate: Other primary form	103.2	214.1	+107.6%
59039090	Textile fabrics impregnated, coated, covered or laminated with plastics other than polyvinyl chloride or polyurethane: Other	100.6	141.9	+41.1%
39239090	Articles for the conveyance or packaging of goods, of plastics: Other	104.3	128.9	+23.6%
39069090	Acrylic polymers, in primary forms (excl. polymethyl methacrylate): Other	76.8	222.0	+189.1%

39202090	Plates, sheets, film, foil and strip, of non-cellular polymers of ethylene, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles: Other	84.2	136.0	+61.6%
90015000	Spectacle lenses of materials other than glass	86.0	94.4	+9.7%
39011010	Linear low-density polyethylene, in which ethylene monomer unit contributes 95 % or more by weight of the total polymer content	94.6	66.6	-29.6%
54072090	Woven fabrics of strip or the like, of synthetic filament, incl. monofilament of >= 67 decitex and with a cross sectional dimension of <= 1 mm: Other	70.4	100.5	+42.7%
39206290	Plates, sheets, film, foil and strip, of non-cellular polyethylene terephthalate, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles: Other	75.4	86.8	+15.0%
39046100	Polytetrafluoroethylene, in primary forms	69.7	119.7	+71.8%
90183930	Cannulae	71.2	78.0	+9.6%
39219099	Plates, sheets, film, foil and strip, of plastics, reinforced, laminated, supported or similarly combined with other materials, unworked or merely surface-worked or merely cut into squares or rectangles: Other	75.8	90.0	+18.8%
39011020	Low density polyethylene	64.5	54.3	-15.8%
39219096	Plates, sheets, film, foil and strip, of plastics, reinforced, laminated, supported or similarly combined with other materials, unworked or merely surface-worked or merely cut into squares or rectangles): Flexible, laminated	68.4	67.2	-1.9%
96081019	Ball-point pens	62.4	75.2	+20.4%
39241090	Tableware and kitchenware, of plastics: Other	58.6	72.5	+23.8%
39072090	Polyethers in primary forms (excl. polyacetals): Other	65.6	35.8	-45.4%
56074900	Twine, cordage, ropes and cables of polyethylene or polypropylene, whether or not plaited or braided and whether or not impregnated, coated, covered or sheathed with rubber or plastics	55.5	90.9	+63.7%
95030030	Toys of plastics	59.2	81.2	+37.1%
39199090	Self-adhesive plates, sheets, film, foil, tape, strip and other flat shapes, of plastics, whether or not in rolls > 20 cm wide: Other	56.5	73.6	+30.3%
39219094	Plates, sheets, film, foil and strip, of plastics, reinforced, laminated, supported or similarly combined with other materials, unworked or merely surface-worked or merely cut into squares or rectangles: Flexible, metallised	58.5	77.0	+31.6%
39206919	Plates, sheets, film, foil and strip, of non-cellular polyesters, not reinforced, laminated, supported or similarly combined with other materials, not worked or only surface-worked, or only cut to rectangular, incl. square, shapes: Other	54.3	68.0	+25.3%

96032100	Tooth brushes, incl. dental-plate brushes	48.1	68.4	+42.1%
59031090	Textile fabrics impregnated, coated, covered or laminated with polyvinyl chloride: Other	46.6	53.2	+14.1%
39023000	Propylene copolymers, in primary forms	55.5	46.0	-17.2%
39140020	Ion-exchangers based on polymers of heading 3901 to 3913, in primary forms: Ion exchangers of polymerisation	48.4	56.7	+17.2%
39119090	Polysulphides, polysulphones and other polymers and prepolymers produced by chemical synthesis, n.e.s., in primary forms: Other	40.5	53.8	+32.7%
39204900	Plates, sheets, film, foil and strip, of non-cellular polymers of vinyl chloride, containing by weight < 6% of plasticisers, not reinforced, laminated, supported or similarly combined with other materials, without backing, unworked or merely surface-worked or merely cut into squares or rectangles	42.5	52.3	+22.9%
39241010	Tableware and kitchenware, of plastics: Insulated ware	36.1	50.4	+39.6%
39129090	Cellulose and chemical derivatives thereof, n.e.s., in primary forms (excl. cellulose acetates, cellulose nitrates and cellulose ethers): Other	42.4	53.6	+26.5%
39095000	Polyurethanes, in primary forms	41.8	58.1	+39.1%
39235010	Stoppers, lids, caps and other closures, of plastics: Caps and closures for bottles	38.0	50.2	+32.2%
39206929	Plates, sheets, film, foil and strip, of non-cellular polyesters, not reinforced, laminated, supported or similarly combined with other materials, not worked or only surface-worked, or only cut to rectangular, incl. square, shapes: Other	38.3	51.9	+35.7%
54072030	Woven fabrics of strip or the like, of synthetic filament, incl. monofilament of >= 67 decitex and with a cross sectional dimension of <= 1 mm: Dyed	29.6	20.3	-31.3%
39073010	Epoxy resins	29.6	85.3	+188.6%
39011090	Polyethylene with a specific gravity of < 0,94, in primary forms: Other	36.4	62.7	+72.3%

Source: Ministry of Commerce & Industry, Government of India

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How Is Inventory Control System Different From Inventory Management System?

If you are into a wholesale, retail or manufacturing business, then maintaining and optimizing your inventory is one of the most critical tasks. Imagine it's a New Year, and you are into the wholesale and retail business of clothes. What if your inventory is populated with last year's stock of old designs, and there are no new products to sell? It's a loss—big financial loss for your business.

By controlling and managing your inventory, you can always be assured that the right products are present with you, at the right time. Businesses which are heavily dependent on stocking products cannot afford to lose track of their inventory.

In this article, we will share what is inventory control, the best features of an inventory control system, and how it is different from the inventory management system. We will also share types of inventory control systems present and give a brief idea on how to manage inventory.

What Is an Inventory Control System?

Among new business owners and recently formed MSMEs, there is a great deal of confusion when it comes to understanding inventory control system. Inventory control is regulating and controlling the inventory which is already present in the warehouse of a manufacturer or wholesaler/distributor.

By an effective inventory control system, the business owner is aware of the exact position of each and every unit inside their inventory: How many units are about to be shipped, how many are already present, and how many units of the products are expected to come in.

With a single glance of the inventory control system, the management should be able to get a complete idea about inventory management and control.

In fact, the inventory management system is a part of an inventory control system.

What Is Inventory Management System?

Inventory management system, as the name reveals, is the management and optimizing of an inventory, all through the supply chain, right from the sourcing, shipping to order fulfilment. Unlike an inventory control system which focuses on keeping track of every product in the inventory, inventory management system focus on forecasting and fulfilment of orders.

An efficient inventory management system will enable the management to ensure supply of the best selling products at any given point of time, forecasting the demand using historical data and current trends and making the new orders, as and when needed.

Both inventory management and control are inter-linked, and their main objective is to ensure that the businesses know where their products are in an inventory, and when/how to order new products.

Important Features Of Inventory Management System

Forecasting and Predicting Demand: An ideal inventory management system should be able to forecast and predict the demand of the products, and ensure that the inventory never runs out of supply.

Barcoding & Scanning: The new and technologically advanced inventory management system should have the option of barcoding and scanning the products so that they are categorized and labelled accordingly.

Advanced Inventory Analysis: The system should be able to inform the user about the position of the products, their ordering history, and whether new orders should be placed or not.

Customizations: Inventory management system should be customizable, as per the business needs and requirements. For example, if the SKU format needs to be altered, the end-user should be able to do it quickly without taking any external help.

Cloud Technology Is Preferred: There exists both stand-alone inventory management system and Cloud based system. Since Cloud reduces IT expenses, and makes the system universally accessible via any device, the system to manage inventory should be Cloud based, which makes it even more powerful and flexible, at the same time.

Important Features Of Inventory Control System

As we already discussed what is inventory control, we will now share some of the critical features of an effective and efficient inventory control system:

Stock Control System: This is the most important feature of an efficient inventory control system: It should be able to control and monitor stock and implement a system which makes the process automated and updated. The floor supervisor or the manager should know the exact position of any product inside the inventory, at any given point of time.

Optimizing The Inventory: Factors such as optimal utilization of the floor space, managing the incoming shipment quickly, human resource management, etc. are critical features of an inventory control system.

Managing Different Products, Different Materials At The Same Time: Since an inventory will have myriad products, materials and units stocked together, the inventory control system needs to be able to manage all these, at the same time. Enforcing policies and procedures and setting guidelines are part of this process.

Timely Availability Of Products: It's the primary job of the inventory control system to ensure that the products stocked inside an inventory are available in time, as and when needed.

Types Of Inventory Control System

There are mainly 4 types of inventory control system:

Perpetual Inventory Control: When the incoming and outgoing inventory is updated on a constant basis, then it comes under Perpetual Inventory Control. This cannot be done manually, and specialized equipment is needed for the same.

Periodic Inventory Control: In this system, the updates are not done every single time a new item comes in or goes out, but is updated periodically, at the start and at the end of a specific period. It can be done manually, but there are several disadvantages associated.

Barcode Inventory Control: In this system, barcodes are the primary means to keep the inventory records updated and for entering data. This is a fast and efficient system and eliminates the need for paperwork.

Radio Frequency Identification (RFID) Inventory Control: In this system, RFIDs or Radio Frequency Identification are used, instead of barcodes. This is a relatively expensive but faster way to manage inventory.

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POLYMER PRICE TRACKER (DOMESTIC MARKET) DECEMBER 2021

High Density Polyethylene HDPE) ↑ ↑ ↓ Oct-21 Nov-21 Dec-21	• HDPE prices fell by Rs 6000 per MT in December 2021 after an increase of Rs 1500 per MT in November 2021 and Rs 7500 per MT in October 2021. • In December 2021, HDPE prices were reduced by Rs 3000 per MT in the first week and Rs 2500 per MT in the second week. A minor price reduction took place later.
Linear Low-Density Polyethylene (LLDPE) ↑ ↑ ↓ Oct-21 Nov-21 Dec-21	• LLDPE prices fell by Rs 9000 per MT in December 2021 after an increase of Rs 2500 per MT in November 2021 and Rs 9000 per MT in October 2021. • In December 2021, LLDPE prices were reduced by Rs 4000 per MT in the first week, Rs 3000 per MT in the second week and Rs 2000 per MT subsequently.
Low Density Polyethylene(LDPE) ↑ ↑ ↓ Oct-21 Nov-21 Dec-21	• LDPE prices fell by Rs 11500 per MT in December 2021 after an increase of Rs 5000 per MT in November 2021 and Rs 15000 per MT in October 2021. • In December 2021, LDPE prices were reduced by Rs 5000 per MT in the first week, Rs 4000 per MT in the second week and Rs 2500 per MT subsequently.
Polypropylene (PP) ↑ ↔ ↓ Oct-21 Nov-21 Dec-21	• PP prices fell by Rs 12000 per MT in December 2021. PP prices were unchanged in November 2021 but had increased by Rs 10000 per MT in October 2021. • In December 2021, PP prices were reduced by Rs 4000 per MT in the first week, Rs 5000 per MT in the second week and Rs 3000 per MT subsequently.
Polyvinyl Chloride (PVC) ↑ ↓ ↓ Oct-21 Nov-21 Dec-21	• PVC prices fell by Rs 7000 per MT in December 2021 after a decline of Rs 13000 per MT in November 2021 and an increase of Rs 20000 per MT in October 2021. • In December 2021, PVC prices were reduced by Rs 7000 per MT in the first week. Thereafter no changes were announced.

Source: Industry, Plexconcil Research

LAVATORY SEATS AND COVERS OF PLASTICS

Lavatory seats and covers of plastics are used in the bathrooms. These products come in various shapes, colours and sizes. Technological improvements over the years have led to creation of soft-close and stain-resistant lavatory seats and covers that are ergonomically designed for enhanced comfort. Nowadays, lavatory seats and covers are also available with built-in nightlights, heating functionality and added features like antibacterial coating. The product is classified under Subheading 392220 of the Harmonized System (HS) of Coding.

World-wide import of Lavatory seats and covers of plastics is valued at USD 900 million per year.

- In 2020, top-5 exporting countries of Lavatory seats and covers of plastics were: China (46.8%), Germany (11.1%), Bulgaria (8.6%), United States of America (4.6%), and Turkey (3.1%).
- Likewise, top-5 importing countries of Lavatory seats and covers of plastics were: United States of America (17.3%), Germany (15.2%), United Kingdom (5.9%), France (4.1%), and Netherlands (3.1%).

In 2020-21, India exported 1,083 tonnes of Lavatory seats and covers of plastics valued at USD 3.07 million to the world. Morocco was the key export destination both in terms of value and volume.

Destination Country	Value (USD Mn)	Destination Country	Qty. (tonnes)
Morocco	0.76	Morocco	245
Saudi Arabia	0.21	Kenya	117
United States of America	0.17	United States of America	86
Kenya	0.17	Saudi Arabia	73
United Arab Emirates	0.16	United Arab Emirates	46
Bulgaria	0.13	Ghana	40
Sudan	0.12	Sudan	39
Israel	0.10	Bulgaria	36
Qatar	0.09	Angola	33
Angola	0.09	Qatar	22

Source: Department of Commerce, Govt. of India, Plexconcil Research

India is also an importer of Lavatory seats and covers of plastics. In 2020-21, India imported 1,323 tonnes of Lavatory seats and covers of plastics valued at USD 6.79 million from the world. China was the major supplier country both in terms of value and volume.

Source Country	Value (USD Mn)	Source Country	Qty. (tonnes)
China	5.11	China	1,135
Bulgaria	0.45	Bulgaria	68
Germany	0.37	Turkey	37
Turkey	0.22	Germany	21
Vietnam	0.18	Vietnam	14
Indonesia	0.08	United Arab Emirates	9.5
Italy	0.07	Italy	5.7
Malaysia	0.05	South Africa	5.1
United Arab Emirates	0.04	Indonesia	4.3
United States of America	0.04	Hong Kong	3.8

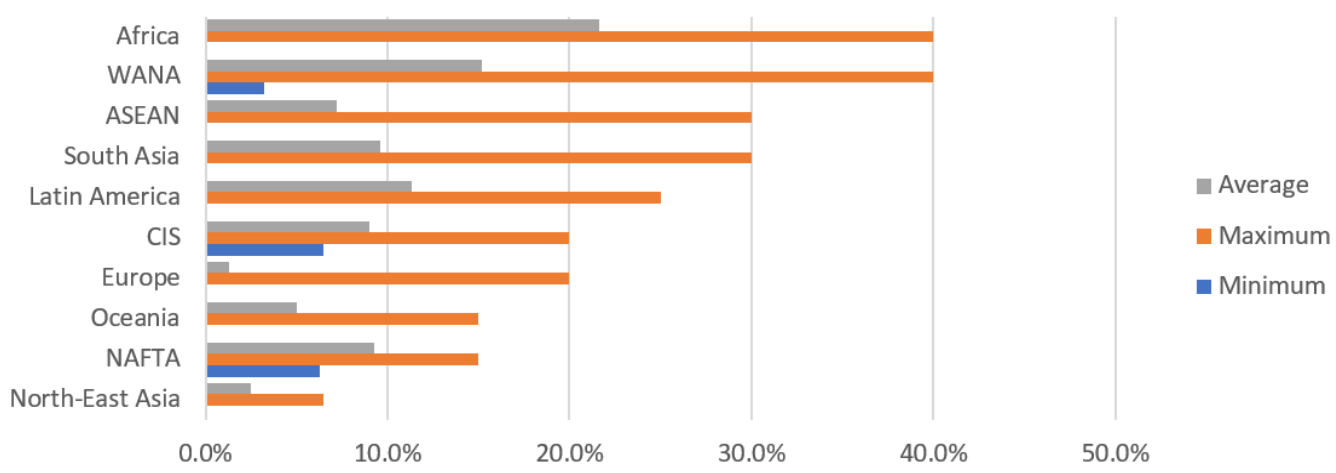
Source: Department of Commerce, Govt. of India, Plexconcil Research

Indian firms dealing in Lavatory seats and covers of plastics have immense potential to export to destinations like United Kingdom, France, Netherlands, Switzerland, Poland, Japan, Republic of Korea, Peru, Mauritius and Morocco.

There is zero customs duty applicable on import of Lavatory seats and covers of plastics from India in the European Union and the United Kingdom due to Generalised Scheme of Preferences Scheme; and in a few ASEAN countries due to India-ASEAN Free Trade Agreement. Import of Lavatory seats and covers of plastics from India is eligible for zero customs duty in Japan due to India-Japan Comprehensive Economic Partnership Agreement and in Republic of Korea due to India-Korea Comprehensive Economic Partnership Agreement.

Unfortunately, several countries in Africa, WANA, ASEAN, South Asia, Latin America, CIS, North America and Oceania do not accord any preferential treatment to Lavatory seats and covers of plastics exported from India due to which the average customs duty faced on these products is high.

Effective tariff applied by various regions on import of Lavatory seats and covers of plastics from India

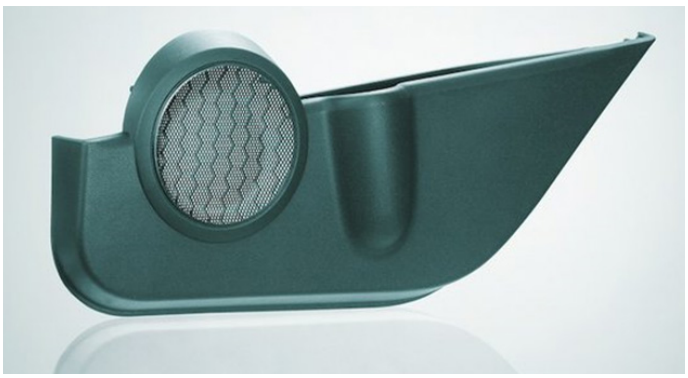


Source: Market Access Map, Plexconcil Research

Innovations in plastics manufacturing: carbon dioxide flexes its muscle

Paolo Kirchpfening, Global Commercialization Linde Technologies, Plastics, and Andreas Praller Global Technology Expert, Plastics, Linde, discuss the technological and environmental innovations arising in the plastics industry.

The global impact of COVID-19 has been unprecedented, exposing industries worldwide to multiple challenges. Lockdowns to curb the transmission of the virus, market uncertainty, decreased investment and operational constraints have led to the postponement of projects worldwide and unavoidable consequences on the global economy.



With many manufacturing activities globally being slowed down or even halted, demand for plastic products was impacted significantly, with the global market exhibiting a decline of 1.2% in 2020[1] and Europe suffering a downwards slide of 5.1% at 55 million tonnes[2].

Demand for plastics from the automotive, building and construction industries, in particular, declined substantially. The automobile sector, one of the biggest buyers of plastics after the packaging and construction industries, saw its consumption plunge by 18% (or 900,000 tonnes)[3] in Europe.

The opportunity

Despite recent challenges, the plastics industry is seeing recovery, with an annual growth rate (CAGR) of 3.4% forecasted between 2021 to 2028[4]. Resurgence in plastic consumption in those hit hardest -construction and automotive - is expected to support that growth. The push towards lightweighting to improve fuel efficiency and reduce carbon emissions will drive the use of plastics as a substitute for metals in the manufacturing of automotive components.

Regulations around natural resource depletion, recyclability of conventional materials, such as metal and wood, and legislation to improve energy efficiency are also expected to drive greater demand for plastic from the construction industries for a wide range of applications such as insulation, pipes, cables, flooring, windows and storage tanks. Plastics have 85% less gravity compared to metals and when used in the automotive and construction industries, they enable approximately 80% weight savings and 30% to 50% cost savings in individual components.

In short, there has never been a more important time for the industry to optimise productivity, lower its energy consumption and reduce costs.

Only 80% to 90% of injection moulding machine capacity time actually consists of productive operation. Valuable manufacturing time is lost due to scheduled downtime and technical failures as well as the set-up process. While machine maintenance and mould changes can help reduce downtime, it is through cycle time optimisation where the greatest benefit can be derived.

Cycle time plays a significant role in the injection moulding process, including the quality of the parts produced, but especially the impact it makes on a company's financial bottom line. Eliminating seconds from a cycle time can lead to an increased number of parts produced in the same or less time.

Advanced technologies for improved productivity

Industrial gases play an indispensable role in a number of process steps in plastics manufacturing – two of which are as blowing agents for foam injection moulding (FIM) and as a pressure medium for gas injection moulding (GIM).

Up until now, manufacturers who relied on foam injection processes have had to choose between physical and chemical foaming techniques. With chemical processes, a foaming agent is mixed with the plastic granulate. Easy to handle, this process can be installed on standard injection moulding machines. However, unlike physical foaming processes, chemical techniques only enable low foaming pressures, making them ill-suited to plastics with thin walls. Chemical blowing agents are also costly and unwanted by-products are created leaving residues on the mould. With physical blowing techniques, the blowing agent is typically injected directly into the melted polymer. This requires additional modifications to the injection moulding machine and a special screw to ensure homogeneous mixing with the polymer melt. A high-pressure gas dosing unit for controlled gas injection is also required. This pushes up installation costs and limits flexibility.

Linde teamed up with Kunststoff-Institut Lüdenscheid (KIMW) and ProTec Polymer Processing GmbH to develop a new process combining the best of both worlds. PLASTINUM® Foam Injection Moulding technology combines the benefits of simple chemical foaming with the efficiency gains of physical foaming. This technology enables foaming on standard injection moulding machines. The plastic granulate is impregnated with the blowing agent carbon dioxide (CO2) under pressure before being fed into the injection moulding machine, with the gas diffusing into the granulate. CO2 is dissolved in the melt during plastification and forms microcellular gas bubbles when the pressure is relieved as the melt is injected into the cavity. In this way, considerable material and weight savings can be achieved.

In addition, the process enhances product quality by ensuring high dimensional stability and functionality of the foamed injection moulded parts. The PLASTINUM® Perfoamer from system partner ProTec Polymer Processing GmbH is the central element of the technology. It can be easily moved from one injection moulding machine to another or can even supply multiple machines at the same time, making the production process more flexible.

When it comes to manufacturing methods using gas injection technology, traditionally, this has relied on high-pressure nitrogen (N2) gas to shape a hollow or channel in a moulded plastic part. However, Linde is again leveraging the properties of CO2 across its PLASTINUM® GIM C portfolio. By replacing gaseous N_2 with liquid CO_2 the process matches the heat removal capacity and cycle times of water injection moulding, but does not leave moisture on the products or mould, so eliminating the drying step associated with the fluid injection cycle. In addition, CO2 has a higher density and specific thermal capacity than nitrogen and provides significant cooling during expansion, which means it accelerates cycle times by as much as 50%.

For both PLASTINUM FIM and GIM technologies, Linde is leveraging the unique characteristics of CO_2. Often coming under scrutiny, when captured as a by-product from another chemical process - such as ammonia synthesis or ethylene oxide production - and used as a natural alternative to more harmful gases, CO2 can play its part in resource efficiency. Committed to mitigating the effects of climate change, Linde seeks to minimise its carbon footprint by recycling CO_2 instead of generating new streams of this gas and around 80% of its supplies are captured from other chemical processes.

Carbon dioxide in action: At Wirth Werkzeugbau GmbH

Wirth Werkzeugbau GmbH is a leader in the design and manufacture of larger plastic tools and moulds weighing up to 40 tons. The company operates its own technical centre where it develops and tests its own manufacturing process technology. For the past decade, a major focus has been on designing solutions for physical foaming, which today accounts for over 50% of the tools manufactured at Wirth.

Up to now, the N2-based process had proven itself, but was found to be expensive and less economical for smaller and medium-sized injection moulding machines. Managing Director, Werner Wirth, set out to find a powerful alternative that could be “more cost-efficient, less complex and - above all - more flexible, because we wanted to offer our customers a future-proof solution for every machine on the horizon”.

Wirth and his team found what they were looking for in Linde’s CO2-based PLASTINUM® FIM technology. With several customers now performing trials at the company’s Wirth Tech Centre, they are able to offer injection moulders a proven and easy-to-implement solution which doesn’t require modifications to existing production lines – and at considerably lower investment cost.

At AQ Anton

With an annual revenue in excess of EUR 22 million in only 20 years, Hungary-based AQ Anton has quickly grown into successful company specialising in tooling, machining and plastics. A pioneer in the adoption of cutting-edge technologies such as multicomponent injection moulding, hot stamping, tampon printing, ultrasonic welding and conditioning, GIM was a natural fit for the company’s wide technology portfolio.

Bosch, a key customer, contacted AQ Anton about a new GIM line to produce handles for its global brand of chainsaws, prompting the firm to expand its installed base of 21 GIM machines. Exploring all injection moulding options in search of a solution with the ability to increase its competitive position by accelerating cycle times, AQ Anton turned to its trusted gas supplier, Linde.

Working closely with its long-standing partner Maximator, a leading provider of high-pressure gas equipment, Linde was confident that its innovative, patented CO2-based PLASTINUM® GIM solution was best positioned to meet the customer’s demanding cycle time – which Linde expected to reduce by up to 55% - as well as cost and other process efficiency targets.

Tests run by AQ Anton benchmarking N2 against CO2 demonstrated the advantages of the new approach, with the company subsequently rolling out Linde’s CO2-based PLASTINUM® GIM on a manifold cylinder pallet (MCP) for reliable gas supplies. “We are constantly exploring new technology-driven business opportunities and Linde’s PLASTINUM® GIM with CO2 quickly emerged as the perfect fit for our culture of innovation, giving us a valuable competitive lead in this space,” says Krisztina Balogh, Materials Manager at AQ Anton.

As the only company to offer this technology, Linde’s broad reference customer base indicates that early adopters of GIM technology with CO2 are already benefiting from significant gains in process stability and part quality.

Source: Interplas Insights

ISRAEL

Economic overview

Israel is located in the Middle East, sharing land borders with Egypt, Jordan, Lebanon, Palestine, and Syria. It has an area of 21,497 square kilometres and a population of 9.4 million. Israel is considered as a highly developed and diversified economy. The country has made a mark for itself as a technological hub and a nation of innovation due to rapid advancements in food technology, financial technology, cybersecurity, and artificial intelligence. Israel's economy is expected to grow by 4.7% in 2022.

As of January 11, 2022, the S&P's rating for Israel is AA- (stable); Moody's rating stands at A1 (stable); and Fitch has a reported rating of A+ (stable).

Economic indicators		2019	2020	2021
Nominal GDP	USD Billion	397.9	407.1	467.5
Nominal GDP per capita	USD	43,966	44,181	49,840
Real GDP growth	%	3.8	-2.2	7.1
Total population	Million	9.1	9.2	9.4
Average inflation	%	0.8	-0.6	1.4
Total merchandise exports	USD Billion	58.5	50.2	56.33
Total merchandise imports	USD Billion	76.5	69.2	89.1

Source: IMF, TradeMap

Israel has trade agreements with several countries in North America, Europe, and Latin America & Caribbean. Israel has separate trade agreements with Ukraine and the United Kingdom. India and Israel are in dialogue for a Free Trade Agreement.

Trade overview

India and Israel enjoy cordial trade relations. Israel is among the top-50 trade partners of India. In 2020, India and Israel engaged in bilateral trade worth USD 3.65 billion. During the year, India's exports to Israel were valued at USD 1.90 billion in comparison to India's imports worth USD 1.75 billion resulting in a trade surplus of USD 152 million to India.

The major items of export (2-digit HS) from India to Israel are natural pearls and precious stones including diamonds (USD 783 million), automotive fuel (USD 676 million), and electrical machinery and equipment (USD 217 million). Likewise, major items of export (2-digit HS) from Israel to India are electrical machinery and equipment (USD 577 million), natural pearls and precious stones including diamonds (USD 546 million), and fertilisers (USD 161 million).

Within plastics, the trade is in favour of the India with exports of USD 83.3 million to Israel and a trade surplus of USD 59.8 million. India's plastics exports to Israel primarily comprise of the following:

- Plastic raw materials (46.7%)
- Plastic sheets & films (18.7%)
- FIBC, woven sacks, woven fabrics & tarpaulin (13.5%)
- Floorcoverings, leathercloth & laminates (8.7%), and
- Medical items of plastics (1.8%)

Israel's annual plastics imports are valued at USD 4.3 billion approx. Its plastic imports are largely catered to, by China (20.6%) and the United States of America (16.5%). However, India also has a relatively good standing in some of the plastic product imports by Israel:

- FIBC, woven sacks, woven fabrics & tarpaulin – Market share of 20.5% (Rank 3)
- Plastic sheets & films – Market share of 7.4% (Rank 7)
- Plastic raw materials – Market share of 4.2% (Rank 10)

Export potential for India

Our internal research indicates that India's export of plastics to Israel has the potential to grow by over USD 3.2 billion. Details of product panels and their export potential to Israel are provided below:

Product panel	Israel's import from India	Israel's import from world	India's export to world	Export potential for India
	USD Million	USD Million	USD Million	USD Million
Plastic raw materials	52.8	1,259.2	3,312.8	1,004.9
Consumer & houseware products	6.2	996.5	1,034.6	599.9
Medical items of plastics	4.4	496.8	776.8	478.3
Plastic sheets & films	34.9	473.9	1,451.7	386.6
Miscellaneous products & items nes	7.7	465.5	755.9	286.0
Packaging items – flexible & rigid	0.8	214.1	462.7	204.8
Plastic pipes & fittings	0.8	90.2	170.9	71.1
Floorcoverings, leathercloth & laminates	0.5	57.0	554.6	56.5
FIBC, woven sacks, woven fabrics & tarpaulin	15.0	73.2	1,209.8	50.9
Writing instruments & stationery	0.4	33.8	173.5	33.1

Source: TradeMap, Plexconcil Research

Industry Opinion

Interview with Anil Jain, MD, Vice Chairperson, Jain Irrigations Systems Ltd.

India & Israel have strong trade relations thus far. What are the emerging opportunities for Indian plastics exporters generally and your product segment, specifically?

Opportunities for Indian plastic exporters will further increase as the cost of production in Israel will make it much more cost effective to import from India rather than manufacturing in Israel. Plastics applications in almost all sectors ranging from defense to agriculture will bring new opportunities for the Indian plastic exporters.

What are the major challenges faced by exporters that inhibit export growth to Israel?

The major challenge is the import duty on products from India. The plans for bilateral trade agreement to rationalize the import duties has still not been finalized owing to which the Indian imports are still under higher import duties.

Within your product segment, which countries are major competitors and what is their advantage?

We are mainly in the business of Irrigation Systems, Plastic piping and Plastic sheets. In Irrigation segment, the major competitors are in Israel and their advantage is mainly their innovation skills. In Plastic Piping and Sheet businesses the major competitors are in China. The cost of production is a major advantage of Chinese manufacturers.

With major/on-going bi-lateral investments in especially Agritech & Water Technologies between India and Israel, in your opinion, what is the future scope of such investments for plastics?

Future scope of investments from Israel into India can be in specialty plastics and formulations, engineering tools for plastics processing, etc. Investments from India into Israel can be in R&D centers for developing innovative solutions for improving the plastics industry in India.

How is the overall ease of doing business with Israel?

We find that the overall ease of doing business with Israel is comfortable and find it to be improving continuously.

Understanding Wood Plastics Composites

Wood plastic composite is panel or lumber product made from recycled plastic and small wood particles or fibers. Wood plastic composites are relatively new products as compared to the long history of natural lumber or traditional wood composites such as particleboard or fiberboard.

Wood-polymer composites (WPC) are materials in which wood is impregnated with monomers that are then polymerised in the wood to tailor the material for special applications. The WPC boards are prepared by mixing the ground wood elements and heated thermoplastic resins while moulding it into a required shape. Even recycles thermoplastics are used for preparing solid and useful WPC profiles.

Wood plastic composites are widely used in the U.S. As WPC capacity increases, new products are being developed such as door stiles, rails and window lineal. The most widespread use of WPCs in North America is in outdoor deck floors, but it is also used for railings, fences, landscaping timbers, cladding and siding, park benches, molding and trim, prefab houses under the tradename Woodpecker WPC., window and door frames, and indoor furniture.

Main production steps and properties of WPC

In general, manufacturing of WPC is a two-step process. Combination of wood and thermoplastic such as high density polyethylene (HDPE), low density polyethylene (LDPE) and polyvinyl chloride (PVC) are mixed together to a dough-like-consistency called compounding. Mixing can be handled by either batch or continuous process.

In addition to the main ingredient wood with grain size ranging from 20 to 60 mesh, plastic coupling agents, stabilizer, foaming agents or dyes also are added to enhance properties of the final product for a particular use. For example, lubricants improve appearance of the surface.

There are three common forming methods for WPC. Extrusion method, which forces molten composite through a die, is shown in Figure 1. In the case of injection molding method, molten composite is forced into a cold mold. The third one presses molten composite between mold halves.

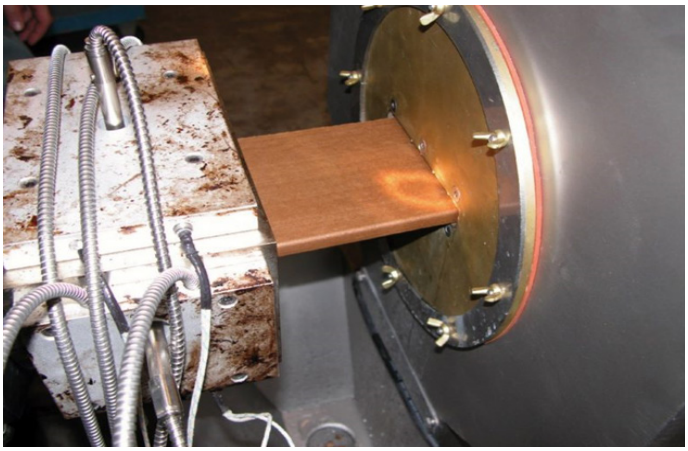
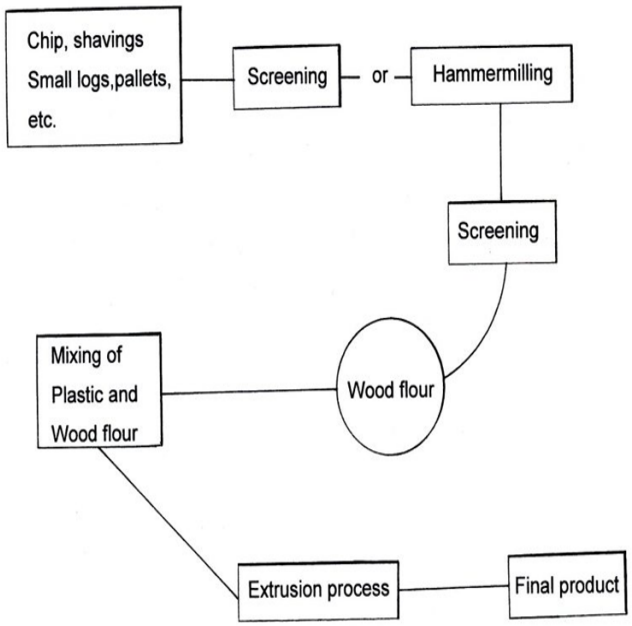


Figure 1. Extrusion manufacturing process of wood plastic composite.

The majority of WPC is produced by extrusion process, which uses variety of extruder types such as single screw or double screw to form final shape of the material. Figures 2, 3 and 4 illustrate examples of WPC products and a flowchart of a typical manufacturing process, respectively.

Figure 2. Different types of wood composite products. Figure

3. Application of wood plastic composites as decking. Figure



4. A typical production flowchart of wood plastic composite.

Most of the physical and mechanical properties of WPC depend mainly on the interaction developed between wood and thermoplastic material. One of the most efficient ways to improve this interaction is by incorporating a coupling agent as an additive. In general, such additives help the compatibility between hydrophilic wood, which absorbs moisture easily, and hydrophobic plastic, having lack of affinity for water, allowing the formation of single phase composite and resulting in a product with better dimensional stability than solid wood.

Use of WPC lumber, either in the form of solid cross section or with tubular structure as shown in Figure 2, has been very popular material as a substitute for treated wood products. Table 1 also shows typical mechanical properties including modulus of elasticity (MOE) and modulus of rupture (MOR) of WPC.

	Bending (psi)		Tensile (psi)	
WPC	MOE	MOR	MOE	MOR
60% polypropylene 40% wood particles Density 0.90 g/cm3	439,000	6,410	561,000	3,680
60% polypropylene 40% hardwood fibers Density 1.05 g/cm3	471,000	6,950	609,000	4,090
57% polypropylene 40% hardwood fibers 3% coupling agent Density 1.03 g/cm3	467,000	10,500	613,000	7,580

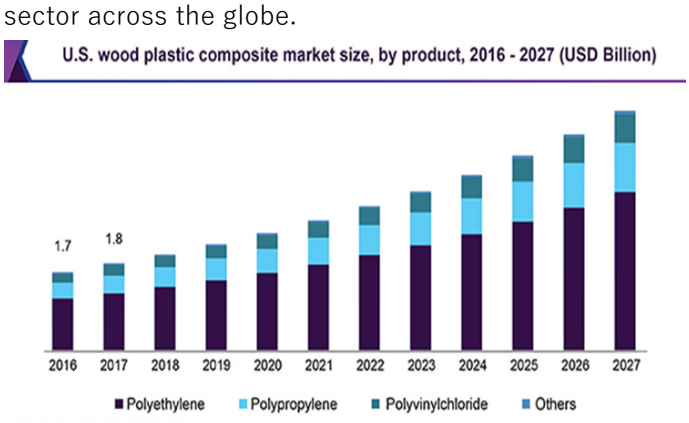
Some advantages and disadvantages of WPC

- The greatest advantage of WPC is its environmentally friendly approach of using waste wood and recycled plastic material. Wood composite plastics have low maintenance cost as compared to that of solid wood. One of the main reasons responsible for the fast growth of WPC is its low-life cycle cost.
- In general, WPC deck has a production cost of about 15% more as compared to that of pressure-treated lumber, but requires a lower maintenance cost.
- Its excellent dimensional stability along with less variability also can be considered as another main advantage of WPC products.
- Most of the research in many countries is concentrating on the durability and extended service life of WPC due to large interest in its outdoor use. In fact, WPC was originally marketed as being naturally decay resistance against fungi or insect attack.
- Thermal expansion, creep (time dependent deformation), high density and difficult application of paint would be some of the other disadvantages of WPC.
- WPC boards come with assured quality. These boards consist of stabilizing agents, modifiers, foaming agents and such elements that require strict mixing ratio. Due to the perfect blend of high quality materials, WPC boards become a high quality material.
- WPC can be moulded into different shapes and sizes. If you are looking for a designer door or window made from WPC, it is possible as WPC gives a very rich look and freshest polishing. This is the reason it is used for doors, windows and home furnishing.
- WPC material is highly fire resistant. It provides fire protection and keeps your furnishings safe.
- The WPC material undergoes modern and high end surface treatment through paint or thermal transfer which makes the WPC profiles, doors or flooring look flourishing. The proficient surface treatment not only provides a unique look to the WPC boards but also gives a ravishing look to the boards.
- It is an environment friendly material which is safe to use. It remains untouched and unaffected from climatic conditions and provides security from water, fire and chemicals.

- Wood plastic composites have a lower melting temperature as compared to conventional wood products, which lowers the energy cost for end-users and also reduces the environmental impact of the product. Wood plastic composite can be worked upon by the same tools utilized for wood products. This factor eliminates the investments to be made by the manufacturers and the risks associated with recouping the same.
- It is a promising and cost effective substitute to plywood.

Global Market Overview*

The global wood plastic composite market size was estimated at USD 5.3 billion in 2019 and is expected to register a growth rate of 11.4% over the period 2020-2027. The market is driven by the rising demand for sustainable construction materials along with an increase in the renovation and repair activities in the residential sector across the globe.



Biggest tech companies such as IBM, Microsoft, and Cisco are investing in megaprojects to build smart and sustainable cities across the globe. The investments in these cities are expected to reach USD 135 trillion in the next two years. In addition to these cities, international megaprojects such as Hudson Yards and Masdar City have created opportunities for interior construction manufacturers resulting in surging the wood plastic composite demand over the coming years.

Product Insights

Wood flour is hygroscopic in nature and must be wetted properly with the use of thermoplastic matrix, otherwise, it can absorb moisture which leads to weak mechanical properties, unwanted odors, and microbial attacks. The technique requires complex machine arrangements and skilled laborers resulting in increasing the overall cost of the products. This, in turn, can restrict the market for wood plastic composite.

In terms of product segmentation, the market is categorized into polyethylene, polypropylene, and polyvinylchloride. The polypropylene segment is anticipated to see a boom, over the forecast period, owing to its heavy use in the niche application segments such as water resistant coatings on furniture and high temperature controllable wooden units.

Growing demand for polyvinylchloride thermoplastics in automotive applications for manufacturing door panels, seat cushions, cabin linings, backrests, and dashboards on account of its excellent insulation properties is expected to have a positive impact on the market for wood plastic composite, over the forecast period.

The polyethylene segment is one of the fastest growing product segments on account of its high demand in manufacturing furniture for homes, offices, restaurants, resorts, and hospitals. Moreover, the rising demand for polyethylene composites in the automotive industry owing to its low cost, high stiffness, and biodegradability is expected to further propel market growth over the coming years.

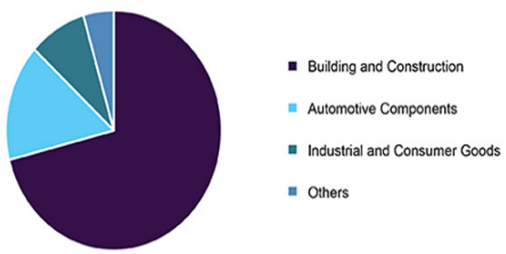
The rising demand for polystyrene and acrylonitrile butadiene styrene composites in a wide range of applications such as kitchen furniture, shower receptors, bathtubs, windowsills, and whirlpool baths on account of its high durability and environment-friendly characteristics is expected to boost market growth over the next eight years.

Application Insights

In terms of application, the wood plastic composite market is categorized into building and construction, automotive components, industrial and consumer goods, and others. Eradication of barriers to promote foreign investments coupled with changing consumer focus towards green buildings is projected to boost the demand for wood plastic composite in the construction industry over the coming years.

Increasing infrastructural development activities, especially in the emerging economies such as China, India, Thailand, and Brazil coupled with the growing demand for aesthetically appealing furniture and flooring solutions across the globe, has surged the demand for wood plastic composite in the construction industry in the recent times.

Global wood plastic composite market share, by application, 2019 (%)



Source: www.grandviewresearch.com

Rising consumer spending on exterior building products that have high resistance to moisture and can withstand extreme environmental conditions is expected to increase product demand in the molding and siding application segment. In addition, rising demand for composites that restricts the growth of mold and premature degradation in the decking application segment is projected to further stimulate market growth over the forecast period.

Increasing demand for wood plastic composite in manufacturing noise barriers for street construction, sheet pilings for landscaping and garden furniture, is expected to surge product demand over the forecast period. In addition, rising demand for wood plastic composite in the manufacturing of consumer goods including, toys, and showpieces is anticipated to further propel market growth over the coming years.

Regional Insights

The demand for wood plastic composite in the U.S. is expected to grow significantly over the next eight years on account of the rising application scope of wood plastic composite in manufacturing docks, porches, and window frames. In addition, growing demand for bio-based plastics in landscaping and street construction is anticipated to further propel market growth over the coming years.

Asia Pacific is expected to emerge as the fastest-growing market for wood plastic composite owing to the increased per capita income, coupled with rapid industrialization. The shift in consumer behavior in China, growing local competition, fragmented distribution, and rising dual-income households are expected to create opportunities for wood plastic composite manufacturers over the forecast period.

Construction activities in the Central and South American economies have grown substantially owing to rising income levels and shifting consumer preference towards green buildings. Expanding commercial construction sector coupled with the government initiatives to create awareness about green buildings among people is expected to stimulate the growth of the market for wood plastic composite over the next eight years.

*Source: Grandview Resear

International News

Clear, Anti-Fogging PP Lid for Microwaveable Food Packaging

A clear, anti-fogging PP lid for microwaveable food packaging developed by Taiwan's South Plastic Industry Co. Ltd. (SPI), a leading Asian manufacturer of thermoformed plastic food packaging, in collaboration with Milliken &Co., has replaced oriented polystyrene (OPS). Many suppliers use OPS for their ready-meal packaging lids, but those can only withstand 185 F/85 C temperatures and are not suitable for microwaveable products

SPI has been striving for years to do this but had not found a way to get PP to meet all performance requirements while also retaining the clarity and non-yellowing aesthetics that are key to consumer appeal. By leveraging on its close, five-year relationship with Milliken, SPI finally achieved its goals. To produce the UltraClear PP resin, the collaborators used Milliken's Millad NX 8000 clarifier that has been shown to deliver on all the required performance along with processing benefits.

According to SPI president Tosho Wang, by using Milliken's additives, which also include Hyperform HPN performance nucleating agent in its PP formulations, SPI is now able to thermoform its products at a lower processing temperature, which reduces their energy usage. Moreover, these additives allow SPI to produce a thinner PP lid without affecting rigidity, which in turn helps to reduce plastic usage while increasing output.

SPI, which now uses Milliken clarifiers in all its UltraClear PP packaging products, says it plans to explore using the material to expand the use of PP in more food applications, including some that currently use PET.
Source: ptonline.com

Eastman to Invest $1 Billion to Build Plastics Recycling Facility in France

Eastman plans to invest up to $1 billion in a material-to-material molecular recycling facility in France. This facility would use Eastman's polyester renewal technology to recycle up to 160,000 metric tonnes annually of hard-to-recycle plastic waste that is currently being incinerated.

This multi-phase project includes units that would prepare mixed plastic waste for processing, a methanolysis unit to depolymerize the waste, and polymer lines to create a variety of materials for specialty, packaging, and textile applications. Eastman also plans to establish an innovation center for molecular recycling that would enable France to sustain a leadership role in the circular economy.

This innovation center would advance alternative recycling methods and applications to curb plastic waste incineration and leave fossil feedstock in the ground. The plant and innovation center would be expected to be operational by 2025, creating employment for approximately 350 people and leading to an additional 1,500 indirect jobs in recycling, energy and infrastructure.

Eastman's project has also garnered support from a roster of global brands. LVMH Beauty, The Estée Lauder Companies, Clarins, Procter & Gamble, L'Oréal and Danone are signing letters of intent for multiyear supply agreements from this facility.

"Accelerating the transition to a circular economy is one of the main challenges in the years to come. Eastman's substantial investment in France demonstrates our country's willingness to embrace innovative technologies that will help us achieve our ecological and economic ambitions, by revolutionizing our country's plastics recycling capacities," said Barbara Pompili, French Minister for Ecological Transition.

Source: ptonline.com

IBA and Mercury Plastics sign contract to install irradiation cross-linking solution

Ion Beam Applications (IBA), the world leader in particle accelerator technology, has announced it has signed a contract for the installation of an irradiation cross-linking solution using IBA's Rhodotron technology with Mercury Plastics in Middlefield, Ohio, US.

The solution will be used to enhance the properties of plastics, leading to several performance improvements, including mechanical and chemical resistance and durability, while ultimately providing a clean, safe and environmentally friendly approach.

Mercury has been operating an IBA Dynamitron electron beam (E-beam) processing plant since 1999, in which the use of IBA's technology has allowed the company to develop extensive experience in cross-linking a variety of polymers using irradiation E-beam technology. The in-house facility has enabled Mercury to enhance the properties of these polymers, thereby developing unique materials, for the delivery of thermoplastic solutions to a variety of industries. The company is one of the few in North America to have a captive electron beam processing unit of this type.

MERCURY PLASTICS
INCORPORATED

Thomas Servais, Executive Vice President of IBA Industrial, said: "This new contract with Mercury Plastics demonstrates the versatility of our Rhodotron technology, which is shown to have a multitude of uses. For a broad range of polymers, the irradiation process is an alternative to chemical cross-linking. This makes the production and the use by the final consumer safe and environmentally friendly."

Jay Burnett, President of Mercury Plastics, added: "After more than 20 years of successful collaboration, we look forward to continuing our work with IBA. From previous experience with the Company's Dynamitron technology, we have been truly impressed with the machine's uptime, as well as the excellent maintenance services provided by the IBA team. Choosing the Rhodotron to expand our irradiation cross-linking production capabilities was an obvious choice, allowing us to support growth and innovation with our customers."

Source: Interplas Insights

TotalEnergies increases HP polymers production for specialty markets

TotalEnergies' polymer plant in Feluy, Belgium, has announced the start-up of a new production of high-performance polymers with the commissioning of a new reactor in its polypropylene unit.

Through this investment, TotalEnergies will aim to strengthen its position on the high value-added polymers market. The company is therefore increasing its production of grades that meet the highest quality stan-

dards and technical requirements of specialty markets, including medical and automotive.

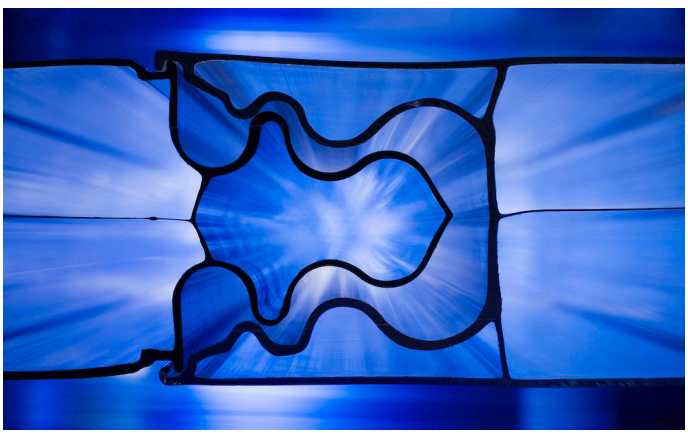
Thanks to their many properties, such as lightweight, impermeability or resistance, plastics have become an integral part of our daily lives. In the automotive sector for example, the use of polymers as replacement for metal contributes to reducing the overall weight of vehicles, thereby allowing reductions in CO2 emissions by as much as 10 per cent. In the medical sector, polymers also play a crucial role in the supply of medicines, particularly by ensuring their protection and packaging.

Valérie Goff, Senior Vice President, Polymers at TotalEnergies, said: “The commissioning of this new reactor in Feluy will enable us to meet the growing demand from our customers, including the automotive and medical specialty markets, for ever more efficient polymers that contribute to reducing the carbon footprint of end-use applications.”

Source: Interplas Insights

Exolon Group co-operates with Società Europea Plastica

The Exolon Group and the Italian company Società Europea Plastica (SEP) will begin a co-operation on polycarbonate panels and thus offer the construction industry further solutions in the field of polycarbonate sheets.



The collaboration brings together almost 100 years of experience in the extrusion of polycarbonate sheets: the Exolon Group as a manufacturer of thermoplastic solid and multiwall sheets for around 40 years and SEP with more than 50 years of experience in the extrusion of panels.

The aim of the collaboration is to offer a broader range of product solutions and to meet the increasing demand of the construction industry for high-performance materials. The transparent polycarbonate panel system from S.E.P. combines ease of application with structural aesthetics.

Source: Interplas Insights

A sweet breakthrough: Scientists develop recyclable plastics based on sugars

Researchers from the University of Birmingham and Duke University, US, have created a new family of polymers from sustainable sources that retain all of the same qualities as conventional plastics, but are also degradable and mechanically recyclable.

The scientists used sugar-based starting materials rather than petrochemical derivatives to make two new polymers, one which is stretchable like rubber and another which is tough but ductile, like most commercial plastics.

The researchers made the new polymers using isoidide and isomannide as building blocks. Both these compounds are made from sugar alcohols and feature a rigid ring of atoms. The researchers found that the isoidide-based polymer, showed a stiffness and malleability similar to common plastics, and a strength that is similar to high grade engineering plastics such as Nylon-6. Despite isoidide and isomannide only differing by the 3D spatial orientation of two bonds, known as stereochemistry, the isomannide-based material had similar strength and toughness but also showed high elasticity, recovering its shape after deformation. Notably, the materials retained their excellent mechanical properties

following pulverisation and thermal processing, which is the usual method for mechanically recycling plastics. Cutting edge computational modelling simulated how the polymer chains pack and interact to produce such different polymer properties. The unique 3D shapes of the sugar derivatives facilitate different movements and interaction of the long chains causing the huge difference in physical properties that was observed.

By creating copolymers that contain both isoidide and isomannide units, the researchers found that they could control the mechanical properties and degradation rates independently of one another. Hence, this system opens the door to using the unique shapes of sugars to independently tune the degradability for a specific use without significantly altering the properties of the material.

The chemical similarity of the polymers means that, unlike a lot of current commodity plastics, they can be blended together to yield materials with comparable or improved properties.

Professor Andrew Dove, who led the research team from Birmingham, said: "This study really shows what is possible with sustainable plastics. While we need to do more work to reduce costs and study the potential environmental impact of these materials, in the long term it is possible that these sorts of materials could replace petrochemically-sourced plastics that don't readily degrade in the environment."

A joint patent application has been filed by University of Birmingham Enterprise and Duke University. The researchers are now looking for industrial partners interested in licensing the technology.

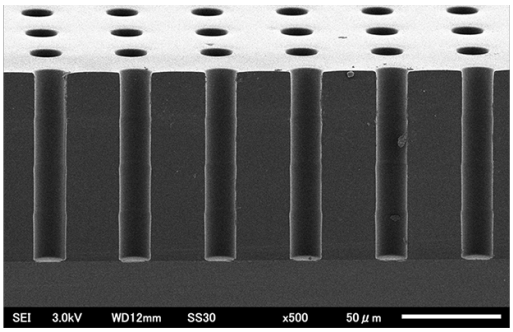
Source: Interplas Insights

New Negative Photosensitive Polyimide Designed for 5G and Next-Gen Devices

A negative photosensitive polyimide developed by Toray Industries maintains the characteristic thermal resistance, mechanical properties, and adhesion of the material while increasing resolutions and enabling high-definition pattern formation on 100-micrometer and other thick films.

To accommodate the increased speed and capacity of 5G and 6G networks, smartphones and other mobile devices will require more miniaturized electronic components and higher density mountings. This will necessitate more refined fabrication processes for the insulating layers of electronic components.

These layers typically use negative photosensitive polyimide materials. While they provide chemical resistance and reliability, the materials are disadvantaged by low light transmission. Photosensitivity deteriorates when thicknesses exceed 50 micrometers, preventing fine processing. Other issues include high thermal stresses after curing and significant warping, reducing reliability during processing.



Toray's new negative photosensitive polyimide material is 100 micrometers thick with vias measuring 10 micrometers in diameter. The company leveraged its expertise in functional polyimide design technology to enhance light transmittance and control photo reactions to achieve this breakthrough.

Toray also reduced thermal stress in the new material, which is less than half of conventional polyimide. Warping is reduced by controlling polyimide resin cross-linking density from photo reactions during exposure and lowering curing shrinkage.

This material should make it possible to miniaturize electronic components and semiconductor package wiring and enhance reliability, according to Toray. It is shipping prototypes with a view to commercializing the material as a varnish and sheet.

Toray plans to augment its lineup with grades having low thermal expansion coefficients and dielectric levels and small dielectric losses for semiconductor devices and electronic components that can drive ultrafast communication technologies.

Source: Plastics Today

NatureWorks Sets up New Headquarters, Expands Biopolymers R&D Lab

The biopolymers business is good for NatureWorks — so good that the company is opening a new headquarters and advanced research facility in Plymouth, MN, in addition to a manufacturing complex in Thailand to produce its Ingeo PLA material.

At its new US headquarters, "expanded laboratory capabilities will support research into the full circular lifecyle of Ingeo biopolymers from next-generation fermentation technology to new applications to increased functionality," according to the company's press release. "The expanded R&D capabilities will also support the construc-

tion and operation of NatureWorks' new fully integrated Ingeo PLA manufacturing complex located in Thailand. With an expected opening in 2024, the facility will have an annual capacity of 75,000 tons of Ingeo biopolymer and produce the full portfolio of Ingeo grades."

Plastics' impact on climate change drives demand for biopolymers

Several factors are driving demand for biopolymers, according to Leah Ford, Senior Global Marketing Communications Manager for NatureWorks. This is particularly true given increased scrutiny of the impact of plastics on greenhouse gas emissions and climate change.

This focus has increased demand for "compostable biopolymers, which can help reduce greenhouse gas emissions when used in food-related applications," Ford noted. "For example, when made into a compostable tea bag or compostable garbage bag, these biopolymers help facilitate food waste diversion from landfills and incineration."

Given that food is the single largest category of material sent to US landfills, she added, and landfills are the third-largest source of human-related methane emissions, the benefit of diverting more food waste to compost is clear, she added. "The U.N. Environment Programme's BreathLife 2030 campaign specifically noted how composting food waste reduces methane emissions from landfills while also improving carbon sequestration in soils amended with compost."

For the past 20 years, NatureWorks has been manufacturing a "broad portfolio of highly functional polylactic acid (PLA) grades," she noted. "What's particularly unique is that we also have expertise in the fermentation process to produce lactic acid, the monomer for PLA. We're bringing that expertise to our new manufacturing complex in Thailand, which is designed for full integration, meaning we will own and operate our own lactic acid production facility on site. The lactic acid produced will be dedicated to making Ingeo PLA biopolymer."

A bit further downstream, she added, "we've invested in broad applications development capabilities since our beginning, including opening our Ingeo Applications Development Facility in 2009. From modeling to running production trials, we work closely with our supply chains to accelerate product development cycles and optimize how to use our Ingeo biopolymer for everything from melt-blown nonwovens for tea bags to thermoforming capsules for compostable coffee pods. Our new Plymouth headquarters will include an upgraded space to support this type of applications development as well as a lab dedicated to 3D-printing material development."

42 billion compostable tea bags, and counting

Compostable tea bags made with Ingeo biopolymer have seen rapid growth, particularly in the UK, she said. "Unilever's new independent subsidiary for its tea business, ekaterra, noted during the recent COP26 conference that it had achieved a milestone of 42 billion compostable tea bags in the market. By the end of 2023, it expects to see that number rise to 60 billion. We also anticipate continued growth of compostable tea bags in other geographies, as both brands and consumers increasingly want a functional solution for diverting those used tea leaves away from landfills and incineration to compost while still brewing a good cup of tea."

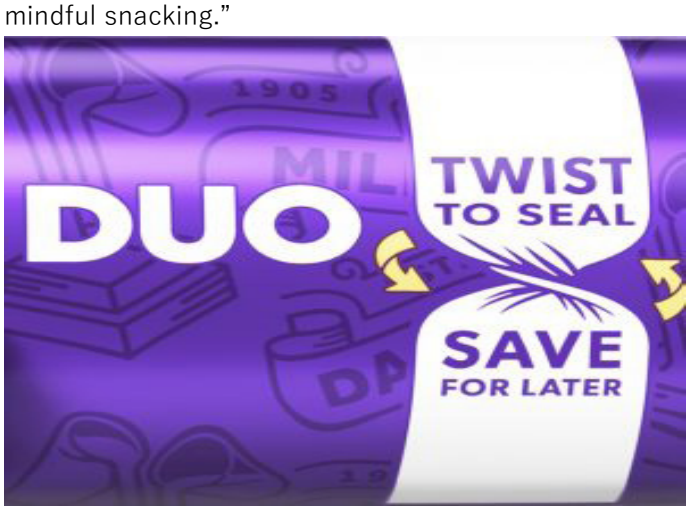
NatureWorks begins the move to its new headquarters and R&D facility in February.

Source: Plastics Today

Mondelēz's Cadbury Chocolate Brand Launches Twist Wrap Packaging for Healthier Snacking

Mondelēz International's brand Cadbury is launching the Twist Wrap packaging solution for its Duos range, allowing consumers to snack in small portions by twisting and sealing the package after consuming half of the chocolate bar.

The move marks the first time the solution has been applied to a chocolate brand in the UK, in what Cadbury labels a boost for "better portion control" and "more mindful snacking."



The new packaging, available this month, is made using a memory technology solution, meaning the wrapper stays twisted by a single twist and preserves fresh flavor, texture and shape. “We’ve put a lot of time and investment into portionable packaging as a way of empowering consumers to snack in a more mindful way, and we are excited to see what shoppers think,” says Kelly Lawrence, brand manager at Cadbury at Mondelēz International.

According to Innova Market Insights, 31% of UK consumers see product convenience as a packaging priority in confectionery, including chocolate. Meanwhile, 17% say product usability on-the-go is a priority in this category.

The Cadbury launch shortly follows Mondelēz International’s annual State of Snacking report, a global consumer trends study examining insights on how consumers make snacking decisions, with mindfulness and well-being considerations playing an increasingly important role.

Cadbury says it wants to help promote healthier snacking to consumers, with a focus on portion control.

Portion control packaging

By launching the packaging innovation, the company says it wants to promote healthier snacking to consumers – with a focus on portion control being recognized as one of the most effective ways of helping people balance their calorie intake.
Lawrence says: “Following good results during concept testing, we’re excited to announce the new packaging this year, allowing shoppers to indulge in a sweet treat then easily reseal and save the remainder of the product for later.”

“Duos are the growth driver of singles, particularly in the independent convenience channel, so an important part of any retailer’s chocolate range,” she notes.

Cadbury says the packaging will be rolled out across five key members of the Cadbury Duos portfolio: Cadbury Wispa, Cadbury Wispa Gold, Cadbury Boost, Cadbury Double Decker and Cadbury Dairy Milk.

Last year, Cadbury also announced plans to incorporate 30% recycled plastic in Dairy Milk chocolate bar wrappers from 2022. The move will ensure Dairy Milk’s 28 million chocolate bars made in Bournville, UK, and sold in the UK and Ireland, meet the impending UK Plastic Packaging Tax requirements.

Source: Packaging 360

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FSSAI's Directions on Recycled Plastics

Food Safety and Standards Authority of India(FSSAI) has issued directions regarding the use of recycled plastics under Section 16 (5) of Food Safety and Standards Act, 2006, related to operationalization of Draft Food Safety and Standards (Packaging) Amendment Regulations, 2022.

In exercise of the power conferred under section 92 of the Food Safety and Standards Act 2006, FSSAI had framed the Draft Food Safety and Standards (Packaging) Amendment Regulations, 2022 permitting the use of recycled plastics as food contact materials based on the Plastic Waste Management (Amendment) Rules, 2021 notified on 17.09.2021 and the recommendations of Scientific panel/ committee.

FSSAI has clarified that the above-mentioned draft amendment regulations are in the process of approval by the Food Authority, draft publication and its final notification are likely to take more time. Meanwhile, to allow the FBOs to make use of recycled plastics as food contact materials, it has been decided to operationalize the provision of Food Safety and Standards (Packaging) Amendment Regulations, 2022, with immediate effect, as below –

"In regulation 4 of Food Safety and Standards (Packaging) Regulations, 2018, sub- regulation (4)(e) shall be substituted, as

Products made of recycled plastics including carry bags may be used for packaging, storing, carrying or dispensing of food products as and when standards and guidelines are framed by the Food Authority. Such packaging materials shall also comply with any other national standards/regulations as applicable."

Accordingly, the approved guidelines for recycling of post-consumer PET for food contact applications and acceptance criteria for recycled PET resin for food contact applications (Annexure-1) is also made effective for implementation.

Notably, this issues with approval of the competent authority, in exercise of the power vested under the Section 18(2)(d) read with 16(5) of the Food Safety and Standards Act, 2006.

Source: Packaging 360

FDC's Flagship Brand Electral Value Added Ready-to-drink ORS+Zinc Solution 'Electral-Z+ Launched in UFlex' Asepto Holographic Packaging

UFlex' Asepto, the first Indian manufacturer of Aseptic Liquid Packaging business, has been chosen as the packaging partner of FDC brand 'Electral Z+ (ORS+Zinc Solution)' ready-to-drink OTC product, having this unique formulation manufactured by Halewood Laboratories Private Ltd. The new value-added variant of Electral launched in Asepto's holographic packs is available in pharmacies and health centers across India.

On being chosen as the preferred packaging partner, Ashwani Kumar Sharma, President & CEO, Aseptic Liquid Packaging Business at UFlex Ltd said, "The goal was to devise a strategy that highlighted the crucial fortification while also protecting the finished product inside. The basic brief was to emphasize the solution's major component, Zinc—the most vital nutrient, so that it receives extra customer attention. What Asepto in turn came up with is the unique 3D holographic packaging solution, drawing attention with an interactive packaging. Overall, the packaging has not only proved to be the ideal match facilitating clear communication to consumers, but also highlighted the product's USP." The six-layer packaging ensures that external media such as bacteria, light, and air do not contaminate the liquid ORS packed, and that the product contents stay sterile. As a result, the ORS solution has a long shelf life without having preservatives. "Adding credence to our winning pack is the recent endorsement by SIES SOP Award 2021 for Asepto's exclusive packaging for FDC Limited's ORS+Zinc Solution Electral Z+(Delicious Orange Flavour) in our value-rich holographic packs." Sharma added.

Talking about the product that has hit the retail shelves in this unique packaging manufactured by Asepto, Nandan Chandavarkar, Joint Managing Director, FDC Ltd. remarked, "Packaging is extremely vital for the ORS category for the simple reason that the content is sensitive in nature and is aimed at boosting immunity. The launch is an extension of our flagship brand Electral with Zinc, marketed as Electral Z+ (ORS +Zinc Solution) RTD is available in a 200ml pack, in orange flavour. The co-packaged ORS+Zinc solution contains a number of critical components that require extra consumer attention in order to make the best health decision. Since these RTD (ready-to-drink) solutions are widely available in pharmacies, shops, and health centers, this new packaging needed to stand out. Our main focus was to highlight the Zinc Plus fortification hence was apt not to use a normal printed pack. We're grateful that the Asepto packaging experts have collaborated closely with our team to develop a unique packaging for our most significant brand, featuring an eclectic mix of aesthetics and pack functionalities, upholding our brand ethos. On the retail shelves, the new packs look fantastic! We value our partnership with UFlex-Asepto and anticipate interesting years ahead."

Expressing his view on the transformational packaging, Krutin Chaturvedi, Director Marketing, Halewood Laboratories Pvt Ltd., said, "Halewood always come with new and innovative products and for that we need a different packaging. We are very happy to launch our formulation in a packaging which achieves our goal. The fact is that our ORS with Zinc in ready-to-drink format is a unique and first time in India formulation, thus needed to be highlighted to our customer impactfully. The formulation with a clean and alluring packaging has changed the ball game of the ready-to-drink ORS segment. This value-added transformation will undoubtedly make it easier and more convenient for consumers to choose our right product with the mark of authenticity."

UFlex's Sharma added, "UFlex works in harmony with the environment and consumers to make food safe, accessible, and appealing, and this encourages the company to develop safe and innovative packaging solutions for the world. Under the mother brand, Asepto is dedicated to maintain the safety of people and communities by safely and efficiently utilizing all resources and ensuring that its customers' businesses are safe, prosperous, and sustainable for future generations."
Source: Packaging 360

Exporters want Budget to aggressively create Brand India tag for certain products

After facing a rather dismal year in 2020 following the outbreak of the coronavirus, exporters saw a positive momentum build-up in 2021 as the month-on-month performance showed a reason to cheer.

The country's exports in December alone showed an impressive feat — at $37.81 billion — on account of sectors such as engineering, textiles, organic and inorganic chemicals and gems and jewellery showing an upward trend. This was the highest-ever monthly achievement, indicating an increase of 37.0% over $27.22 billion in December 2020, according to the Press Information Bureau (PIB).

With India achieving $300 billion in merchandise exports from April-December 2021, it meant that the goal of $400 billion in exports seems within reach in this financial year. Commerce and Industry Minister Piyush Goyal said a much higher goods exports target can be set in the last quarter of this FY. "In December alone, we touched $37-billion goods exports despite the Omicron fear factor weighing high. This month, in 15 days till January 15th, we have reached $16 billion," the minister stated earlier in January.

Exports of Top 10 Major Commodity Groups

Major Commodity Group	Dec 2021	Dec 2020	Growth % (Dec 21 over Dec 20)
Engineering goods	9708.94	7072.63	37.27
Petroleum products	5611.7	2336.63	140.16
Gems and Jewellery	2982.55	2575.67	15.8
Organic and Inorganic chemicals	2646.32	2100	26.01
Drugs and Pharmaceuticals	2288.2	2203.53	3.84
Electronic goods	1663.7	1248.33	33.27
RMG of all Textiles	1460.36	1195.78	22.13
Cotton Yarn/Fabs/Madeups/ handloom	1439.44	987.76	45.73
Plastic and Linoleum	893.02	570.49	56.54
Rice	882.62	682.77	29.27
Total of 10 Major Commodity Groups	29576.85	20973.58	41.02
Rest	7708.21	6242.71	23.48
Total Exports	**37285.07**	**27216.29**	**37**

Value of Export (Million US$)
Source: PIB

Rise

Besides Omicron, exporters also had to contend with an acute container shortage following the virus outbreak, which led to delays in shipments and a longer wait time at ports. Despite such factors, exports have shown resilience in this financial year. A glance at the top 10 major commodity groups, covering 79% of exports, reveals that engineering goods, petroleum products, gems and jewellery, organic and inorganic chemicals, drugs and pharmaceuticals and electronic goods were among the product categories that showed positive growth in December 2021.

What can Budget 2022 encompass to scale up such categories further?

Mahavir Pratap Sharma, Past Chairman, Carpet Export Promotion Council (CEPC), says the government needs to chalk out an aggressive strategy for marketing and branding of such products. “They need to aggressively create a Brand India tag and choose products that no one can compete with. Besides Europe and America, we also need to make inroads into places in South America and Russia, for instance,” he asserts. Sharma substantiates his point by giving the example of tourism. “When India promotes tourism, it promotes India — and multiple industries benefit from this as well. The government should do the same by focusing on specific categories — with short videos — to show India as a world leader in these categories. This will also spur investment.” Besides this, Sharma adds that target-based incentives, lower interest rates and tax incentives can also play their part in pushing such product categories forward.

Other industry experts are of the view that the benefits of the Production Linked Incentive (PLI) scheme will help in its own way to promote certain sectors. “A lot depends on the success of the scheme for certain categories to grow further,” says MS Mani, Partner, Deloitte India. “The scheme focuses on areas where we still have to make a dent; for example, semiconductors, television screens, mobile phones, etc. Such categories are expected to see a pickup in the times to come.”

While not mentioning any specific sectors, Mani predicts some change in India’s export basket in the next few years. “When we look at product merchandise exports, there is not too much that the Budget can do as these are governed largely by our Foreign Trade Policy. However, export competitiveness will certainly find a mention. Also, we anticipate changes in the country’s export basket with a lot of electronic exports from India, including mobile phones, components and chargers, as well as in automobiles and auto components,” he says. The PLI scheme was announced for 13 key sectors in the Union Budget last year with an outlay of Rs 1.97 lakh crore. With sectors such as electronics, white goods, high efficiency solar PV modules and automobiles and auto components included in PLI, the scheme’s objective has been to create global champions in manufacturing.

Affirming Mani’s views, Ajay Sahai, DG & CEO, Federation of Indian Export Organisations, says that categories such as engineering goods and electronics are here to stay for long. “The PLI scheme will also start unfolding. We will build on that,” he says.

Sahai is of the view that announcements are likely to come up in sectors such as agriculture, textile and leather, which are also highly labour intensive. “More financial incentives and a duty correction is possible in these sectors as prices of inputs have gone up. Cotton prices have also spiked. There could also be a larger strategy to promote certain districts as export hubs. We are also hoping for some focus on R&D spends as it is the key to export sustenance,” he adds.

Given how integral exports are to India’s plan of becoming a $5-trillion economy by 2025, a concerted effort to keep the growth rate up and steady is crucial. Budget 2022 should also factor in measures that would help in diversifying India’s export basket as well as make them more competitive in the long run.

Source: ET

Gadkari calls for attracting more foreign investments into MSME sector

Union minister Nitin Gadkari emphasized the need for attracting more foreign investments into the MSME sector as such entities are giving excellent viability and income to investors.

Speaking at a virtual international conference organized by the chartered accountants' apex body ICAI, the minister also urged chartered accountants to suggest ways and innovative approach to attract maximum foreign investment into the Micro, Small and Medium Enterprises (MSME) sector.

The Indian MSMEs are giving excellent viability and income to the investors. It is also time for the country to attract foreign investment into the sector and this is where the role of chartered accountants is very important, he said.

Gadkari, who is the Minister of Road Transport and Highways, noted that chartered accountants can help in accelerating the country's economy as they understand the problems and can guide on ways to increase exports and reduce imports.

He has also served as the MSME minister. The theme of the three-day conference is 'Accountants Creating a Digital and Sustainable Economy'. More than 3,000 professionals from across the globe are expected to participate in the conference.

Source: ET

Walmart invites Indian sellers to expand overseas via its US marketplace

Walmart is inviting select Indian sellers to apply to join Walmart Marketplace, a curated sellers community that serves more than 120 million US shoppers each month. This initiative expands on over 20 years of Walmart's engagement with Indian exporters. India is already one of Walmart's top sourcing markets, and the company has set a goal of exporting $10 billion from India each year by 2027.

Walmart is seeking new sellers from India as part of a global drive to attract international sellers and expand the Marketplace's product assortment. Selected sellers will be able to take advantage of Walmart Fulfillment Services, which allows them to use Walmart's warehousing and delivery infrastructure in the US, along with platform tools that help them streamline their operations and manage promotions and feedback. Walmart also shares US customer insights and global supply chain best practices and business planning strategies with its Marketplace sellers to help them succeed in that country.

"Building on our long history of partnership with Indian exporters, Walmart is now offering Indian businesses the opportunity to further their export dreams as Marketplace sellers. They will be able to leverage our global supply chain infrastructure and receive support to help them reach millions of daily customers in the US," said Michelle Mi, Walmart Vice President, Emerging Markets and Business Development – Global Sourcing, in a statement.

A dedicated Cross Border Trade team has been set up in India to help sellers onboard and grow on the platform. It supports local sellers to meet applicable international regulations and Walmart Responsible Sourcing standards, develop new product lines and enhance their capabilities in packaging, marketing, and supply chain management to upgrade their operations.

In a statement, Rajneesh Kumar, Flipkart Chief Corporate Affairs Officer said, "Outstanding 'Make in India' brands can expand their global networks, learn export best practices and diversify their product categories in concert with Walmart as they take on the world."

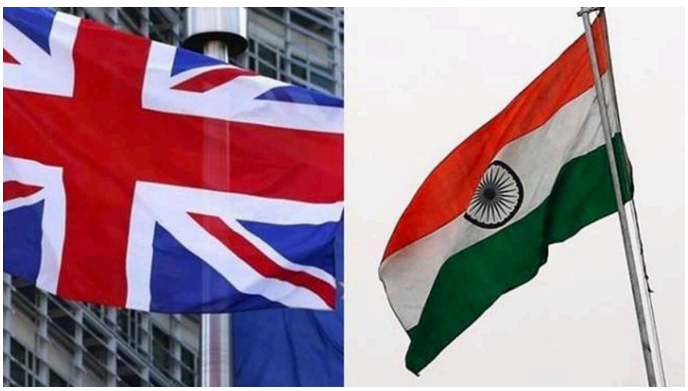
The Marketplace opportunity extends Walmart's efforts to support small sellers in India through its business. At the grassroots level, Walmart and Flipkart are helping Micro, Small, and Medium Enterprises (MSMEs) with export ambitions prepare to participate in the global supply chain via the Walmart Vriddhi supplier development program. It helps MSME sellers develop relevant capabilities, like a digital supply chain, to begin selling overseas.

Source: ET

India-UK FTA talks will go very, very quickly, says Mayor Andy Street

The negotiations between India and the UK to strike a free trade agreement (FTA), which launched last week, will conclude quickly due to an "absolute agreement" at the senior political level, the Mayor for the West Midlands region of England has said. Andy Street, who is in charge of the West Midlands Combined Authority that covers some of England's major industrial hubs of Birmingham and Coventry, expects his region to hugely benefit from such an FTA.

The UK's Department for International Trade (DIT) confirmed that the FTA talks kick-started virtually on Monday and the first round is expected to last two weeks. Last week, UK International Trade Secretary Anne-Marie Trevelyan met her Commerce and Industry Minister Piyush Goyal in New Delhi to formally flag off the negotiations. While their joint statement sets an end of the year timeline for conclusion of negotiations, there is much speculation that such discussions are likely to drag on much further.



"These things tend to be rather longer than one would wish," Andy Street told PTI. "But I think there's a critical ingredient here: there seems to me to be absolute agreement at the senior political level that this has got to happen as quickly as possible. It is surprising how that can unlock these deals more quickly than otherwise. So, I think this will go very, very quickly," he said.
The mayor for the region that is dubbed the automotive capital of the UK, being home to the country's largest car manufacturer Jaguar Land Rover (JLR), believes the trade talks with India hold out great tariff-free promise for the West Midlands.

He said: "The big picture is that within the overall UK-India relationship there's a real opportunity for the West Midlands to build a strong trading relationship. We've already got a very good relationship because our single biggest company, Jaguar Land Rover, is owned by Tata.
"So, there's an incredible Indian investment here and what we believe is that there'll be many, many more opportunities particularly in sectors where we are very strong – automotive, net zero – overlap perfectly with the Indian economy. With its automotive cluster, 50 per cent of the research and development (R&D) for the sector is done in and around Birmingham.

"This is the region that will gain most. We've seen JLR turning to electric and also electric taxis being built, there's electric motorcycles. So, this sector is becoming really, really strong here. Of course, the absence of tariffs with India will enable us to really work with the innovators," said the Mayor.

According to official statistics, the West Midlands is second after London and the south east of England in terms of inward investments from India. Besides JLR, some of the other Indian companies located in the region include software services major Infosys and TVS Motors, which recently acquired Birmingham-based Norton Motorcycles. "We are very confident that we have got the strength that we can build on the back of that FTA. But it doesn't stop businesses developing before an FTA is done. We've got big aspirations at the moment with a number of Indian companies, Infosys being one, where we are expecting to do an investment deal well before we move to the formality of the FTA," said Street.

Source: FE

BPCL sets up superabsorbent polymer demo plant in Kochi refinery

Bharat Petroleum Corporation Limited (BPCL) has set up a superabsorbent polymer technology (SAP) demonstration plant of 200 tonne per annum at the Kochi Refinery. Using the in-house acrylic acid as feedstock, SAP Technology is used in various hygiene products such as diapers and other incontinence products.

BPCL R&D has developed the technology for production of Hygiene grade Super Absorbent Polymer (SAP). This process is in-house developed and patented by BPCL R&D. SAP is produced using the Acrylic Acid which is manufactured at the new Propylene Derivatives Petrochemical Complex at Kochi Refinery.

The technology, Piping and Instrumentation Diagram, detail engineering and equipment specification were all in-house developed jointly by Corporate Research & Development Centre

Polymerisation reactor and the drying units were shifted from BPCL's Corporate Research & Development Centre at Noida. Other units like Feed preparation unit, milling, coating and packing units were indigenously engineered and procured by the project team. The project was completed in just seven months.

SAP is a polymer that can absorb and retain extremely large amounts of a liquid relative to its own mass. Therefore SAP is one of the key component in sanitary napkins, baby diapers, under-pads and adult diapers. Presently, manufacturing units of these products in India are importing SAP. Large quantity of napkins, diapers and under-pads are also being imported. Commencement of production of SAP at Kochi Refinery could result in setting up of ancillary industries based on SAP in the vicinity including at the KINFRA's new Ambalamugal Petro Chemical Park.

Source: Indian Chemical News

Vikas Ecotech finalizing JV with biodegradable plastics firm

Vikas Ecotech Limited has announced its plans to invest in the environment friendly Bio Plastics (PHA) technology and in advance stage of finalizing a technology tie-up/JV with Aurapha Private Limited to produce biodegradable plastics.

The concerns over the impact of the conventional plastic material on the environment are eminently visible and the solution is to adapt to biodegradable plastics such as Poly-Hydroxy-Alkanoates (PHA). PHAs are biopolymers synthesized by various types of bacteria and are biodegradable in nature, produced from renewable resources through an eco-friendly process.

Realizing the potential of the environmentally friendly Bio Plastics concept, Vikas Ecotech has decided to start investing in that direction and in this very pursuit eyeing a technology tie-up/joint venture with AuraPHA to produce biodegradable plastics on an industrial scale. Initially a pilot plant for producing biodegradable plastics shall be set up which will eventually, with further investments, be scaled up in various well-organized phases.

In addition, in order to push the company's keen interest in developing a variety of biodegradable materials to replace conventional plastics for different application areas, Vikas Ecotech is actively exploring various proposals for acquisition of necessary the technology to produce PBAT (Polybutylene adipate terephthalate), specifically to manufacture environment friendly carry bags, which are presently made of conventional plastic materials and are cause of severe environmental concerns across the world.

Defense Research and Development Organization (DRDO), Ministry of Defense, Government of India has developed certain technologies for developing bio-degradable polymer granules of PBAT (Polybutylene adipate terephthalate) to manufacture biodegradable carry bags, and Vikas Ecotech will be pursuing this opportunity starting with submitting an expression of interest (EoI)/its credentials for obtaining the same.

Aurapha Private Limited is founded by renowned microbiologist Dr. P. Murugan has established a laboratory scale project and is all set to start a pilot project/plant for producing PHAs which can be used in making "Single-Use Biodegradable Plastic Materials" and Innovative and Futuristic Materials like "Slow-Release Fertilizers" and Niche Matrices to facilitate "Re-cycling of AquaCulture Systems", which are highly relevant to the future of our country.

Vikas Ecotech Ltd., a New Delhi based company is engaged in the business of speciality polymers & specialty additives and chemicals for plastics & rubbers industries, catering to a wide horizon of applications in agriculture, infrastructure, packaging, electrical, footwear, pharmaceuticals, automotive, medical devices and components and other consumer goods.

Source Indian Chemical News

Why become a Plexconcil Member?

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
- Special price for Dun & Bradstreet's D-U-N-S® REGISTERED™ SOLUTION (Plus Variant)
- Basic Website Development Assistance *

*Nominal Charges Applicable

The Plastics Export Promotion Council added the following companies/firms as new members during December 2021. We would like to welcome them aboard!

Sr. No	Name of the Company	Address	City	Pin	State	Partner / Director / Propeitor	Email
1	Vishuddh Recycle Private Limited	Plot No.59, Sector 2, 2nd phase, Bidadi Industrial Area, Bidadi Hobli,	Ramanagara,	562109	Karnataka	Suresh Kodihalli Krishna	ashutosh.singh@vishuddh-recycle.com
2	Albari Industries Private Limited	462/1, Muthanamapalayam	Coimbatore	641606	Tamil Nadu	Mansur Rahman	mannan@albari.in
3	Infinity Enterprises	B-04 Tanwar Nagar Chsl,Old Mumbai Pune Road,Kausa,	Thane	400612	Maharashtra	Munaf Umar Khopatkar	m.u.khopatkar09@gmail.com
4	Lorven Seed Pro Pack	11-14-251, Plot No. 65, New Haripuri Colony, Rangareddy Saroornagar	Hyderabad	500035	Telengana	Devulapally Sunil Kumar	lorvenflex@lorvengroup.in
5	Vellox Polymers	Survey no. 202/p1 and 202/p2 plot no. 1 near corial ceramic pvt. Ltd.	Morbi	363642	Gujarat	Milankumar Ishvarbhai Koradiya	velloxpolymers3203@gmail.com
6	Earthirrigation	Survey no. 1335, village: ambaliyara,ta.	Bayad	383325	Gujarat	Mahesh Patel	earthirrigation2020@gmail.com
7	Raj Polyfabrics Private Limited	1516/3, Vidyanagar At Post Jejuri	Purandar	412303	Maharashtra	Pandurang Sonawane	rppljejuri@gmail.com
8	Angel Wavy Hair	KH. No.672, Siraspur village,	North West	110042	Delhi	Jwala Prasad Chauhan	indiaorganics@gmail.com
9	Nirmit Polymer Private Limited	Plot no 31 and 32, swapnil industrial park-2, at kuha, ahmedabad-indore highway,	Ahmedabad	382433	Gujarat	Tejal A Ramoliya	nirmitpolymer@yahoo.com
10	Shankar Techx Private Limited	803, Ozone, Sarabhai Compound, Near Vadodara Centre Mall, Genda Circle	Vadodara	390007	Gujarat	Vikramshankar Pandya	menon@shankarpack.com
11	Numakers Asia LLP	Block No 376, Moje Abrama, Ta Kamrej,	Surat	394105	Gujarat	Milap Pragjibhai Sachani	connecttokp@gmail.com
12	Srija Polymers	SY NO. 261, Muppireddypally Village Toopran Mandal	Medak	502336	Telengana	Kamalesh Gupta	SRIJAPOLY@GMAIL.COM
13	Dutta Enterprise	Premises NO 6/6/3, Halisahar, Ramprasad Sarani P.O.-Hazi Nagar, Halisahar, 24 Pargansa Noth	Hazinagar	743135	West Bengal	Atanu Dutta	atanudutta0867@gmail.com
14	Benchmark Poly Technik Private Limited	Meet House, S NO 396, Nr.Nova Petrochem Moraiya-Changodar	Ahmedabad	382213	Gujarat	Jagdish Thakkar	taxation@benchmark-polytech.com
15	Plastotech Engineers Pvt Ltd	Plot No.7,Gat No.281/1, Kasar Amboli	Mulsi	412115	Maharashtra	Milind Vaidya	peplpune1@gmail.com
16	Maak Impex Private Limited	GC, Alsa Glenridge , 32, Langford Road ,	Bangaluru	560025	Karnataka	Mohammed Abdul Ameen Rahaman	tilak@maakimpex.com
17	Arr Freeflow Private Limited	Plot No 92 Spring Blossom Near Sathiyam Grande Hotel , Sriperumbudur Kanchipuram ,	Sriperumbudur	602105	Tamil Nadu	Sarangapani Sasidharan	arr66sasi@gmail.com
18	P.P. Concern	6/6/3, Ramprasad Sarani, South Prasad Nagar, Hazinagar 24 Paraganas North	Hazinagar	743135	West Bengal	Mithu Dutta	dmithu368@gmail.com

19	Aegios Polyfilms Private Limited	Jindal house" opp. D-mart, ioc petrol pump lane, shivranjani shyamal 132 ft ring road	Ahmedabad	380015	Gujarat	Saurabh Agrawal	aegiospoly-filmspvtltd@gmail.com
20	Eleven Orchids	672, Ushma Urja Apart-ments, Sector 62, Gautam Buddha Nagar,	Noida	201301	Uttar Pra-desh	Ankush Yadav	spy123spy@gmail.com
21	General Industrial Cont-rols Private Limited	T-107 , MIDC, Bhosari,	Pune	411026	Maharas-htra	Shantilal B Chordiya	medha.kesk-ar@gicindia.com
22	Chakarani Exports	152 GF V2 Ayodyanagar Near Nalanda School-2 Punagam	Surat	395010	Gujarat	Mayur Chaka-rani	mayur@cha-karaniexports.com
23	Sansons Polymers Private Limited	Udyog Marg Jind Road	Kaithal	136027	Haryana	Nipun S Chaudhry	nipun303@gmail.com
24	DVK Poly Export Private Limited	14-2-519, Chandanwadi, Gosha Mahal,	Hyderabad	500012	Telengana	Vijay Kumar Agarwal	dvk-polyexport@gmail.com
25	Aries Polychem	34, Ahmedabad Cotton Merchant Co Op W/H Nr.Nidc Narol-Lambha Road,Narol	Ahmedabad	382405	Gujarat	Hiren Mu-kundbhai Swadia	aries-polychem@gmail.com
26	Hindustan Global Impex	D31 NU 4, Sapna Nagar,	Gandhidham	370201	Gujarat	Syed Abid Hasan	abidmgr@gmail.com
27	Dhabriya Polywood Limited	SP-2032(A) Industrial Area Ramchandrapu Ra (Sitapura Extn.)	Jaipur	302022	Rajasthan	Shreyansh Dhabriya	manohar@polywood.org
28	Yash Seals Private Limited	Plot no 43 Municipal Indust-rial Estate, Umela Phata, Vasai West,	Palghar	401207	Maharas-htra	Siddharth Sushil Vaid	accounts@yashseals.com
29	EMI Kompozites Private Limited	Plot NO-1, Por GIDC Ra-mangadi	Vadodara	391243	Gujarat	Patel Rupam-ben Reenkoob-hai	sales@electro-magneticindia.com