PLEXCONCIL - The Plastics Export Promotion Council

# PLEXCONNECT®

Edition 25, July 2021



## Optimizing Production Efficiently

## Dr. Bio - The Leap from Recyclable to Bio-Compostable

## Packaging Sustainability – Interview with Dr. Gaurav Madhu, IIP

## SONCAP Certificate: Requirement for Imports into Nigeria

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The past nearly 1.5 years of pandemic acutely highlighted the significant role of plastics as a life saver across numerous applications. However, the fact remains that we cannot keep up current plastics consumption and expect to create a sustainable world. While the need for hygiene and safety in crisis situations that we face today is paramount, one cannot overlook the expanding use of single use or disposable plastics these past months, the waste generated and the barriers to global recycling efforts. It is time to pivot back and move towards plastic recycling processes and environmentally friendly and sustainable alternatives, like bio-based degradable plastics with a circular economy perspective.

The month of June saw the roll out of the National Awareness campaign about Single-use Plastics by the Ministry of Environment, Forest and Climate Change. As citizens the onus lies on each of us to reduce, reuse and recycle polluting plastics to the best of our ability. And as an industry, we must adopt sustainable practices across the board to fulfil our obligation to our ecosystem. In this issue, Plexconnect interviewed Mukul Sareen of Hi-Tech International, the country's first company to manufacture a plant-based biopolymer, Dr Bio, which can be used to replace single-use and multi-use plastic products such as bottles, straws, cups, disposable cutlery, polybags, etc., with bio-compostable plastic. It is the only Indian biopolymer to have been approved by CIPET. Dr. Bio biopolymer resin compound is made from corn starch and is 100% compostable and biodegradable making it the best alternative of the normal plastic. We are also grateful to our guest writer, Dr. Gaurav Madhu, Jt. Director, Indian Institute of Packaging, Hyderabad who talks about Sustainable Packaging and strategies that we as an industry need to adopt towards achieving our sustainability goals.

Continuing our focus on the subject, Plexconcil will continue to host Webinars in the month of July and August to help our industry members align with India's Waste Management and Environmental goals. We are hoping that by taking smaller steps towards these goals, we will eventually transform our industry into one that is environmentally, socially and economically sustainable.

The month of May saw a slight drop in PP, PE, PVC, HDPE, LDPE prices and the trend has continued in June. Raw material supplies have begun to ease and with some leading global economies gradually opening up, we do hope that exporters can expect better business in the coming months. In fact, during May 2021, India exported plastics worth USD 1,129 million, up 33.0% from USD 849 million in May 2020. Cumulative value of plastics export during April 2021 – May 2021 was USD 2,115 million as against USD 1,400 million during the same period last year, registering a positive growth of 51.1%.

Focusing on the Latin American region, in this issue, we bring you a glimpse of exports to Chile. Chile is one of India's largest trade partners in the region with high export potential. We have also covered exports of Polytetrafluoroethylene resin (or PTFE) or Teflon, a specialized engineering plastic with wide application, in addition to news, etc.

As the country's economic activities gradually pick pace, let us not forget that the dark clouds of the Covid crisis continue to linger. So, let's continue to forge ahead with greater responsibility towards our people and our societies. We urge all members to maintain all Covid protocols and be safe at all times.

**Warm regards,**

**Arvind Goenka**
**Chairman**

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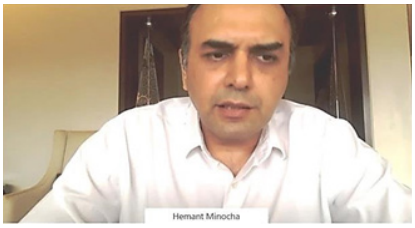
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**Date: 07-05-2021** **Region: West**

**Webinar on Customs Bonded Manufacturing scheme – Whether a viable alternative to FTP and other schemes such as Advance Authorization/EOU/SEZ?**

The Government of India through the Central Board of Indirect Taxes and Customs (CBIC) has announced a Customs Bonded Manufacturing & Warehousing Scheme to promote India as a global manufacturing hub as well as ease of doing business. To create awareness amongst members and compare the scheme with FTP and other schemes, Plexconcil organized a webinar on Customs Bonded Manufacturing & Warehousing Scheme on 7th May, 2021.

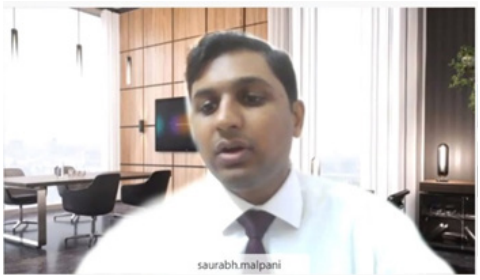
In his opening address, Mr. Hemant Minocha, Vice Chairman, Plexconcil said that this scheme aims to promote manufacturing operations and to strengthen the initiative of Aatma Nirbhar Bharat.




**Mr. Hemant Minocha, Vice Chairman, Plexconcil**

Mr. Ratan Jain –Partner, Lakshmikumaran & Sridharan Attorneys and Mr. Saurabh Malpani – Principal Associate, Lakshmikumaran & Sridharan Attorneys discussed MOOWR, Eligibility, Duty implications and easing compliance. They also briefed participants about various factors in choosing the right scheme and benefits of MOOWR over other schemes.




**Date: 11-05-2021** **Region: East**

**Meeting on the shortage of containers/port related issues held under the chairmanship of Director General of Shipping & Addl. Secretary to the Govt. of India**

A virtual meeting was held on 11th May 2021 under the chairmanship of Director General of Shipping to address the shipping related issues, including container shortage and port related issues. Mr Vikram Bhaduria, Regional Chairman (North), Mr Amit Pal, COA Member flagged off various logistics related issues affecting exports. Member exporters along with Mr Nilotpal Biswas, RD, Ms Bharti Parve, Asst. Director, PLEXCONCIL joined the meeting.

**Date: 14-05-2021** **Region: West**

Webinar on **MAKING PLASTICS FANTASTIC AGAIN - Examine Factors that drive Scalable Solutions & Combat Plastic Waste**

Focusing on growing concerns on Plastics use globally, experts examine the importance of circular economy as a dominant corporate sustainability concept and factors to drive scalable solutions to combat plastic waste and promote industry growth. Plexconcil organized a webinar on 14th May to help members understand the significance of Plastic Recycling, Innovation, the future Trends and Role of Young Innovators.

Mr. Arvind Goenka, Chairman, Plexconcil during welcome address said that Plastics is significant to circular economy creation as an alternative and a more sustainable model to the traditional linear economy. India being one of the highly populated country has a great potential in Plastic Recycling and Young Innovators will be key contributor for the success of circular economy.






**Mr Utsav Dixit, ALPLA India**




**Mr. Pranay Kumar, Vasudhae-cofriends Projects (P) Ltd**




**Mr. Narayan Lal, EF Polymers,**

Mr. Utsav Dixit, Senior Manager, Sustainability, ALPLA India Pvt. Ltd., Mr. Pranay Kumar, Chief Environment Officer, Vasudhaecofriends projects (P) Ltd., New Delhi and Mr. Narayan Lal, Founder-CEO, EF Polymers, Rajasthan were the Speakers for the session. The Event has received very good response and attracted registration of over 177 Exporters.

**Date: 20-05-2021** **Region: East**

**Outreach Session by Addl. DGFT, Mumbai with Exporters**

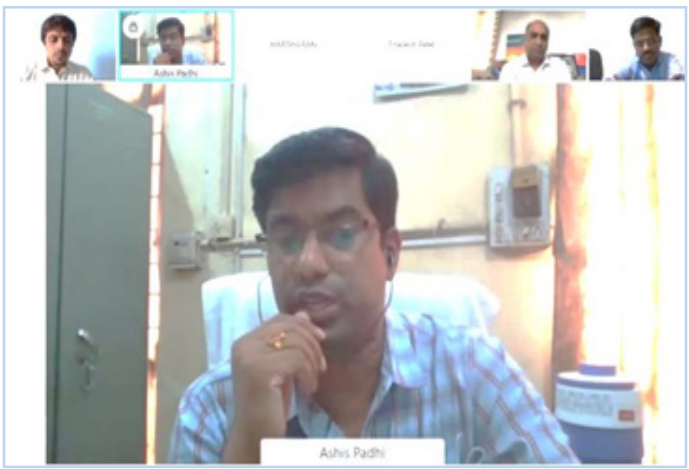
The online session organised by Addl. DGFT Office Mumbai on 20.5.2021 was held to address all exporters' software related issues. Mr S.B.S. Reddy, Addl. DGFT, Mr Satya Raja Sekhar, Dy DGFT and other senior officer from DGFT office (New Delhi & Mumbai) attended the meeting. Mr Nilotpal Biswas, RD along with Member Exporters joined this online session.

**Date: 21-05-2021** **Region: West**

**Webinar on Boost your Export competitiveness through MSME Schemes**

The Plastics Export Promotion Council organised a webinar on Boosting Export Competitiveness through MSME Schemes on 21st May, 2021 to empower exporters with knowledge and disseminate information on various Incentive schemes of Development Commissioner (Micro, Small & Medium Enterprises) and benefits available for MSMEs to enhance their competiveness and boost their exports.

During welcome address, Mr Alpesh Patel, Chairman- Gujarat Region Committee, Plexconcil said that MSME sector is a highly vibrant sector of the Indian economy and plays significant role in Indian exports.






Shri Ashis Kumar Padhi, IEDS, Assistant Director from MSME Development Institute, Ahmedabad briefed participants about definition of MSME, Udyam Registration, Public procurement policy, and explained various schemes of Ministry of MSME such as Credit Linked Capital Subsidy Scheme, Lean Manufacturing Competitiveness Scheme, Cluster Development Programme, Procurement and Marketing Support Scheme, Scheme for Participation of MSME Delegation in International Trade Fair/Exhibition or Buyers-Sellers Meet in abroad, Design Clinic scheme, IPR scheme, ZED certification scheme etc. Presentation was followed by interactive Q & A session.

**Date: 28-05-2021** **Region: East**

**WEBINAR - Financial Market Outlook & Managing Exports Business in Pandemic**

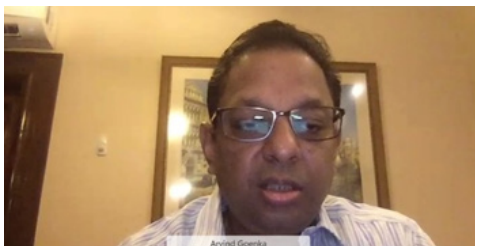
PLEXCONCIL & SHEFEXIL in association with ICICI Bank jointly organized a Webinar on the Financial Market Outlook and managing exports during the pandemic. Mr Arun Agarwal, AGM, Markets Group, ICIC Bank and Mr Harjeet Singh, SME Products Group, Elite Trade Group, ICICI Bank made a detailed presentation on the subject seminar. Mr Amit Pal, COA Member moderated the session.

**Date: 29-05-2021** **Region: West**

**Webinar on COLLABORATIVE R&D- WHY DOES IT MATTER MORE NOW?**

Plexconcil organized a webinar on Collaborative R&D and its merits. The objective was to help members understand the possibilities of collaboration between the academia and the industry in building a common ground for success and industry upliftment through shared resources and aligning of objectives.

Mr. Arvind Goenka, Chairman, Plexconcil during welcome address said that R&D plays an integral role in the growth of the company, industry & economy and companies should focus on the same as it is integral to the Govt's Make in India and Atma Nirbhar India initiatives.



**Mr. Arvind Goenka Chairman, Plexconcil**



**Dr. Samir Chikkali, Principal Scientist, CSIR-National Chemical Laboratory**



**Mr. Vikram Bhadauria, MD, ALOK Masterbatches**

Mr. Vikram Bhadauria, MD, ALOK Masterbatches was the keynote speaker for the forum. The session started with Dr. Samir Chikali talked about Bridging the Academia & Industry Gap followed by A Case Study on dUHMWPE. Mr. Bhadauria spoke about Affordable Technologies & its importance in uplifting the industry's standards. The Meeting was successfully organised with over 156 Participants registration from Pan India.

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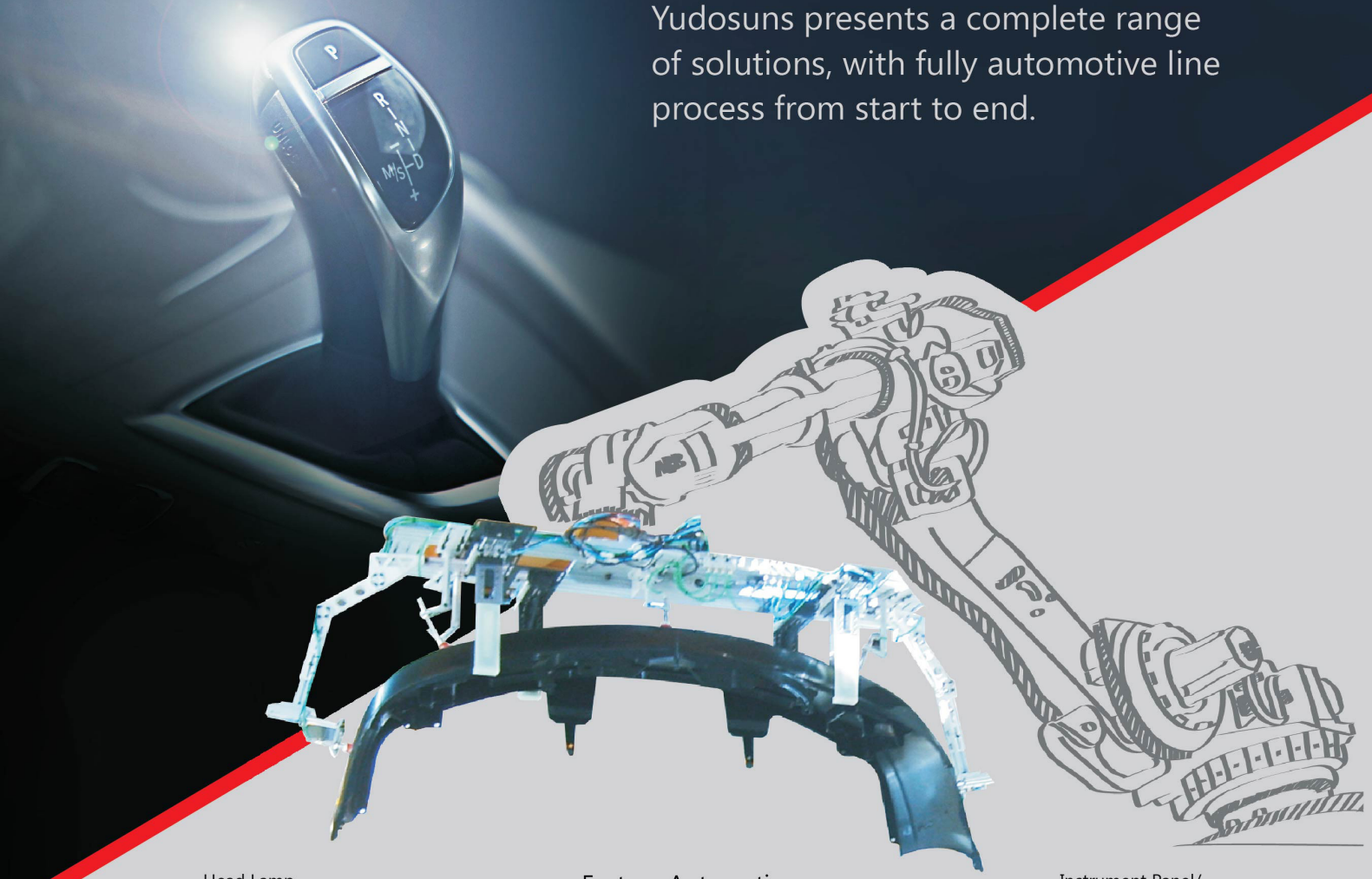
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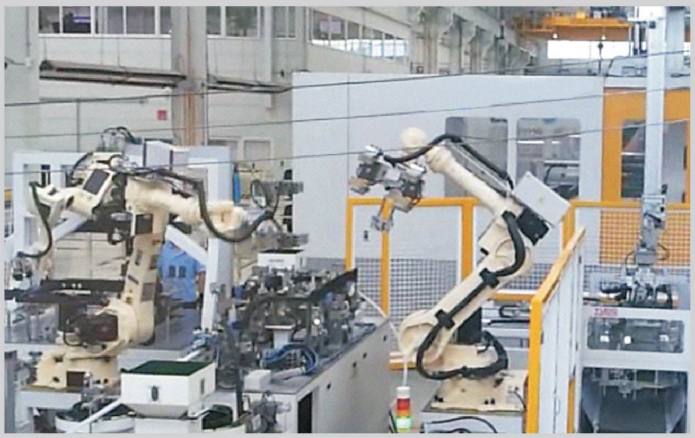
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Recycling just one plastic bottle saves enough energy to power a 60W light bulb for **SIX HOURS**



## PLASTIC SAVES CARBON

Recycling 1 tonne of plastic bottles saves **1.5 TONNES** of carbon



To replace all the plastic bags being used in the European Union with paper ones in one year, you would need to cut down an additional **2.2 MILLION TREES** which would prevent 2,188 metric tonnes of carbon being absorbed by the trees





Compared to traditional building bricks, plastic building blocks emit **95% LESS CO2**



The production of 1kg cheese results in a CO2 impact equivalent of 11kg, which is almost **6 TIMES BIGGER** than the CO2 impact equivalent of 1kg PVC




## PLASTIC SAVES FUEL

Over the lifetime of the average car, lightweight plastic parts save around **3,000 LITRES** of petrol as a result – which would get you to and from New York almost five times!



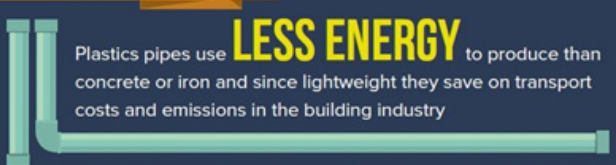
For every 7 trucks needed to deliver paper bags,



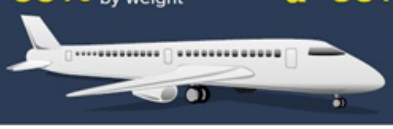
only **1 TRUCK** is needed for the same number of plastic bags

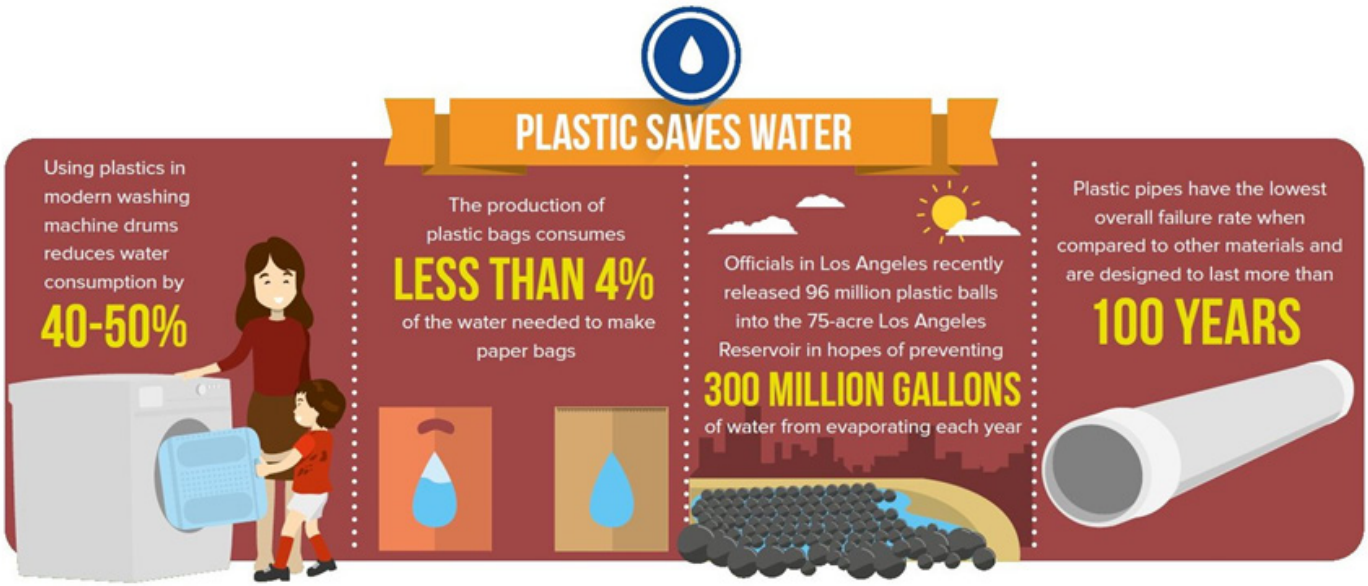


Plastics pipes use **LESS ENERGY** to produce than concrete or iron and since lightweight they save on transport costs and emissions in the building industry



The Boeing 787 Dreamliner is comprised of **50%** plastic composites by weight **& 80%** by volume, which contributes to a **20% FUEL SAVING**





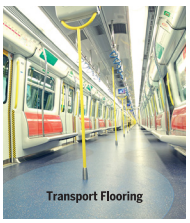




















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# CHILE

## Economic overview

Chile is located in the southwest of South America sharing land borders with Argentina, Bolivia, and Peru. It has an area of 756,102 square kilometres and a population of 19.5 million. Chile is among the most industrialised countries in Latin America, thanks to its vibrant mining sector that is underpinned by vast copper and lithium reserves. Despite the challenges and negative economic growth in 2020, Chile is expected to benefit from a rapid Covid-19 vaccine campaign and continued monetary and fiscal stimulus.

As of June 7, 2021, the S&P's rating for Chile is A (stable); Moody's rating stands at A1 (negative); and Fitch has a reported rating of A- (stable).




| Economic indicators | | 2018 | 2019 | 2020 |
|---|---|---|---|---|
| Nominal GDP | USD Billion | 297.4 | 279.3 | 252.8 |
| Nominal GDP per capita | USD | 15,862 | 14,616 | 12,990 |
| Real GDP growth | % | 3.7 | 1.0 | -5.8 |
| Total population | Million | 18.8 | 19.1 | 19.5 |
| Average inflation | % | 2.3 | 2.3 | 3.0 |
| Total merchandise exports | USD Billion | 75.4 | 69.1 | 67.6 |
| Total merchandise imports | USD Billion | 68.5 | 64.1 | 55.3 |

Source: IMF, TradeMap

Chile has several Trade Agreements & Economic Partnership and Cooperation Agreements with countries in Africa, Caribbean, Central America, East Asia, Europe, Middle East, North America, Oceania, South America and West Asia. The India-Chile Preferential Trade Agreement came into force in August 2007. This PTA was further expanded and implemented in May 2017 to include more products.

**Trade overview**

Chile is an important trade partner of India. In 2020, India and Chile engaged in bilateral trade worth USD 1.59 billion. During the year, India's exports to Chile were valued at USD 738 million in comparison to India's imports worth USD 854 million resulting in a trade surplus of USD 116 million to Chile.

The major items of export (2-digit HS) from India to Chile are vehicles (USD 208 million), pharmaceutical products (USD 111 million), electrical machinery and equipment (USD 41 million), articles of iron or steel (USD 36 million), made-up textile articles (USD 32 million), and organic chemicals (USD 32 million). However, there is just one major item of export from Chile to India: copper ore and concentrates (USD 545 million).

Within plastics, the trade is in favour of India with exports of USD 60.0 million to Chile and a trade surplus of USD 58.1 million. India's plastics exports to Chile primarily comprise of the following:

- Woven sacks/FIBCs (20.0%)
- Packaging items (16.2%)
- Plastic sheets and films (12.9%), and
- Nets, including fishnets (9.6%)









Chile's annual plastics imports are valued between USD 3.3 - 3.7 billion. Its plastic imports are largely catered to, by China (32.8%), United States (15.9%), and Brazil (6.9%). However, India also has a good standing in some of the plastic product imports by Chile:

- Woven sacks/FIBCs – Market share of 25.3% (Rank 2)
- Nets, including fishnets – Market share of 22.0% (Rank 2)
- Ropes, twines and cordage – Market share of 16.4% (Rank 4)
- Packaging items – Market share of 4.8% (Rank 7)
- Masterbatches – Market share of 2.8% (Rank 7)

**Shashank Agarwal, Dy. Managing Director, Kanpur Plastipack Ltd.**

Chile is the most open and transparent country for global trade in South America and by the nature of its laws there, it has particularly good potential for global trade. Chile has PTA with almost all countries with strong exports of Plastics. This makes it incredibly competitive and yet creates a level playing field for global exporters of plastics. The country's PTA with India as well as being a part of MERCOSUR makes it an ideal destination for export of high-value or value-added plastics. Great opportunities also exist for semi-finished products from India that can be further processed or used to manufacture products domestically.

Despite the numerous prospects for exports, there are several barriers to trade in Chile. The country has an exceptionally long coastline stretching almost across the entire Western coast of South America. This makes port and inland logistics very challenging. The cost of currency and the laws supporting international companies is not strong and hence local companies often default on export payments, making recovery extremely difficult. Considering the complexity of the country's global trade laws and the logistical aspects, doing business with Chile can be difficult at times.

**Trade potential**

Our internal research indicates that India's export of value-added plastics to Chile has the potential to grow by nearly USD 1.9 billion. Product categories, within value-added plastics, that have immense export potential for export to Chile include:

| Product Category | Chile's import from India | Chile's import from world | India's export to world | Trade potential for India |
|---|---|---|---|---|
| | USD Million | USD Million | USD Million | USD Million |
| Medical disposables | 0.7 | 299.1 | 638.7 | 298.4 |
| Plastic sheets and films | 7.8 | 308.0 | 1,338.2 | 268.4 |
| Packaging items | 9.7 | 198.7 | 731.0 | 188.9 |
| Masterbatches | 3.4 | 130.9 | 1,155.0 | 102.3 |
| Houseware | 0.5 | 100.5 | 191.2 | 98.6 |
| All types of optical items | 2.9 | 76.0 | 375.6 | 48.2 |
| Travel ware | 1.2 | 45.5 | 328.1 | 44.3 |
| Woven sacks/FIBCs | 12.0 | 58.6 | 853.8 | 43.3 |
| Ropes, twines and cordage | 3.6 | 21.9 | 93.9 | 16.4 |
| Nets, including fishnets | 5.7 | 27.6 | 74.1 | 10.2 |

Source: TradeMap, Plexconcil Research

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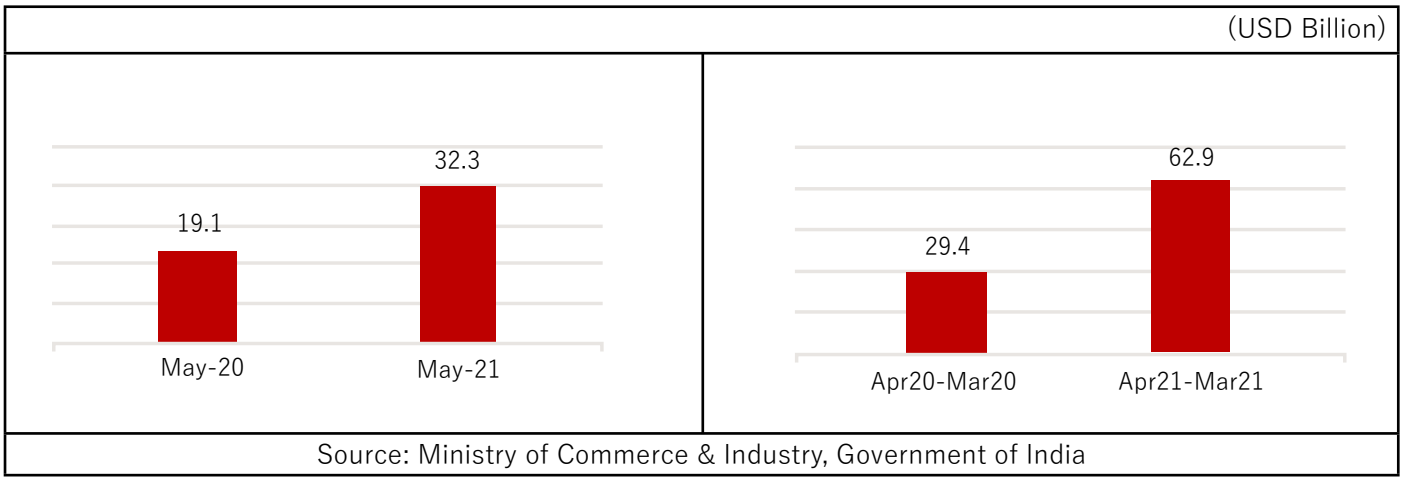


# Export Performance - May 2021

**TREND IN OVERALL EXPORTS**

India reported merchandise exports of USD 32.3 billion in May 2021, up 69.4% from USD 19.1 billion in May 2020. Cumulative value of merchandise exports during April 2021 – May 2021 was USD 62.9 billion as against USD 29.4 billion during the same period last year, reflecting a growth of 113.9%.

**Exhibit 1: Trend in overall merchandise exports from India**

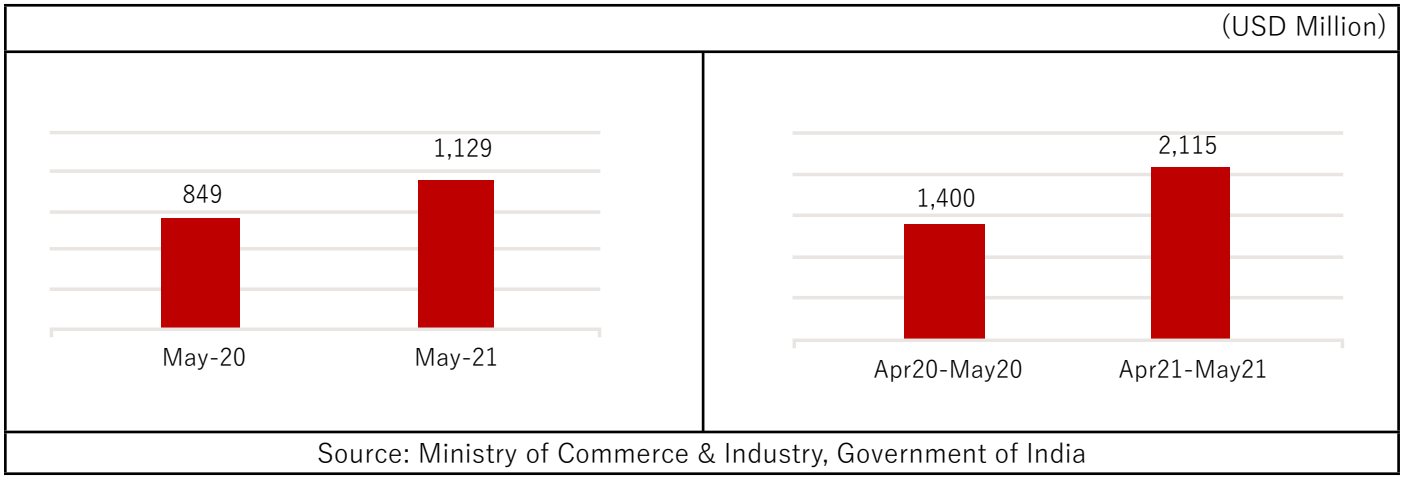



Source: Ministry of Commerce & Industry, Government of India

## TREND IN PLASTICS EXPORT

During May 2021, India exported plastics worth USD 1,129 million, up 33.0% from USD 849 million in May 2020. Cumulative value of plastics export during April 2021 – May 2021 was USD 2,115 million as against USD 1,400 million during the same period last year, registering a positive growth of 51.1%.

**Exhibit 2: Trend in plastics export by India**




Source: Ministry of Commerce & Industry, Government of India

## PLASTICS EXPORT, BY PANEL

In May 2021, all the product panels reported positive growth, particularly, Woven sacks / FIBCs; Human hair products; Consumer & houseware; Polyester films; Floor Coverings, leathercloth & laminates; Composites / FRP products; and Miscellaneous products.

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

| Panel | May-20 | May-21 | Growth | Apr 20-May 20 | Apr 21-May 21 | Growth |
|---|---|---|---|---|---|---|
| | (USD Mn) | (USD Mn) | (%) | (USD Mn) | (USD Mn) | (%) |
| Consumer & House ware | 22.5 | 54.4 | +142.1% | 29.9 | 104.9 | +251.1% |
| Cordage & Fishnets | 9.5 | 14.8 | +55.6% | 12.1 | 30.0 | +148.4% |
| Composites / FRP products | 18.5 | 32.6 | +76.0% | 23.9 | 65.8 | +175.8% |
| Floor Coverings, Leather cloth & Laminates | 33.2 | 52.0 | +56.4% | 38.3 | 101.5 | +164.6% |
| Human Hair & Related Products | 17.0 | 63.1 | +270.0% | 21.5 | 123.5 | +473.8% |
| Miscellaneous Products | 96.6 | 155.8 | +61.2% | 149.7 | 312.0 | +108.4% |
| Pipes & Fittings | 9.1 | 17.0 | +86.7% | 12.4 | 38.8 | +213.2% |
| Polyester Films | 147.0 | 174.4 | +18.6% | 242.5 | 332.5 | +37.2% |
| Plastics Raw Materials | 416.3 | 423.4 | +1.7% | 751.6 | 726.0 | -3.4% |
| Rigid Packaging & PET Preforms | 25.1 | 33.5 | +33.6% | 36.6 | 65.7 | +79.6% |
| Woven Sacks / FIBCs | 46.3 | 94.8 | +104.9% | 71.7 | 186.8 | +160.6% |
| Writing Instruments | 7.9 | 13.8 | +75.0% | 9.6 | 27.8 | +190.0% |
| | 849.0 | 1,129.3 | +33.0% | 1,399.7 | 2,115.3 | +51.1% |

Source: Ministry of Commerce & Industry, Government of India

Export of **Consumer & house ware** products increased by 142.1% in May 2021 due to higher shipment of Tableware and kitchenware of plastics (HS code 392410); Toys of plastics (HS code 95030030); and Electrical switches of plastics (HS code 85365020).

**Cordage & fishnets** export were up 55.6% in May 2021 on account of improved sales of Twine, cordage, ropes and cables of polyethylene or polypropylene excluding binder or baler twine (HS code 56074900); and Other made-up fishing nets (HS code 56081190).

Export of **Composites** was up by 76.0% due to increased sales of Articles of plastics and articles of other materials of heading 3901 to 3914, n.e.s (HS code 39269099).

In case of **Floor coverings, leather cloth & laminates,** exports in May 2021 were up 56.4% as Indian exporters managed higher sales of Textile fabrics impregnated, coated, covered or laminated with plastics other than PVC or PU: Other (HS code 59039090); and Decorative laminates (HS code 48239019).

Export of **Human hair & related products** clocked an impressive 270.0% growth due to strong sales of Human hair, dressed, thinned, bleached or otherwise worked (HS code 67030010) to China. India's human hair exports had witnessed a significant increase in the last year.

**Miscellaneous products** export increased by 61.2% in May 2021 due to higher sales of Other sacks and bags of plastics (HS code 39232990); Optical fibres, optical fibres bundles and cables (HS code 90011000); and Polypropylene articles, n.e.s (HS code 39269080).

Export of **Pipes & fittings** witnessed a growth of 86.7% due to improved sales of Flexible tubes, pipes and hoses, having a minimum burst pressure of 27.6 MPa (HS code 39173100); and Other tubes pipes and hoses of other plastics (HS code 39172990).

**Polyester films** witnessed an increase of 18.6% in exports in May 2021 due to higher shipments of a variety of products including Flexible plates and sheets of polypropylene (HS code 39202020); and Other plates and sheets of polypropylene (HS code 39202090).

**Plastics raw materials** export was up 1.7% in May 2021 due to higher sales of Other primary form of Polyethylene terephthalate (HS Code 39076190 and 39076990) and Other acrylic polymers in primary form (HS Code 39069090).

**Rigid packaging & PET performs** export witnessed an increase of 33.6% due to improved sales of Other items of plastics for the conveyance or packing of goods (HS code 39239090); and Caps and closures for bottles (HS Code 39235010).

Export of **Woven sacks and FIBCs** gained 104.9% during May 2021 on account of higher sales of Flexible Intermediate Bulk Containers or FIBCs (HS code 63053200). India is a significant exporter of FIBC to Europe and North America.

Export of **Writing instruments** was up by 75.0% in May 2021, mainly on account of improved sales of Felt tipped and other porous-tipped pens and markers (HS code 96082000); Other ball point pens with liquid ink (HS code 960810).

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

| HS Code | Description | Apr 20- May 20 | Apr 21- May 21 | Growth |
|---|---|---|---|---|
| | | (USD Mn) | (USD Mn) | (%) |
| 63053200 | Flexible intermediate bulk containers, for the packing of goods, of synthetic or man-made textile materials | 59.2 | 145.0 | +144.7% |
| 39021000 | Polypropylene, in primary forms | 205.0 | 123.0 | -40.0% |
| 39076190 | Polyethylene terephthalate: Other primary form | 120.2 | 145.3 | +20.9% |
| 39232990 | Sacks and bags, incl. cones, of plastics (excl. those of polymers of ethylene): Other | 39.8 | 75.6 | +90.0% |
| 67030010 | Human hair, dressed, thinned, bleached | 21.3 | 117.2 | +449.6% |
| 39269099 | Articles of plastics and articles of other materials of heading 3901 to 3914, n.e.s: Other | 23.5 | 65.0 | +176.2% |
| 39012000 | Polyethylene with a specific gravity of >= 0,94, in primary forms | 73.7 | 33.3 | -54.8% |
| 39014010 | Linear low-density polyethylene, in which ethylene monomer unit contributes less than 95 % by weight of the total polymer content | 64.3 | 54.9 | -14.7% |
| 90011000 | Optical fibres, optical fibre bundles and cables (excl. made-up of individually sheathed fibres of heading 8544) | 26.7 | 59.3 | +121.9% |
| 48239019 | Decorative laminates | 15.2 | 39.9 | +163.0% |
| 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 | 46.1 | 43.2 | -6.3% |
| 39269080 | Articles of plastics and articles of other materials of heading 3901 to 3914, n.e.s: Polypropylene articles, not elsewhere | 19.3 | 43.2 | +124.1% |
| 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 | 41.9 | 62.0 | +47.8% |
| 39232100 | Sacks and bags, incl. cones, of polymers of ethylene | 16.8 | 31.3 | +86.3% |
| 39076990 | Polyethylene terephthalate: Other primary form | 19.0 | 55.0 | +189.1% |
| 59039090 | Textile fabrics impregnated, coated, covered or laminated with plastics other than polyvinyl chloride or polyurethane: Other | 10.2 | 37.1 | +263.9% |
| 39239090 | Articles for the conveyance or packaging of goods, of plastics: Other | 17.5 | 28.9 | +65.1% |
| 39069090 | Acrylic polymers, in primary forms (excl. polymethyl methacrylate): Other | 8.9 | 38.7 | +335.3% |

| | | | | |
|---|---|---|---|---|
| 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 | 17.6 | 30.5 | +73.2% |
| 90015000 | Spectacle lenses of materials other than glass | 7.1 | 20.5 | +190.5% |
| 39011010 | Linear low-density polyethylene, in which ethylene monomer unit contributes 95 % or more by weight of the total polymer content | 37.3 | 14.2 | -61.8% |
| 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 | 9.0 | 26.0 | +189.7% |
| 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 | 19.5 | 25.9 | +32.8% |
| 39046100 | Polytetrafluoroethylene, in primary forms | 15.3 | 24.0 | +57.3% |
| 90183930 | Cannulae | 12.2 | 13.3 | +9.0% |
| 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 | 16.6 | 17.8 | +7.4% |
| 39011020 | Low density polyethylene | 36.8 | 22.7 | -38.3% |
| 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 | 14.5 | 13.0 | -10.5% |
| 96081019 | Ball-point pens | 6.0 | 14.0 | +132.9% |
| 39241090 | Tableware and kitchenware, of plastics: Other | 4.0 | 15.8 | +293.3% |
| 39072090 | Polyethers in primary forms (excl. polyacetals): Other | 10.8 | 7.1 | -34.5% |
| 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 | 6.9 | 17.5 | +153.4% |
| 95030030 | Tricycles, scooters, pedal cars and similar wheeled toys; dolls' carriages; dolls; other toys: of plastics | 4.2 | 14.1 | +236.2% |
| 39199090 | Self-adhesive plates, sheets, film, foil, tape, strip and other flat shapes, of plastics, whether or not in rolls > 20 cm wide: Other | 8.6 | 13.0 | +51.6% |
| 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 | 13.7 | 15.5 | +13.2% |

| | | | | |
|---|---|---|---|---|
| 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 | 11.4 | 15.1 | +32.5% |
| 96032100 | Tooth brushes, incl. dental-plate brushes | 6.6 | 14.0 | +113.7% |
| 59031090 | Textile fabrics impregnated, coated, covered or laminated with polyvinyl chloride: Other | 4.7 | 12.5 | +165.5% |
| 39023000 | Propylene copolymers, in primary forms | 24.8 | 10.6 | -57.3% |
| 39140020 | Ion-exchangers based on polymers of heading 3901 to 3913, in primary forms: Ion exchangers of polymerisation or | 9.1 | 11.6 | +27.8% |
| 39119090 | Polysulphides, polysulphones and other polymers and prepolymers produced by chemical synthesis, n.e.s., in primary forms: Other | 7.3 | 10.6 | +43.7% |
| 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 | 7.9 | 10.1 | +27.1% |
| 39241010 | Tableware and kitchenware, of plastics: Insulated ware | 1.5 | 10.3 | +597.3% |
| 39129090 | Cellulose and chemical derivatives thereof, n.e.s., in primary forms (excl. cellulose acetates, cellulose nitrates and cellulose ethers): Other | 8.0 | 11.1 | +38.9% |
| 39095000 | Polyurethanes, in primary forms | 9.8 | 12.8 | +30.7% |
| 39235010 | Stoppers, lids, caps and other closures, of plastics: Caps and closures for bottles | 5.6 | 11.8 | +110.3% |
| 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 | 3.4 | 11.0 | +218.3% |
| 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 | 2.0 | 11.0 | +437.3% |
| 39073010 | Epoxy resins | 4.1 | 12.0 | +188.9% |
| 39011090 | Polyethylene with a specific gravity of < 0,94, in primary forms: Other | 11.6 | 10.6 | -8.1% |

Source: Ministry of Commerce & Industry, Government of India

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# Mr. Mukul Sareen

**Director – Business Development, HiTech Group**

# The Leap from Recyclable to Bio-Compostable

Dr. BIO
BIO-POLYMERS & PRODUCTS

Hi-Tech International is the first approved company in the country to manufacture a plant-based biopolymer, Dr Bio, which can be used to replace single-use and multi-use plastic products such as bottles, straws, cups, disposable cutlery, polybags, etc., with bio-compostable plastic. It is the first Indian biopolymer to have been approved by CIPET, thus uniquely positioning Hi-Tech International to drive the plastic industry towards sustainable bio-compostable plastic.

Dr. Bio biopolymer resin compound is made from corn starch and is 100% compostable and biodegradable making it the best alternative of the normal plastic. The product is especially beneficial in packaging and also find wide application in home textiles, appliances, fresh food packaging, lamination of paper cups and cartons, disposables, cutlery etc. The product can effectively replace fossil carbon with renewable carbon from biomass.

Plexconnect catches up with Mukul Sareen, to know more about what makes Dr. Bio a sustainable and environment friendly alternative to fossil based plastics.

**What are the distinct advantages of Biopolymers over bio-degradable polymers? What is the environmental impact of the use of biopolymers?**

Biopolymers are completely compostable and can even add to the nutrient value to the soil. All plastics are supposed to be biodegradable, eventually. It is just a matter of how long. While fossil-based plastics can take thousands of years, plastics with photodegradable or enzyme based additives also break down to microplastics, albeit in comparatively shorter duration. Dr. Bio products compost at a rapid speed of a maximum of six months as tested for ISO 17088 standard. We have also undertaken studies to understand its impact on plant life, and even if left in the soil, it does not affect the stem growth of the plants.

Compostable plastics are made of industrial and/or food grade corn starch which is one of the most important ingredients for our product. Since the ingredient can be extracted from excess supply or even from, for instance, agro products that are deemed unfit for human consumption, it reduces the burden on the water table as we do not need to specifically cultivate products for industrial use.

The products can be recycled in the same way as regular plastics and do not require any unique infrastructure. Hence, these have both recyclability and composting values.

**What are the barriers to the adoption of bio based/ biodegradable polymers by processors in terms of processing/ machinery/ product design/ cost of output?**

The biggest barrier would be cost. Cost of biopolymers is normally a little higher than traditional plastics. However, if one were to look at high value products such as cosmetics, the impact of the incremental cost of using compostable plastic against the overall price of the product is very marginal and does not impact the overall value of the product. Hence, there is greater adoption in the premium product segments. Sustainability goals of organizations also impact adoption and is one of the biggest demand drivers for use of biopolymers.

Today, the Govt of India through its latest PWM Rules has increased the weight of bags from 50 microns to 120 microns. This initiative gives compostable plastics a fair chance to compete as the desired result can be achieved with a lower micron (our bags can be made in 30 microns) without any far-reaching impact on the cost.

There is no significant impact on present design, machinery or processing itself as our products come with similar properties as regular polymers such PP or PE. Our bio plastics have a good enough OTR and WBTR and can also replace MLPs by combining with 80% PE. Our products have been tested for safety in food applications and we are also awaiting the USFDA approval for the same. We are also testing our products for liquids with IIPCA, and other labs and expect to receive the same in the coming quarter as it will allow us to use bio polymers in food grade contact.

What are the measures needed to improve market (consumer) adoption of such packaging, which is often seen as more expensive and mostly used by premium labels?
First and foremost, as an industry, we need to examine alternate renewable sources such as paper, glass etc and weigh the benefits and disadvantages. For example, recycled paper demands huge water consumption for conversion to pulp and back into paper; it also takes a lot more paper to improve the strength of the recycled product and lastly, use of PE lamination in paper packaging eventually makes it more harmful to the environment. It is much more sustainable to replace recycled paper with compostable plastics.

Brand owners and industries such as e-commerce are huge consumers of packaging. They must take a lead and change their strategy from paper packaging to compostable polymers. As the bio plastics concept is still comparatively new, there is limited initiative on the part of e-commerce segment to adopt bio polymers. An enormous amount of packaging is used in e-commerce and hence adoption should be done in a phased manner. Paper/ Glass alternatives will eventually have untold impact on our environment and this needs to be recognized. Lack of standards for paper products is also a deterrent and as a result, we are turning a renewable resource to a non-renewable one.

Cosmetics, hygiene, personal care products, are often carelessly discarded. Hence these industries need to lead the change. A top to bottom approach is important on encouraging this shift in consumer mind set.

Uniform federal laws are also needed and processors need to be ready for the change in laws so that they do not miss out on business opportunities. Strategies need to be designed to gradually switch to compostable products if we are to reduce environmental damage.

**What are the measures needed to enhance production capacities of non-fossil polymers in India?**

We are the first approved biopolymer manufacturer in India and there is huge potential for a greater number of players in the market. At this point however, we need to first start with market creation. If the demand increases, the supply will too. The market is currently at a nascent stage and demand/supply in India are presently in sync. Furthermore, other than for plastic bags, there is no mandate from the Govt. to use compostable plastics in other applications such as disposable cutlery, etc. Use of Compostable plastic bags have been successfully implemented in a few states and must be enforced across the country. This will increase demand for compostable bags as its merits are proven.

We also need to make greater efforts to research indigenous sources of starch, whether potatoes, corn or tapioca, etc. India has huge supply of Maida/Corn, for instance. Our company has 8 manufacturing units in India, including one in Punjab which is the country's largest producer of Maida/Corn. Being close to the source makes raw material procurement easy. Also, integrating with local agricultural communities becomes an optimal solution for all stakeholders and helps boost agriculture & production.

**What is the impact of use of bio-based polymers on India's current recycling infrastructure? Are these recycled, can they be reused, etc?**

There is no impact on recycling and compostable plastics can be recycled like fossil based plastics. It can be mixed with other recyclable plastics as its tensile strength is the same as other virgin polymers. However, if there is a delay of say 3 months, biopolymers may lose some strength though it can still be converted to recyclable products. To sum it up, compostable plastics can be recycled as well as composted. We have already validated the same.

**What product segments have a high demand for bio based polymers? What are some of the emerging opportunities?**

Bags are currently the biggest application due to the Govt mandate in many states. We are also working on numerous other applications such as electronics manufacturer for keyboards, spectacle frames, water bottles, disposable cutlery, bio-polymer laminates for paper cups, etc. Cosmetics is another focus area and so are gardening applications, agricultural films or mulch, and even pens!

**What are India's opportunities for exports considering that currently, we are largely import dependant and the usage in volume terms is very low?**

We have a huge opportunity for exports. India has a wide agricultural base and our starch quality from corn or tapioca which is the key ingredient, is reasonably good. We export to 45 countries and at least half of them are testing our products with their customers and we are seeing an increase in adoption. Single use plastics have been banned in nearly 60 countries and these countries are excellent opportunities for bioplastics. Europe is a leader in adopting the use of bio plastics. USA, South Africa and Australia are also taking similar initiatives. Certification standards have been introduced in Europe and USA as well.



# POLYMER PRICE TRACKER (DOMESTIC MARKET)
# MAY 2021

| | | | | |
|---|---|---|---|---|
| High Density Polyethylene (HDPE) | | | | • HDPE prices fell by Rs 6500 per MT in May 2021 after a minor decline in April 2021. HDPE prices had increase by Rs 7000 per MT in March 2021.<br>• In May 2021, HDPE prices eased by Rs 2000 per MT in the first week and by Rs 3000 per MT in the second week and Rs 1500 per MT around mid-month. |
| ↑ | ↓ | ↓ | | |
| Mar-21 | Apr-21 | May-21 | | |
| Linear Low-Density Polyethylene (LLDPE) | | | | • LLDPE prices fell by Rs 9500 per MT in May 2021 after a decline of Rs 3000 per MT in April 2021 and an increase of Rs 7000 per MT in March 2021.<br>• In May 2021, LLDPE prices eased by Rs 2500 per MT in the first week and later again by Rs 5000 per MT in the second week and Rs 2000 per MT around mid-month. |
| ↑ | ↓ | ↓ | | |
| Mar-21 | Apr-21 | May-21 | | |
| Low Density Polyethylene (LDPE) | | | | • LDPE prices dropped by Rs 11500 per MT in May 2021 after an increase of Rs 7000 per MT in April 2021 and Rs 6500 per MT in March 2021.<br>• In May 2021, LDPE prices witnessed a fall of Rs 5000 per MT in the second week and Rs 6500 per MT around mid-month. |
| ↑ | ↑ | ↓ | | |
| Mar-21 | Apr-21 | May-21 | | |
| Polypropylene (PP) | | | | • PP prices lowered by Rs 8500 per MT in May 2021 after a decline of Rs 3000 per MT in April 2021 and an increase of Rs 14500 per MT in March 2021.<br>• In May 2021, PP prices eased by Rs 2000 per MT in the first week, Rs 3500 per MT in the second week and Rs 3000 per MT around mid-month. |
| ↑ | ↓ | ↓ | | |
| Mar-21 | Apr-21 | May-21 | | |
| Polyvinyl Chloride (PVC) | | | | • PVC prices fell by Rs 4500 per MT in May 2021 after an increase of Rs 2500 per MT in April 2021 & Rs 12500 per MT in March 2021.<br>• In May 2021, PVC prices witnessed a minor decline in the first week of the month. Thereafter, a major price reduction was announced in the third week. |
| ↑ | ↑ | ↓ | | |
| Mar-21 | Apr-21 | May-21 | | |



# Polytetrafluoroethylene Resin (PTFE)

Polytetrafluoroethylene resin (or PTFE) is a specialized engineering plastic formed by polymerization of monomer tetrafluoroethylene in the presence of an initiator. Commonly known as Teflon, PTFE provides distinguishing qualities like extreme chemical inertness, optimum dielectric properties, heat resistance capability and low frictional co-efficient. PTFE is used in a range of applications including aerospace, automotive, cookware, electrical, electronics and pharmaceutical. The product is classified under Sub-heading 390461 of the Harmonized System (HS) of Coding.

World-wide import of Polytetrafluoroethylene resin stands at USD 1.1 billion per year.

- In 2020, top-5 exporting countries of Polytetrafluoroethylene resin were: China (21.1%), Germany (13.1%), United States of America (11.5%), India (9.7%), and Italy (9.7%).
- Likewise, top-5 importing countries of Polytetrafluoroethylene resin were: United States of America (14.1%), Germany (10.2%), Italy (9.4%), China (8.4%), and South Korea (7.7%).

India is among the top-5 exporters of Polytetrafluoroethylene resin in the world. In 2020, India exported 10,383 tonnes of Polytetrafluoroethylene resin valued at USD 93.6 million to the world. Germany and the United States of America were the two major destinations for export of Polytetrafluoroethylene resin from India.

| Destination Country | Value (USD Mn) | Destination Country | Qty. (Tonnes) |
|---|---|---|---|
| Germany | 26.60 | Germany | 2,815 |
| United States of America | 24.44 | United States of America | 2,737 |
| Italy | 9.62 | Italy | 1,390 |
| China | 6.70 | China | 881 |
| Turkey | 6.65 | Turkey | 646 |
| Brazil | 4.53 | United Kingdom | 394 |
| United Kingdom | 4.48 | Brazil | 388 |
| Japan | 3.35 | Japan | 294 |
| Singapore | 1.22 | Canada | 154 |
| South Korea | 1.03 | Singapore | 122 |

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





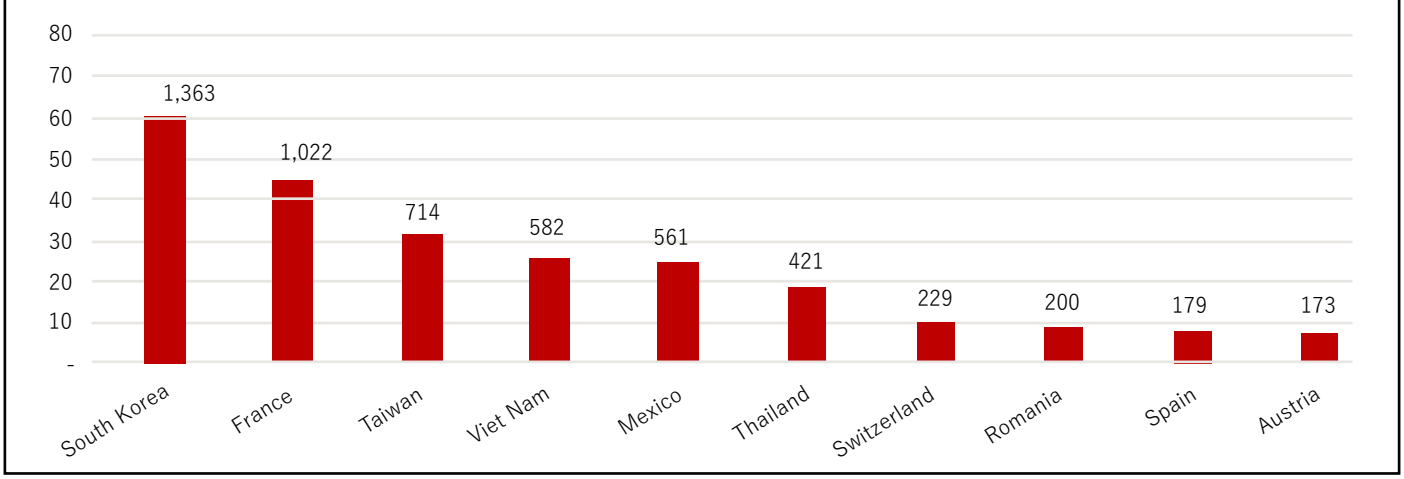
India is also an importer of Polytetrafluoroethylene resin. In 2020, India imported 2,810 tonnes of Polytetrafluoroethylene resin valued at USD 24.9 million from the world. United States of America and China were the major source for India's imports.

| Source Country | Value (USD Mn) | Source Country | Qty. (Tonnes) |
|---|---|---|---|
| United States of America | 7.25 | United States of America | 792 |
| China | 5.14 | China | 742 |
| Netherlands | 3.14 | Italy | 264 |
| Switzerland | 1.85 | Netherlands | 220 |
| Italy | 1.67 | South Korea | 197 |
| Germany | 1.56 | Russia | 166 |
| Japan | 1.31 | Switzerland | 137 |
| South Korea | 0.99 | Germany | 122 |
| Russia | 0.80 | Japan | 87 |
| Belgium | 0.49 | Australia | 35 |

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

Our internal research indicates that Indian firms dealing in Polytetrafluoroethylene resin have immense potential to export to destinations like South Korea, France, Taiwan, Viet Nam, Mexico, Thailand, Switzerland, Romania, Spain, and Austria.

**Import of Polytetrafluoroethylene resin in USD Million – 2020**




Source: Trade Map, Plexconcil Research

M/s Gujarat Fluorochemicals Limited and M/s Hindustan Fluorocarbons Limited are the only manufacturers of Polytetrafluoroethylene in India. M/s Gujarat Fluorochemicals Limited is the fourth largest manufacture of PTFE in the world.




# PACKAGING SUSTAINABILITY



**Dr. Gaurav Madhu, Joint Director – IIP Hyderabad**

Today, India is one of the fastest growing economies in the world. Forward looking policies by the Government and continued investments in manufacturing and other industries is enabling this growth and leading to rapid development and urbanization. But with most inspiring stories of urban and industrial progress emerges some disturbing challenges – the menace of waste, pollution, depletion of non-renewable and natural resources and threats to environmental sustainability.

India a highly populated country and the production of solid waste poses a significant environmental problem. A recent study reported that India generates over 1,50,000 tones of municipal solid waste (msw) per day. According to World Bank, India's daily waste generation will reach 3,77,000 tons by 2025. Industries would continue to spend hefty amounts for managing, marketing and disposing waste but these efforts may not be sufficient to beat the waste menace added every year. The problem is much deeper and is ingrained in the fundamentals of the way businesses and economies operate. The problem begs for a complete paradigm shift.

Packaging is the largest form of domestic garbage that was recognized in 1999 and amounted the 33.1% of solid waste measured by weight. There is an urgent need to develop a strategic plan to utilize presently produced solid waste in a manner that it does not create any environmental problem. In short, sustainable solutions should be adopted.

The concept of sustainable packaging or 'Green Packaging' thus evolved to demonstrate the use of materials and manufacturing methods for the packaging with low impact on both energy consumption and on the environment.

**What is Sustainable Packaging?**

According to the dictionary meaning, sustainable packaging is the development and use of packaging that results in improved sustainability. It involves increased use of Life Cycle Inventory (LCI) and Life Cycle Assessment (LCA) as a guidance for packaging materials that leave an ecological footprint. It also includes a look at entire product chains, from product design to marketing to the end of life (LCA). The main objective of sustainable packaging is to improve the long term viability and quality of life for humans and the longevity of the ecosystem.

Sustainable packaging must meet the functional and economic needs of the present without compromising the ability of future generation to meet its own needs. Sustainable packaging is a relatively new addition to the environmental consideration for packaging and requires greater analysis and documentation including package design, choice of materials, processing and life cycle. Many companies are implementing eco-friendly, actions with the objective to reduce their carbon footprint by using recycled materials and reusing package components.




Sustainable packaging is a subset of sustainable development. It is an approach that emphasizes the use of technologies that will have the least impact on the environmental resources and ecological conditions. It includes factors such as minimalistic package design, recycling of packaging materials, using recycling packaging materials, reducing energy use and eliminating the release of harmful by-products including greenhouse gases, toxins and other containments.

## Strategic approaches for Sustainable Packaging

A proper sustainable packaging strategy cannot be a one-time effort. It must be ongoing, periodically evaluated and continuously improved. There is no single magic solution for environmentally sustainable packaging and packaging professionals must consider different approaches to achieve this mission. Some recommendations include:

### (a) Packages to be developed from single layer materials

In order to achieve recycling objectives, packages need to be developed or designed from single layer or single-family materials. For example, in India, milk products are developed from 3 layered Polymeric materials of polyolefin group which can be layered easily. Similarly, rigid plastic containers need to be manufactured either by injection moulding or blow moulding process from a single polymeric material like HDPE. Such post-consumer plastic waste can be recycled easily and converted into recycled polymeric granules as raw materials in manufacturing other non-packaging application.




### (b) Packages should have optimum weight with high functional properties

In general, the packages made of flexible or rigid plastics, metal or glass with higher weight leads to greater consumption of packaging material. Hence, we should develop packaging that is lighter so that there is reduced consumption of material, albeit without compromising functional properties. In the case of plastics, the selection of a particular grade of polymer become crucial. Similarly, special alloy grade materials need to be used for metal containers & innovative process should be adopted to develop walled glass containers.




### (c) Designing Returnable package

This approach is highly applicable for the liquid food products like milk and beverages. For example, glass bottles should be used only if a proper collection mechanism is adopted for collection of empty bottles. These bottles must be subjected to proper washing cycle and sent back to the production unit for filling of liquid food product, However, precautions must be taken to ensure no residual material is left after washing. Attention must also be given to increase the strength of the bottle so that the chances of breakages during handling, storage and transportation is reduced to comply with sustain-

able practices.

### (d) Optimizing the production process

The optimization of production process can be achieved by optimizing the quality of raw material, controlling the processing machine parameters to ensure minimal wastage and energy consumption. In short, the inputs for the process should be controlled and monitored effectively to get the maximum output.

### (e) Adoption of Automation in manufacturing

It is advisable to install new equipments by eliminating old machinery in the processing line for packaging manufacturing. This not only enhances plant productivity but also minimizes the wastage or scrap materials from the manufacturing operation. Adoption of automation is another way to increase the efficiencies, ensure process control and minimize the number of operations in the process resulting into the reduced manufacturing costs. This is a sustainable way to reduce per unit cost of the product and to ensure market competitiveness.

### (f) Optimization of supply chain and distribution network

In the competitive business scenario, optimum supply chain management plays an important role in the growth of business. Improved efficiency levels in supply chain and proper distribution network prevents “stock out” situations and packaging manufacturers should optimize SCM to avoid crisis situations in their supplies. It is well known fact that packaging companies are considered as service sector and hence, timely delivery of packaging materials to the user industry is crucial.

## Conclusion




There is an enhanced environmental awareness among people today and consumers are recognizing the ecological impact of their choices. They are now willing to pay more to use durable goods that have minimum environmental footprint. Being eco-friendly as a brand and business philosophy is increasingly being acknowledged. Several companies are taking initiatives to incorporate the model of economic circularity in the way they operate, source and reuse. However, the packaging companies need to take effective initiatives and efforts to develop innovative packaging materials and systems that make for sustainable solutions for the future.




# SONCAP Certificate: A Requirement For Importation Of Goods Into Nigeria

**Introduction**

The Standard Organisation of Nigeria (SON) was established by the Standard Organisation of Nigeria Act (No 56) of 1971 with the mandate to set the Standards for manufacturing and sale of products, materials, processes and services amongst others; to certify and provide assistance in the production of quality of goods and services; and improve measurement accuracies and circulation of information relating to standards.

The SON in 2005, introduced the Standards Organisation of Nigeria Conformity Assessment Program (the "Program") to address the problem of substandard and unsafe products imported into the country. Under the Program, certain imported products1, are required to be inspected to conform with essential requirements, technical regulations and approved industrial standards before importation into Nigeria.

For convenience and efficiency, the SON accredited some independent firms such as Cotecna, Intertek, SGS, CCIC etc ("Accredited Firms") to process and issue SONCAP Certificate on behalf of the SON2.

Below is a summary of the procedure for obtaining a SONCAP Certificate.

**What are the steps to obtaining a SONCAP Certificate?**

A Product Certificate ("PC") is a mandatory requirement for products regulated by the SON. The PC is also a pre-requisite for the issuance of a SONCAP Certificate for imported products. There are three (3) categories of PCs and an importer may make an application based on frequency as described in the table below.

PC type Preference Validity Period

| | PC type | Preference | Validity Period |
|---|---|---|---|
| 1 | Product Certificate one | Preferred for one-time importers | 6 months |
| 2 | Product Certificate two | Preferred for occasional importers | 1 year |
| 3 | Product Certificate three | Preferred for frequent importers | 1 year |

**How should an application for a PC be made?**

An application for a PC should be accompanied by the following documents3;

- an application form;
- an ISO 9001 Certificate of the manufacturer;
- a test report of the product from an accredited ISO17025 laboratory4;
- a quality declaration from the manufacturer;
- a picture of the product or a sample of the product (where the Accredited Firm requests);
- all other quality documents available; and
- Factory Inspection/Audit (applicable only for PC 3).

**How long does it take to process a PC?**

Provided that all the required information and documentation are satisfactory, the PC will generally be issued between three to seven (3-7) days depending on the Accredited Firm.

**What is the next step after obtaining the PC?**

The next step is to obtain an e-Form M5 required for the clearing of products at the Nigerian port. The PC is used to process the e-Form M on the Nigerian Single window for trade portal or through an authorised dealer (usually a commercial bank). Upon approval by an authorised dealer and registration by the Nigeria Customs Service (NCS), the importer may then proceed to apply for a SONCAP Certificate.

Upon successfully obtaining the e- Form M, the importer may apply for a SONCAP Certificate through one of the Accredited Firms. The SONCAP Certificate is linked to the PC obtained for the product and a particular shipment may or may not be subject to inspection based on the category of the PC obtained as described in the table below.

| PC Type | Inspection Rate |
|---|---|
| Product Certificate one | 100% inspection rate |
| Product Certificate two | 40% inspection rate |
| Product Certificate three | 20% inspection rate |

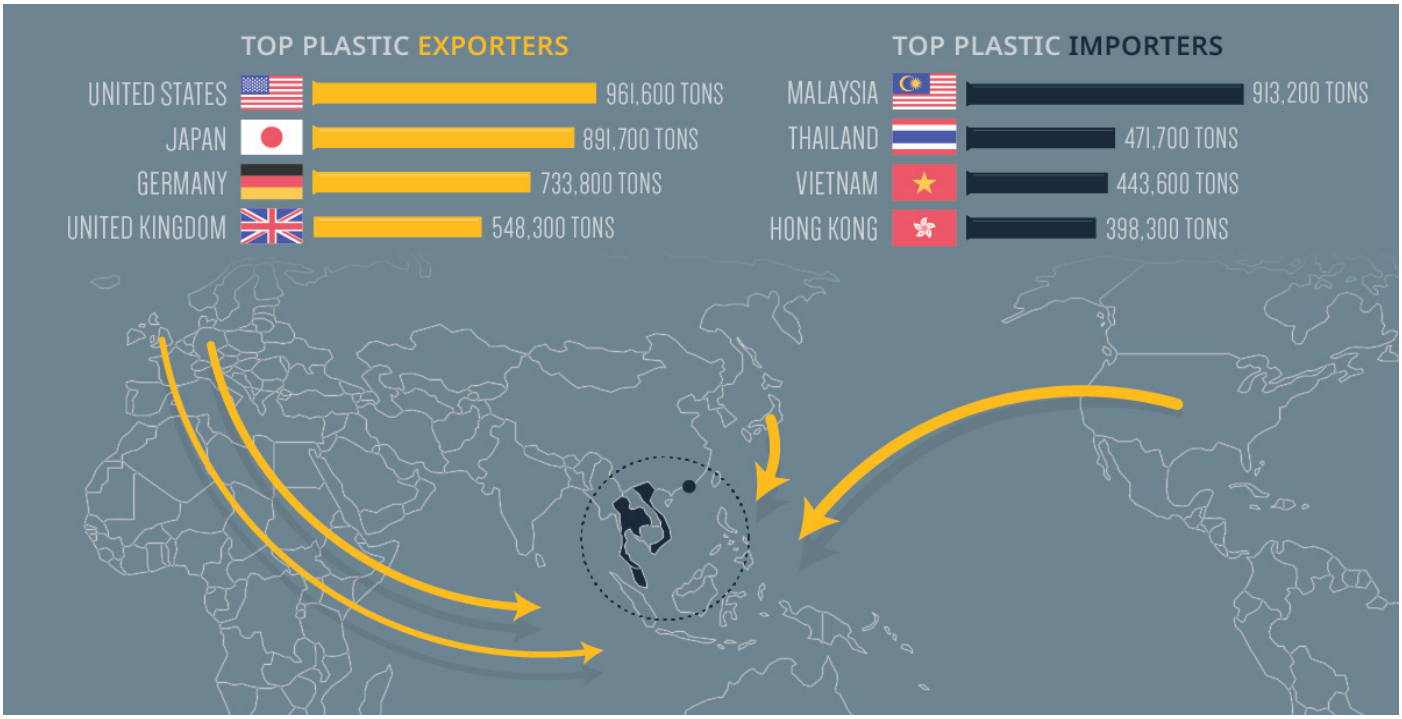
**How should an application for SONCAP be made?**

To process a SONCAP Certificate, a company will be required to provide the following:

- SONCAP application/ request for certificate form
- A Valid PC for each product;
- Tax Identification Number;
- Pro forma Invoice; and
- E-Form M.

**Conclusion**

A SONCAP Certificate is a condition precedent required for the clearance of products at the Nigerian port6. This has played a pivotal role in reducing the importation and sale of substandard products in the country. The Program has proven to be a step in the right direction in ensuring the availability of quality products in Nigeria.
Source: https://www.mondaq.com/nigeria/international-trade-investment/1047172/soncap-certificate-a-requirement-for-importation-of-goods-into-nigeria-




# Mapping the Flow of the World's Plastic Waste

*This article was published in 2019 and has been reproduced from visualcapitalist.com*

The first plastic material, Bakelite, was invented in 1907. It made its way into everything you can imagine; telephones, chess pieces, Chanel jewelry, and electric guitars.
But it was in 1950 that our thirst for plastic truly began. In just 65 years, plastic production soared almost 200 times, resulting in about 6,300 million metric tons of waste today.

How does the world deal with this much debris? The truth is, a lot of plastic waste—both trash and recycled materials—is often shipped overseas to become someone else's problem.

**The Top Exporters and Importers of Plastic Waste**

In honor of International Plastic Bag-Free day, today's graphic uses data from The Guardian to uncover where the world's plastic waste comes from, and who receives the bulk of these flows.

The U.S. could fill up 68,000 shipping containers with its annual plastic waste exports. Put another way, 6,000 blue whales would weigh less than this nearly one million tons of waste exports.

Given the amount of plastic which ends up in our oceans, this comparison is just cause for alarm. But one interesting thing to note is that overall totals have halved since 2016:

- **Top 21 total exports (Jan-Nov 2016): 11,342,439 tons**
- **Top 21 total exports (Jan-Nov 2018): 5,828,257 tons**
- **Percentage change (2016 to 2018): -49%**

The world didn't suddenly stop producing plastic waste overnight. So, what caused the decline?

| Top Exporters, Jan-Nov 2018 | | Top Importers, Jan-Nov 2018 | |
|---|---|---|---|
| United States | 961,563 tons | Malaysia | 913,165 tons |
| Japan | 891,719 tons | Thailand | 471,724 tons |
| Germany | 733,756 tons | Vietnam | 443,615 tons |
| United Kingdom | 548,256 tons | Hong Kong | 398,261 tons |

### China Cuts Ties with International Plastic Imports

Over recent years, the trajectory of plastic exports has mimicked the movement of plastic waste into China, including the steep plummet that starts in 2018. After being the world's dumping ground for decades, China enacted a new policy, dubbed "National Sword", to ban foreign recyclables. The ban, which includes plastics, has left the world scrambling to find other outlets for its waste.

In response, top exporters quickly turned to other countries in Southeast Asia, such as Malaysia, Vietnam, and Thailand.

That didn't completely stop plastic waste from seeping through, though. China previously imported 600,000 tons of plastic monthly, but since the policy only restricted 24 types of solid waste, 30,000 tons per month still entered the country post-ban, primarily from these countries:

- Indonesia: 7,000 tons per month
- Malaysia: 6,000 tons per month
- United States: 5,500 tons per month
- Japan: 4,000 tons per month

Many countries bearing the load of the world's garbage are planning to follow in China's footsteps and issue embargoes of their own. What does that mean for the future?

### Recycle and Reuse; But Above All, Reduce

The immense amounts of plastic waste sent overseas include recycled and recyclable materials. That's because most countries don't have the means to manage their recycling properly, contrary to public belief. What is being done to mitigate waste in the future?

#### Improve domestic recycling

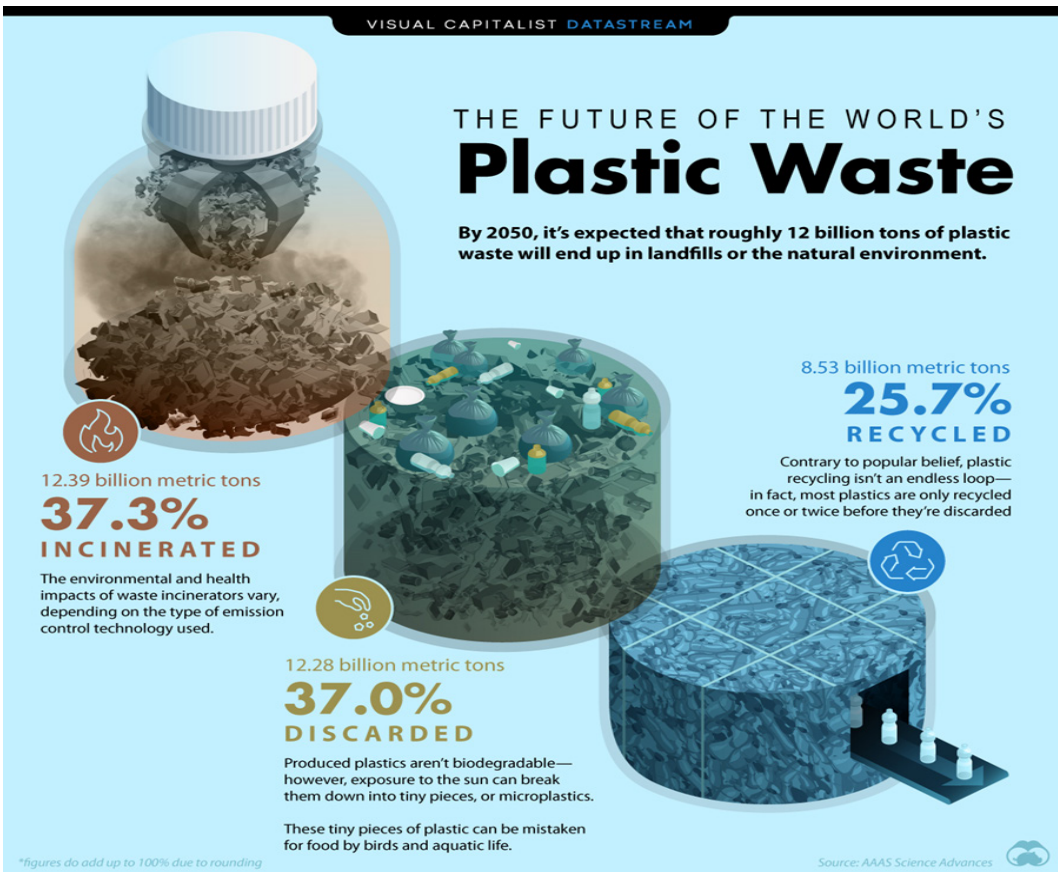
Waste Management is the largest recycling company in the United States. In 2018, it put $110 million towards building more plastic recycling infrastructure.

Meanwhile, tech giant Amazon invested $10 million in a fund that creates recycling infrastructure and services in different cities.

#### Reduce single-use plastics

Recycling on its own may not be enough, which is why countries are thinking bigger to cut down on "throw-away" culture.

The European Union passed a directive to ban disposable plastics and polystyrene "clamshell" containers, among other items, by 2021. More recently, California passed an ambitious bill to phase out single-use plastics by 2030.





# Optimizing Production Efficiently

The competitiveness of a plastic product manufacturer is highly dependent on the efficiency of the entire production process. Only 80 to 90 percent of injection molding machine capacity time actually consists of productive operation. Valuable manufacturing time is often lost due to scheduled downtime and technical failures as well as the set-up process. That is why you should make your production as efficient as possible.

### CYCLE TIME OPTIMIZATION: The Importance of Why

Cycle time plays a significant role in the injection molding process, including the quality of the parts produced, but especially the impact it makes on a company's financial bottom line. Further optimizing a molding cycle can improve the production process, lower energy and labor costs, while also increasing profits. An additional two seconds on a given cycle may require extra hours of production, in turn taking away expected profit, and lessening the return on investment. Eliminating seconds from a cycle time can lead to an increased number of parts produced in the same or less time, as well as increased profits by the thousands. However, reducing cycle times is not always a 'one size fit all' concept for mold makers when evaluating their production process and performance. Reducing cycle times may also lead to mold damage or compromise a part's quality, therefore should be carefully gauged and adjusted.



There are many areas to consider when trying to reduce cycle times during an injection molding process. A few to consider are:

- Cooling time optimization of mold
- Reducing nozzle force, instead of retracting the nozzle completely
- Strategically setting pause time just enough to drop the part – no more, no less – to eliminate excess movement
- Eliminate unnecessary movements
- Setting appropriate pause time to drop the part
- Open a mold only as far as needed

### MACHINE MAINTENANCE

To make full use of your production plant's potential and extend injection molding machine, component life maintenance on a regular base is mandatory. Only by thorough machine inspection and calibration, maximum efficiency and optimal functionality can be achieved.



The range of equipment checks should be tailored to your individual needs, depending on the requirements and the type of machine. Qualified specialists can inspect your systems at the intervals you outline, following standardized procedures and techniques. This can reduce both planned and unplanned downtime due to an irregular maintenance schedule.

Different maintenance services that are available:

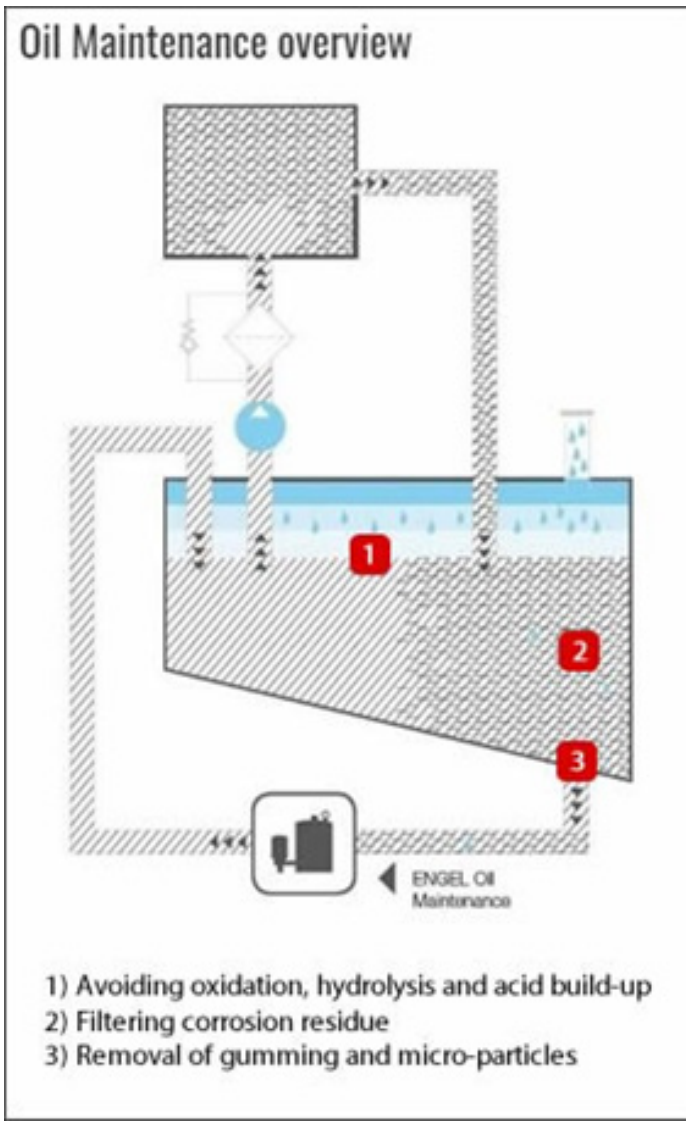
- Inspection - visual inspection of the machine, inspection checklist with 9 inspection categories which include up to 33 individual checks
- Safety check - inspection and test of safety-relevant machine parts
- Fluid service - hydraulic oil inspection, lubricant service, filter change
- Measuring & testing - function test, inspection of platen parallelism and injection unit
- Calibration - optimization of control parameters for cylinder heating, pressure and velocity, calibration of movements, pressure and velocity

## MOLD CHANGE

When the number of product changes and because of that mold set-ups increases, the utilization time of the machine decreases. Mold changeovers can be extremely time-consuming. To increase efficiency and of course productivity, fast mold exchange systems are the solution. It helps avoid the negative impact that multiple mold changeovers have on productivity and the resulting increase in component costs.

*Semi-automated mold change*

Mold changing can be equipped with automation, which accelerates process. A simple and comparatively cost-effective measure for optimizing mold changes is a menu-driven set-up. The software module guides the machine operator interactively through the procedure; the program steps are processed automatically where possible. Manual steps must be confirmed in the control software. Procedural errors are therefore ruled out. The procedure can be run beforehand as an offline computer simulation on a virtual machine and then transferred to the production machine for the actual set-up. Optionally, a pre-heating unit, standardized media couplings and high-speed mounting systems can be used and integrated into the software module checklist.




## OIL MAINTENANCE

The purpose of hydraulic oil in a hydraulic injection molding machine is to transfer power and enable movement of machine parts. During that movement, even the smallest particles of dirt can be released into the oil causing contamination. Believe it or not, contamination of the hydraulic oil is responsible for 80% of all hydraulic system failures. Consistent high oil quality and viscosity and a clean hydraulic system are indispensable for increasing productivity in the long-term. Without any precautions the hydraulic oil needs to be changed regularly. Failures can be caused by:

- **Particles -** Particles in the hydraulic oil collide with metal parts. This damages the surface and releases new metal particles. Hard particles between moving parts can result in deterioration.
- **Oil degradation -** Oxidation and high working temperatures of the hydraulic oil lead to
- resin build-up or resin deposits (gumming).
- **Water -** Water in the oil evaporates. The microscopically small vapor bubbles implode under high pressure. The resulting pressure peaks strip particles off the metal surface. Additionally, water in the oil causes equipment corrosion.

Oil maintenance helps to sustainably avoid unplanned downtime, reduce wear, maintenance and replacement costs and to produce in a more energy-efficient way by reducing friction. With the use of a small electric pump, the hydraulic oil constantly circulates through a cellulose cartridge, which removes dirt particles, condensed water and oil degradation products in a single step – clean oil is returned to the circulation stream. Clean oil, with constant quality and viscosity, can extended life expectancy up to 4 times for hydraulic components. It enhances the necessary maintenance interval on oil changes and tank cleanings. Oil related downtime can be reduced up to 55%. Oil Maintenance cartridges retain




oil degradation products.
Source: PTOnline



# International News

**SK Innovation acquires 10% stake in Loop Industries**

SK Global Chemical announced today its decision to make a strategic equity investment in Loop Industries, a clean technology innovator, on a mission to accelerate a sustainable plastics economy. The companies intend to partner in a Joint Venture with exclusivity to commercialize Loop's sustainable polyethylene terephthalate ("PET") plastic and polyester fiber manufacturing technology throughout Asia.




With this investment of 56.5 million USD, SK Global Chemical will purchase a total of 4.71 million shares of common stock of Loop Industries, amounting to a 10% stake in the company.

Loop Industries is a Canadian-based NASDAQ-listed company that owns patented depolymerization technology that recycles waste PET plastics and polyester fiber. Loop Industries intends to begin building PET manufacturing facilities in Canada and Europe in the next year.

SKGC has been paying attention to chemical decomposition, a key solution that can fundamentally solve the plastic waste. The company particularly focus on eco-friendly technologies that can maintain the quality of PET even after being recycled repeatedly.

Among chemical decomposition technologies, the depolymerization technology owned by Loop is known as one of the most complex one. Loop's innovative, low-energy depolymerization technology breaks down low and no-value waste PET that would otherwise be sent to landfills or incinerators. Compared to traditional mechanical recycling that can cause degradation in PET quality, Loop's technology causes no degradation in quality or strength, and can be repeated infinitely. This means the waste PET and polyester fibers can be restored to original raw material state, and recycled 100% with the same quality as new products. It is an eco-friendly technology that presents an important solution to address the global waste plastics issue.

SK Global Chemical and Loop Industries intend to form a joint venture next year with exclusivity to commercialize Loop's sustainable PET plastic and polyester fiber manufacturing technology throughout Asia. The two companies plan to begin construction of a production facility that can annually recycle 84,000 tons of waste PET in 2023, then accelerate to process a total of 400,000 tons of waste PET per year by building four production facilities in Asia by 2030.

Source: India Chemical News

## Aramco raises US $6 bn

The Saudi Arabian Oil Company has successfully raised US $6 billion, following the sale of US dollar-denominated Shariah-compliant securities to leading institutional investors.

The issuance comprised three tranches of senior unsecured Sukuk trust certificates issued under Aramco's newly established International Sukuk Program, with the funds raised allocated for general corporate purposes. The three tranches included: $1,000,000,000 maturing in 2024, carrying a profit rate of 0.946%; $2,000,000,000 maturing in 2026, carrying a profit rate of 1.602%; and $3,000,000,000 maturing in 2031, carrying a profit rate of 2.694%.

Aramco President & CEO, Amin H. Nasser, said, "We are very pleased with the global investment community's response to Aramco's first international dollar Sukuk, which attracted demand 20 times the initial targeted issuance size. The outcome demonstrates further evidence of Aramco's unique value proposition, which is underwritten by its operational and financial resilience. This is of course made possible by our employees, who continue to make a difference by safely and reliably delivering energy to the world."

Khalid Al-Dabbagh, Aramco Senior Vice President of Finance, Strategy and Development, said, "We are delighted with the strong reception for our inaugural international Sukuk offering that led to the largest order book ever recorded globally for a dollar-denominated Sukuk transaction, with orders exceeding US $60 billion. The success of the transaction is a strong endorsement from the global investment community of our leading position in the industry, and our ability to deliver on our long-term business strategy. The issuance attracted more than 100 new investors across the globe."

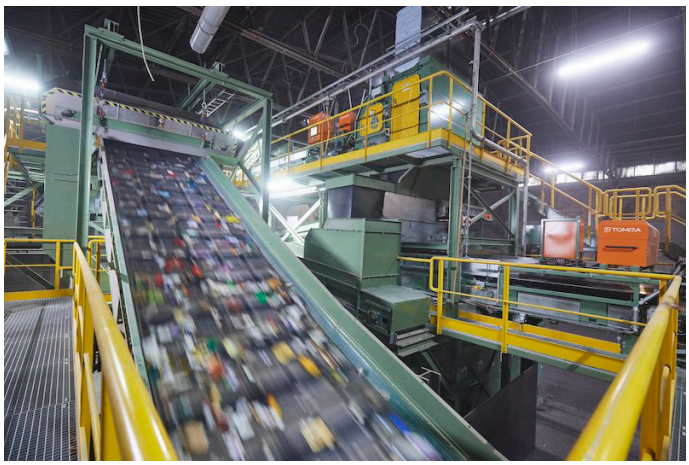
The transaction settled on June 17, 2021 with the Sukuk admitted to the official list of the United Kingdom Financial Conduct Authority, for trading on the London Stock Exchange's main market.

Source: India Chemical News

## INEOS Styrolution offers mechanically recycled PS developed in collaboration with TOMRA

Production of the new Styrolution PS ECO 440 is based on TOMRA's high-quality NIR sorting process delivering a polystyrene purity of more than 99.9%. The new material is available in white and light grey.

This new polystyrene solution is suitable across a wide range of applications and will enable INEOS Styrolution customers to address sustainability goals and contribute to a circular economy for plastics.



The first available grade is Styrolution PS ECO 440 MR100 WHITE. The suffix 'MR100' indicates that the material contains 100% post-consumer recycled content.

INEOS Styrolution follows the concept of using Styrolution PS ECO material behind a functional barrier making the material suitable for food contact applications such as XPS foam food packaging trays. The concept, which conforms with requirements under FC Regulation (EU) No 10/2011, is based on a layer of virgin polystyrene enclosing the recycled polystyrene.

Dr Frank Eisenträger, Product Director PS EMEA, INEOS Styrolution, said: "We will start production in EMEA with up to 1,000 tonnes in 2021, working very hard to grow volumes in line with our pledge to use on average 30% recycled content in products destined for polystyrene packaging in Europe by 2025."

Jürgen Priesters, SVP, Circular Economy at TOMRA, added: "As the strategic partner in driving transformation, we are excited to contribute to a unique solution offering true circularity of polystyrene"

The new solution complements INEOS Styrolution's ambitious efforts to commercialise recycled polystyrene based on advanced recycling technologies.

Source: Interplasinsights

**World's First 100% Enzyme-Recycled PET Plastic Bottles Debut**

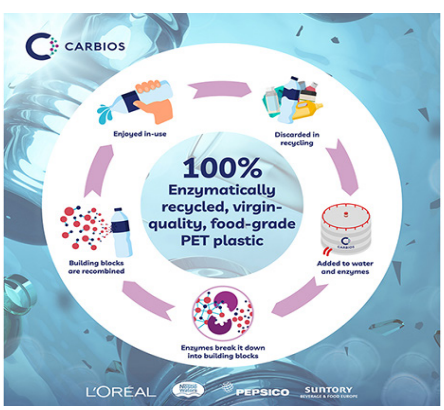
The promise of endlessly recycled PET plastic is one step closer as the Consortium of Carbios, L'Oréal, Nestlé Waters, PepsiCo and Suntory Beverage & Food Europe announced the successful production of the world's first food-grade PET plastic bottles produced entirely from enzymatically recycled plastic.




Each Consortium company has successfully manufactured sample bottles based on Carbios' enzymatic PET recycling technology for some of their leading products including: Biotherm, Perrier, Pepsi Max and Orangina.

It's the culmination of nearly 10 years' research and development by Carbios to create a new process and supercharge an enzyme naturally occurring in compost heaps that normally breaks down leaf membranes of dead plants. By adapting this enzyme, Carbios has fine-tuned the technology and optimized this enzyme to break down any kind of PET plastic (regardless of color or complexity) into its building blocks, which can then be turned back into like-new, virgin-quality plastic.

Carbios' patented enzymatic PET recycling process enables a wide variety of PET plastics to be recycled into virgin quality, food grade rPET. PET plastics that would otherwise go to waste or be incinerated, can now be brought back into a continuous circular system of recycling. And this can be achieved at high speed — breaking down 97% of plastic in just 16 hours. That's 10,000 times more efficient than any biological plastic recycling trial to date (peer-reviewed article in Nature).




Together, these brands will work to scale this innovation to help meet the global demand for sustainable packaging solutions. In September 2021, Carbios will break ground on a demonstration plant, before launching a 40,000 tons capacity industrial facility, by 2025.

Enzymatic recycling overcomes the issue of degradation in conventional recycling and can be used on any type of PET plastic. Because Carbios' recycling process works under mild conditions, it could also lower the carbon footprint of PET waste treatment by saving 30% of CO2 emissions compared to a conventional end of life mix of incineration and landfill, taking virgin PET production substitution into account.***

The successful completion of these initial food-grade bottles is a major milestone in the Consortium's validation of Carbios' technology. This partnership is part of a growing trend amongst brands to collaborate across industries to tackle these global challenges, working towards a world of circularity, where we limit the production of virgin plastic.

Carbios will license its technology to PET manufacturers worldwide, accelerating the global adoption of enzymatic recycling for all kinds of PET based products.

Source: Plastics Today

**First Recycled Lego Brick Prototype Built**

A prototype Lego brick made from recycled plastic was unveiled by The Lego Group today. It's the latest step in the brand's journey to make Lego products from sustainable materials.

The new prototype, which uses PET plastic from discarded bottles, is the first brick made from a recycled material to meet the company's strict quality and safety requirements.

A team of more than 150 people are working to find sustainable solutions for Lego products. Over the past three years, materials scientists and engineers tested over 250 variations of PET materials and hundreds of other plastic formulations. The result is a prototype that meets several of their quality, safety, and play requirements.

Tim Brooks, VP of environmental responsibility at the Lego Group, says "we are super excited about this breakthrough. The biggest challenge on our sustainability journey is rethinking and innovating new materials that are as durable, strong, and high quality as our existing bricks — and fit with Lego elements made over the past 60 years. With this prototype we're able to showcase the progress we're making."



It will be some time before bricks made from a recycled material appear in Lego product boxes. The team will continue testing and developing the PET formulation and then assess whether to move to the pilot production phase. This next phase of testing is expected to take at least a year.

“We know kids care about the environment and want us to make our products more sustainable,” Brooks says. “Even though it will be a while before they will be able to play with bricks made from recycled plastic, we want to let kids know we’re working on it and bring them along on the journey with us. Experimentation and failing are important parts of learning and innovation. Just as kids build, unbuild and rebuild with Lego bricks at home, we’re doing the same in our lab.”

*A 1-liter bottle yields how many Lego bricks?*

The prototype is made from recycled PET sourced from suppliers in the US that use US Food & Drug Administration (FDA) and European Food Safety Authority (EFSA) approved processes to ensure quality. On average, a one-liter plastic PET bottle provides enough raw material for ten 2 x 4 Lego bricks.

The patent-pending material formulation increases the durability of PET to make it strong enough for Lego bricks. The innovative process uses a bespoke compounding technology to combine the recycled PET with strengthening additives.

The recycled prototype brick is the latest development in making the Lego Group’s products more sustainable. In 2020, the company announced it will begin removing single-use plastic from its boxes. In 2018, it began producing elements from bio-polyethylene (bio-PE), made from sustainably sourced sugarcane. Many Lego sets contain elements made from bio-PE, which is perfect for making smaller, softer pieces such as trees, branches, leaves and accessories for minifigures. Bio-PE is not currently suitable for making harder, stronger elements such as the iconic Lego bricks.

Source: Plastics Today

**Inject direct: ENGEL processes waste as flakes**

At its live e-symposium 2021, ENGEL is presenting the new two-stage process to a trade audience for the first time. The process also offers benefits in the production of very large and thick-walled components with high shot weights.



The key to shortening the recycling process is breaking down plasticising and injection into two independent process steps. In the first stage, the raw material is melted in a conventional plasticising screw. In the second stage, the melt is transferred to a second screw for injection into the cavity. This process enables integration into a melt filter and degassing unit on the injection unit side of the injection moulding machine, so that products with a consistently high quality are obtained even from contaminated plastic flakes.

Pelletising recycled material is an energy-intensive process. The elimination of this step results in the reduction of a CO2 footprint, as well as an improved recycling cost.

As an alternative to an injection screw, the plasticising screw used for creating the melt can be combined with a piston unit. This variant of the two-stage process is also very efficient for processing very large shot weights of up to 160kg with a comparatively low injection pressure requirement. The two-stage process enables a more compact system design and a lower unit cost than is possible with a conventional single-stage plasticising and injection process.

ENGEL has developed a new piston design to eliminate the typical disadvantages of piston injection units when changing materials. The rheologically optimised piston tip supports uniform flushing around the piston, enabling fast material and colour changes.

Typical applications are containers, pallets or even large fittings. Starting at a shot weight of 20kg, processing efficiency increases significantly thanks to keeping the plasticising and injection processes separate.

Source: Interplasinsights

**Domestic Prime Resin in Scarce Supply**

Most spot polyethylene (PE) and polypropylene (PP) prices held steady for a second consecutive week. Although buyers were wishing and hoping to talk the market down, there was still no real sign that US commodity resin prices were headed for a reversal, reports the PlasticsExchange in its Market Update.



Some market participants pointed to the return to healthy reactor rates and corresponding build in some upstream resin inventories, but domestically produced prime resin was still very difficult to source in the spot market, as force majeure conditions and sales allocations remain in place for many producers. There was some resistance to market pricing early in the week of June 14, but buyers that truly needed material were unable to find a better deal and came back later in the week to pay suppliers' asking prices. Producers showed their intent on maintaining the firm undertone that has been the prevailing theme throughout this year by announcing another round of PE price increases for July. The July nominations came as June contracts have yet to be finalized but lean heavily toward implementation.

Spot PE demand remained robust and, once again, completed orders at the PlasticsExchange were limited by scarce resin availability. Despite stronger production rates, contract orders are filled first, leaving scant supplies for spot sales. One producer indicated they were already sold out for the next two months. Completed orders were spread out with low-density (LD) and linear-low-density (LLD) PE Film, and high-density (HD) PE Blow Mold business accounting for 81% of the PlasticsExchange total PE business for the week. The other main commodity grades — HDPE Film, LDPE Injection, and LLDPE Injection — saw moderate flow, accounting for the 19% balance of the resin clearinghouse's PE trading. All prime PE grades were transacting over $1.00/lb, except HDPE high-molecular-weight Film, which has been firming back higher again. HDPE Blow Mold still held the largest premium because of its scarcity and the impracticality of importing bottles, which is mostly just shipping air. PE demand from Mexico was just as strong as it was the week before. Producers likely will secure their average $0.05/lb increase for June PE contracts; in the meantime, at least three producers have announced their intention to increase prices again in July. Producers nominated price increases for June within a $0.05 to $0.07/lb range, driven by solid demand and limited supply.

*Dow raises PE resin prices*

Dow said it will increase the price for all PE resins sold in the United States by $0.05/lb for July, or as contracts allow. The company added that it was implementing its previously announced price increase of $0.07/lb for all HDPE resins and $0.05/lb for all LLDPE and LDPE resins sold in the United States, effective June 1.

LyondellBasell said its Equistar Chemicals business is increasing prices for all grades of PE products sold in North America by $0.05/lb, effective July 1. This is in addition to any previously announced price increases, including a $0.07/lb price increase implemented on June 1.

Meanwhile, Ineos announced a price increase of $0.03/lb for HDPE, effective July 1. The Ineos July increase was in addition to its previously announced price increase of $0.05/lb, effective June 1.

June PE contracts are expected to settle toward the end of the month. Buyer reaction to the nominated July increases has been thin, writes the PlasticsExchange, but there is growing market sentiment that June will see an increase.

*LyondellBasell declares force majeure*

The July price announcements also come with many producers still under force majeure or with contract allocations in place. LyondellBasell is the latest producer to declare force majeure, doing so on June 17 for LLDPE at its La Porte, Texas, facility following a Q1 reactor equipment failure. The notice comes after the company lifted its force majeure on all PE compounds in April, according to market participants. La Porte was already on force majeure for other PE products. LyondellBasell lifted force majeure on all products, except at its Chocolate Bayou, Matagorda, and La Porte facilities. LyondellBasell did not give a timeline for how long the force majeure would be in place but said it was evaluating the impact on production and logistics, and it would provide additional information once it assesses supply capabilities.

*Producers push for $0.08/lb PP resin increase*

As for PP trading, completed volumes were solid and, like PE, still limited by prompt availability. Homo- and co-polymer prices held on to their gains for another week, remaining in the vicinity of all-time highs. Co-polymer still commanded its $0.10/lb premium to homo-polymer, which has been intact since mid-May, reports the PlasticsExchange. Co-polymer was also the most actively traded grade at the PlasticsExchange last week. Domestic supply is limited, so most of the material was sourced from Asia and to a lesser extent the Middle East.

PP contracts will confirm higher again in June, with producers pushing for an $0.08/lb margin increase in addition to a rise in the June PGP contract. Perhaps we will see a total of $0.10 to $0.12/lb implemented, writes the PlasticsExchange. “We might expect producers to push for the lion’s share of the increase to be slanted toward margin, which is more sustainable than the cost-push PGP induced increase, some of which could potentially erode next month unless July monomer strengthens.”

Source: Plastics Today



# India News

**BPCL to establish a superabsorbent polymer technology plant in Kochi**

Bharat Petroleum Corporation Limited is setting up a Superabsorbent Polymer technology (SAP) demonstration plant of 200 tonne per annum at 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.

The demonstration project will be followed by setting up a commercial plant of 50,000 tonne per annum capacity, thereby saving foreign exchange worth ₹1,000 crore to make India #AtmaNirbhar in this niche and fast-growing segment, the company said in a statement.

P. Ravitej, Executive Director, Refineries, BPCL said the SAP process development is a pioneering initiative of the company's R&D towards independence in technology development and value addition to acrylic acid produced from the first world scale acrylic acid unit installed in India by BPCL".

The company continues to focus on an unending path of innovation and research to minimize costs and maximize returns with optimum utilization of resources. Mastering the chemistry of #SuperAbsorbentPolymer is a step ahead in this direction, the statement added.

**American Chemistry Council awards Solvay-partner for Indian sustainable guar initiative**

Solvay's partner in the Sustainable Guar Initiative, non-profit organization TechnoServe, has received the External Collaborator Award from the American Chemistry Council (ACC), for its commitment to working collaboratively with ACC members and others throughout the guar supply chain to drive sustainability and innovation.

The Sustainable Guar Initiative is an integrated program implemented by Solvay and its partners in collaboration with TechnoServe to teach and promote sustainable agricultural practices, and encourage women empowerment among guar bean farmers within the Bikaner desert district in Rajasthan, India. This program provides benefits upstream and downstream for our partners across the value chain, improving the livelihood of guar bean farmers by ensuring income durability and protecting local resources while considering the impact climate change has on their activities. This is an exemplary model for inclusive business and accelerates our Solvay One Planet commitment under our Better Life pillar.

The Sustainable Guar Initiative was initially set up in 2015 by Solvay, L'Oréal, TechnoServe, and Hichem, a Solvay joint venture and guar manufacturer, with Henkel joining the partnership in 2017 which increased the number of Indian farmers involved in the project to over 7,300 in 2020, 25 percent of whom are women.

"We are pleased that TechnoServe has been recognized for their inestimable contribution to the success of our Sustainable Guar Initiative by offering strong local ex-

pertise, on-the-ground involvement, and market analysis," said Anne-Charlotte Butrot, Sustainability Project Manager at Solvay. "TechnoServe has been the enabling partner for Solvay and its international collaborators providing farmers training for land and seed treatment, improving crop cultivation for arid conditions, soil replenishment techniques, and rainwater harvesting systems to enhance crop yields. The program also focuses on women empowerment through the management of kitchen gardens and health and nutrition training."

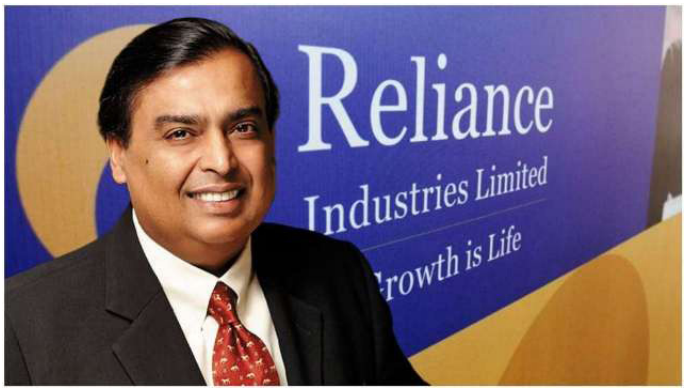
Solvay is a world leader in guar derivatives and India provides about 80 percent of the world's total guar production, where farmers play an integral role at the top of the supply chain. The seeds are processed to obtain guar gum, an exceptionally fine thickener and stabilizer used as an eco-friendly solution in a range of industries such as personal care and cosmetics.

"Assisting Solvay and their partners to bring to fruition this commendable initiative to transform the lives of guar bean farmers in poor communities has been a very rewarding experience," said Punit Gupta, Country Director, TechnoServe India. "Small farmers in India face numerous challenges ranging from soil quality, scarce water supply, and lack of access to markets for their crops. With a specific focus on women farmers to help them improve well-being, nutrition, and gain economic independence, we provided the tools and resources for improving yields, thereby helping enhance revenue to raise their standard of living."

**Reliance launches New Energy business; to invest US$10 bn**

In 2021, Reliance Industries Limited (RIL) is launching its New Energy business with the aim of bridging the green energy divide in India and globally.

The company plans to invest over Rs. 60,000 crore in these initiatives over the next three years for creating and offering a fully integrated, end-to-end renewables energy ecosystem. An additional investment of Rs. 15,000 crore will be in the value chain, partnerships and future technologies, including upstream and downstream industries. So, overall initial investment in the New Energy business will be Rs. 75,000 crore (US $10 billion) in 3 years.




The New Energy business will focus on three pillars - hyper integration, robust business model and scale. First, the focus will be to build and operate truly integrated systems that deliver hyper-performance. Second, will be to build a model that catches the irreversible upward curve in the demand for green, clean and renewable energy and catches the downward curve in the cost of production by improving the efficiency, performance and life-cycle of its assets and operations. Third, is to achieve total system optimisation and economics by improving efficiency and performance.

To give impetus to the New Energy business, the company has established Reliance New Energy Council with some of the finest minds globally to validate strategies and embrace disruptive pathways, said Mukesh D. Ambani, CMD, Reliance Industries Limited.

"The company is also creating a coalition of partnerships with leading global universities, best technology companies and most promising start-ups in America, Europe, Australia and Asia. In addition, the company is also leveraging its existing strengths and capabilities in digitisation platforms and large-scale manufacturing," added Ambani.

The company has started work on developing the Dhirubhai Ambani Green Energy Giga Complex on 5,000 acres in Jamnagar. This will be amongst the largest such integrated renewable energy manufacturing facilities in the world.

The company plans to build four Giga factories which will manufacture and fully integrate all the critical components of the New Energy ecosystem. The factories will have an integrated solar photovoltaic module factory, an advanced energy storage factory, an electrolyser factory, and fuel cell factory.

Source: India Chemical News

**SIDBI revamps term loan scheme LIQUID for Covid-hit MSMEs; enables credit up to 20% of highest outstanding**

India's principal financial institution for MSMEs — Small Industries Development Bank of India (SIDBI) – on Tuesday launched the revamped version of its liquidity scheme for Covid-hit MSMEs – Liquidity Support by Urgent Infusion of Funds Through Direct Finance Window (LIQUID) 1.0. Under LIQUID 2.0, SIDBI would enable term loan for its existing customers for the purpose of executing new orders, purchase of raw materials, machines, and equipment, clearing unpaid creditors, etc., the bank announced the launch on its YouTube channel on Tuesday. SIDBI said MSMEs would get assistance up to 20 per cent of their highest outstanding (both term loan and working capital counted) in the previous 12 months subject to a maximum of Rs 1.5 crore and aggregate exposure of Rs 2.5 crore under the first and second version of the scheme.



The bank noted that the scheme would involve zero contribution from the promoter of the enterprise. Moreover, subsidized interest rate, low processing fee, and no prepayment charges were among other features of the scheme, according to SIDBI. SIDBI spokesperson was not immediately available for more details on LIQUID 2.0.

The revised scheme is among multiple other offerings by SIDBI announced post-Covid to support MSMEs. Among recent initiatives, SIDBI had launched Shwas and Arog scheme in April this year for MSMEs manufacturing Covid-related goods and earmarked Rs 200 crore for the same, Financial Express Online had reported. While Shwas catered to MSMEs manufacturing oxygen cylinders, oxy-generators, oxygen concentrators, liquid oxygen or providing services in transportation, storage, refilling to supply of these items, Arog focused on enabling credit for MSMEs in manufacturing of products or providing services which are directly related to fighting Covid including pulse oximeters, permitted drugs such as (Remdesivir, Fabiflu, Dexamethasone, Azithromycin, etc), ventilators, PPE kits, etc.

In December last year, SIDBI had launched a DIY web portal for MSMEs to prepare their restructuring proposals on their own under the restructuring scheme by the Reserve Bank of India. MSMEs had to key in only the most essential data of their past financials, future projections, and restructuring requirement for the proposal. Meanwhile, year-on-year growth in the deployment of gross bank credit to micro and small enterprises in March had declined to its lowest level, amid the second Covid wave, since May in the financial year 2020-21. The credit outstanding as of March 26, 2021, for the MSE sector, stood at Rs 11.07 lakh crore – up only 2.5 per cent from Rs 10.8 lakh crore in March 2020, according to the monthly bulletin by the Reserve Bank of India. The fall from 7.7 per cent in March last year to 3.3 per cent in April had reflected the likely early impact of the Covid breakout. Similarly, the current decline followed the second wave of the deadly virus that had started to hit in February. The credit growth had bounced back to 6.5 per cent in June last year after two months of decline.

Source: FE

**India receives $64 billion FDI in 2020, fifth largest recipient of inflows in world: UN**

India received USD 64 billion in Foreign Direct Investment in 2020, the fifth largest recipient of inflows in the world, according to a UN report which said the COVID-19 second wave in the country weighs heavily on the country's overall economic activities, but its strong fundamentals provide "optimism" for the medium term. The World Investment Report 2021 by the UN Conference on Trade and Development (UNCTAD), released Monday, said global FDI flows have been severely hit by the pandemic and they plunged by 35 per cent in 2020 to USD 1 trillion from USD 1.5 trillion the previous year.




Lockdowns caused by COVID-19 around the world slowed down existing investment projects, and prospects of a recession led multinational enterprises (MNEs) to reassess new projects. The report said in India, FDI increased 27 per cent to USD 64 billion in 2020 from USD 51 billion in 2019, pushed up by acquisitions in the information and communication technology (ICT) industry, making the country the fifth largest FDI recipient in the world.

The pandemic boosted demand for digital infrastructure and services globally. This led to higher values of greenfield FDI project announcements targeting the ICT industry, rising by more than 22 per cent to USD 81 billion. Major project announcements in the ICT industry included a USD 2.8 billion investment by online retail giant Amazon in ICT infrastructure in India.

The report noted that the second wave of the COVID-19 outbreak in India weighs heavily on the country's overall economic activities.

Announced greenfield projects in India contracted by 19 per cent to USD 24 billion, ?and the second wave in April 2021 is affecting economic activities, which could lead to a larger contraction in 2021,? it said, adding that the outbreak in India severely hit main investment destinations such as Maharashtra, which is home to one of the biggest automotive manufacturing clusters (Mumbai,Pune,Nasik,Aurangabad) and Karnataka (home to the Bengaluru tech hub), which face another lockdown as of April 2021, exposing the country to production disruption and investment delays.

"Yet India's strong fundamentals provide optimism for the medium term. FDI to India has been on a long-term growth trend and its market size will continue to attract market-seeking investments. In addition, investment into the ICT industry is expected to keep growing," the report said.

The country's export-related manufacturing, a priority investment sector, will take longer to recover, but government facilitation can help. India's Production Linkage Incentive scheme, designed to attract manufacturing and export-oriented investments in priority industries including automotive and electronics can drive a rebound of investment in manufacturing.

The report said FDI in South Asia rose by 20 per cent to USD 71 billion, driven mainly by strong M&As in India. "Amid India's struggle to contain the COVID-19 outbreak, robust investment through acquisitions in ICT (software and hardware) and construction bolstered FDI," it said adding that cross-border M&As surged 83 per cent to USD 27 billion, with major deals involving ICT, health, infrastructure and energy.

Large transactions included the acquisition of Jio Platforms by Jaadhu, a subsidiary of Facebook for USD 5.7 billion, the acquisition of Tower Infrastructure Trust by Canada's Brookfield Infrastructure and GIC (Singapore) for USD 3.7 billion and the sale of the electrical and automation division of Larsen & Toubro India for USD 2.1 billion. Another megadeal Unilever India's merger with GlaxoSmithKline Consumer Healthcare India, a subsidiary of GSK United Kingdom) for USD 4.6 billion also contributed, it said.

FDI outflows from South Asia fell 12 per cent to USD 12 billion, driven by a drop in investment from India. India ranked 18 out of the world's top 20 economies for FDI outflows, with 12 billion dollars of outflows recorded from the country in 2020 as compared to 13 billion dollars in 2019.

"Investments from India are expected to stabilise in 2021, supported by the country's resumption of free trade agreement (FTA) talks with the European Union (EU) and its strong investment in Africa," the report said. The report cautioned that while the Asian region has managed the health crisis relatively well, the recent second wave of COVID-19 in India shows that significant uncertainties remain. "This has major impacts on prospects for South Asia. A wider resurgence of the virus in Asia could significantly lower global FDI in 2021, given that region's significant contribution to the total," the report said.

FDI inflows to developing Asia grew by 4 per cent to USD 535 billion in 2020, making it the only region to record growth and increasing Asia's share of global inflows to 54 per cent.

In China, FDI increased by 6 per cent to USD 149 billion. While some of the largest economies in developing Asia such as China and India recorded FDI growth in 2020, the rest recorded a contraction, it said.

The report added that FDI inflows in Asia are expected to increase in 2021, outperforming other developing regions with a projected growth of 5 10 per cent.

Signs of trade and industrial production recovering in the second half of 2020 provide a strong foundation for FDI growth in 2021. Yet, substantial downside risks remain for the many economies in the region that struggle to contain successive waves of COVID-19 cases and where fiscal capacity for recovery spending is limited. "Economies in East and South-East Asia, and India, will continue to attract foreign investment in high-tech industries, given their market size and their advanced digital and technology ecosystem," the report said.

Source: FE

**Saudi Aramco Chairman to be on board of RIL**

Saudi Aramco's chairman and head of the Kingdom's wealth fund Yasir Othman Al-Rumayyan was on Thursday invited by Reliance Industries Limited (RIL) Chairman Mukesh Ambani to join the conglomerate's board as an independent director. Ambani made the announcement during RIL's Annual General Meeting (AGM).

This is being widely anticipated as a precursor to a $15 billion deal between RIL and Saudi Aramco, which is one of the largest companies in the world in terms of revenue.

“I welcome H.E. Yasir Al-Rumayyan, Chairman of Saudi Aramco and Governor of PIF, to join the Board of Reliance Industries as Independent Director. His joining our Board is also the beginning of internationalisation of Reliance,” Ambani said during his address.

“Continued engagement and resolve from both sides, even during this pandemic, is a testimony of strong relationship between Saudi Aramco and Reliance. I expect our partnership to be formalised in an expeditious manner this year,” Mukesh Ambani added.

Mukesh Ambani, who had two years back disclosed talks to sell a 20 per cent stake in the company’s oil-to-chemical (O2C) unit to Saudi Aramco, announced the appointment of Al-Rumayyan at the company’s annual meeting of shareholders.

# 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

# New Members

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

| Sr.No | Name of the Company | Address | City | Pin | State | Director Name | Email |
|---|---|---|---|---|---|---|---|
| 1 | ADVANCE BIOMATERIAL COMPANY PRIVATE LIMITED | B 27, HERITAGE OPP SCIENCE CITY, | AHMEDABAD | 380061 | Gujarat | HITESH SANGHAVI | sales@advance-bioplast.com |
| 2 | ANKAI INTERNATIONAL PVT LTD | 115,NEW INDIA INDUSTRUIAL ESTATE PLOT NO 33,OFF MAHAKALI CAVES ROAD NEAR PAPER BOX | MUMBAI | 400093 | Maharashtra | Dharmesh Mistry | ankai.manager@gmail.com |
| 3 | ANTIQUE PLASTO INDUSTRIES LLP | PLOT NO. 107, AVADH 4, ST 1, NEAR SMALL KENAL, SANALA ROAD, | MORBI | 363641 | Gujarat | MR. HITESHBHAI | antiqueplast2021@gmail.com |
| 4 | ARAV POLYPACK LLP | SR. NO. 170/P2,-RAJPAR NASITPAR ROAD, RAJPAR MORBI | MORBI | 363641 | Gujarat | JIGNESHBHAI HIRJIBHAI SAVSANI | aravpolypack@gmail.com |
| 5 | ARGIL SPC FLOORING CO | SURVEY NO.98 P1,99 P1, 100, AT. JAMBUDIYA, | MORBI | 363642 | Gujarat | KUSHAL RAMESHBHAI VARNESHIYA | spc@argiltiles.com |
| 6 | ASTHA POLYMERS PVT LTD | PLOT NO 85, INDUSTRIAL AREA, | HYDERABAD | 501401 | Telengana | Rajiv Pritwani | admin@asthapoly.com |
| 7 | BANG POLYWEAVE PRIVATE LIMITED | 326, 3RD FLOOR, KEWAL INDUSTRIAL ESTATE, SENAPATI BAPAT MARG, LOWER PAREL (WEST), | MUMBAI | 400013 | Maharashtra | MR .GOVERDHAN NATH CHATURVEDI | infobpw@bangdataforms.com |
| 8 | CINGULARITY TOOLING AND ENGINEERING CONCEPTS INDIA PVT LTD | NO. 330, 3RD FLOOR, 27TH MAIN SECTOR , 2 HSR LAYOUT, | BENGALURU | 560102 | Karnataka | samuel gerald | sam@cingularity.in |
| 9 | DHANLAXMI PACKAGING INDUSTRIES | Plot No A-26, STICE, MUSALGAON, SINNAR | NASHIK | 422101 | Maharashtra | Sanjana Dhadiwal | sanjanadhadiwal@gmail.com |
| 10 | FLEXID TECHNOPACK PRIVATE LIMITED | M3, Medical Devices Park, Sultanpur , Ameenpur Mandal MEDAK , | HYDERABAD | 502319 | Telengana | SAIRAM PHILKANA | rameshvadde@gmail.com |
| 11 | GENESIS INDUSTRIES | 477,FIE PATPARGANJ INDUSTRIAL AREA NEW DELHI | NEW DELHI | 110092 | Delhi | Alvira Khan | alvira@genesisindustries.co.in |
| 12 | GOLDCOIN ANGEL CPP FILM PRIVATE LIMITED | SURVEY NO. 17 PLOT NO. 1 & 2, VILLAGE: PIPLANA, KOTDA SANGANI, | RAJKOT | 360030 | Gujarat | VEDIA BHARAT S | rohit@goldcoinangelcppfilm.com |
| 13 | GOLDCOIN INUDSTRIES PRIVATE LIMITED | SURVEY NO. 79, N.H. 8B, SHAPAR, Tal-KOTDA SARANGANI, N.H. 8B SHAPAR | RAJKOT | 360025 | Gujarat | HITESH K SIDPARA | goldcoinindustries@gmail.com |
| 14 | GREEN PARK INCENSE CO | SHED (BARAK) No. 1 & 2 , KUMARGHAT INDUSTRIAL ESTATE, | KUMARGHAT | 799264 | Tripura | SATADRU BISWAS | MAIL@GREENPARKINDIA.IN |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 15 | JAY KAY PLASTICS INDUSTRIES | D11, INDUSTRIAL ESTATE, MOGAPPAIR EAST | CHENNAI | 600050 | Tamil Nadu | NAVNEET BHATTAD | navneetbhattad@jkplastics.in |
| 16 | MARUDHARA POLYPACK PVT LTD | F 661 G 681 & 682 PHASE IV RICCO INDL AREA JODHPUR RAJASTHAN JODHPUR JODHPUR | JODHPUR | 342012 | Rajasthan | MAHESH PUROHIT | accounts@mppi.co.in |
| 17 | MARVEL TECHNOPLAST | A 17, MANMOHAN SOCIETY, B/H RAGHUNATH SCHOOL, BAPUNAGAR, | AHMEDABAD | 382345 | Gujarat | Ketan Dhamasana | info@marveltechnoplast.com |
| 18 | MG ACRYPLAST INDUSTRIES PVT LTD | SURVEY NO. 214, NANDASAN TAL : KADI, DIST : MEHSANA MEHSANA HIGHWAY, AHEMDABAD | MEHSANA | 382715 | Gujarat | SANJAY KUMAR | mgacryplast@gmail.com |
| 19 | MODERN PLASPACK | PLOT NO 1901/1902, PHASE-2, GIDC ESTATE, CHHATRAL, | KALOL | 382729 | Gujarat | PADMESH SUTHAR | INFO@MODERNPLASMOLD.COM |
| 20 | NANDALALA INDIAN HAIR PRIVATE LIMITED | No.13, JAYANTI NAGAR II MAIN ROAD, KOLATHUR, | CHENNAI | 600099 | Tamil Nadu | KUMARAN | info@nandalalaenterprises.com |
| 21 | NORTHERN PLASTICS | B-61, SECTOR-5, | NOIDA | 201301 | Uttar Pradesh | PANKAJ GUPTA | npnoida04@gmail.com |
| 22 | NRPMH DEVELOPERS | 4th Floor, 13, Gokul Building, Dr. Atmaram Merchant Road, Bhuleshwar, Kalbadevi, | MUMBAI | 400002 | Maharashtra | Bhagirath Suthar | nrpmhdevelopers@gmail.com |
| 23 | S B INTERNATIONAL | KOLA UTTARPARA, VILL - KOLA, PO-KOLAGHAT PURBA MEDINIPUR | MEDINAPUR | 721134 | West Bengal | . | SEALGOPAL@GMAIL.COM |
| 24 | THUSMAA SMS NONWOVENS PRIVATE LIMITED | 42, OLD KUYAVARPALAYAM ROAD, - - | MADURAI | 625009 | Tamil Nadu | RAMBHILASH BAABU T S | thusmaasms@gmail.com |
| 25 | TILAK POLY IMPEX | 312, GIDFC ESTATE, HALOL, | HALOL | 389350 | Gujarat | SHAH AKSHAYKUMAR | tilakpolyimpex@gmail.com |
| 26 | VALUE PACKAGING INDUSTRIES PRIVATE LIMITED | PLOT NO 87, BOMMASANDRA JIGANI LINK ROAD, BOMMASANDRA INDUSTRIAL AREA, BIA 4th Phase, | BENGALURU | 562106 | Karnataka | RAKESH JHUNJHUNWALA | info@valuepack.in |
| 27 | VEDARI CAPS PRIVATE LIMITED | 6A, MIDC INDUSTRIAL AREA, HINGNA ROAD, | NAGPUR | 440016 | Maharashtra | ROHINI KHODE | info@vedaricaps.com |
| 28 | VEDHAA POLYPACK LLP | SURVAY NO 111 P1/P2, RAJPAR-NASITPAR ROAD, NASITPAR,TANKARA | MORBI | 363641 | Gujarat | KANJIYA CHIRAGBHAI KESHAVJIBHAI | info@vedhaapolypack.com |