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PLASTISCOPE

The Official Journal of the Organization of Plastics Processors of India

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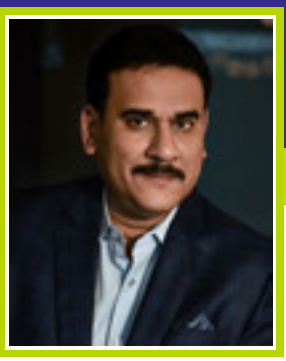
FROM THE PRESIDENT's DESK

Mr. Pradeep Rathod



OPP

CONTENTS

Dear Members,

Greetings from Organization of Plastics Processors of India!

The Financial Year 2025 – 2026 dawned with precautions on various fronts – Reciprocal Tariff Policy of President Trump, Russia – Ukraine hostilities, Tariff Wars between the US and China and various other issues.

In March 2025 issue of Plastiscope I had assured all members that OPPI has been working very closely with the Department of Chemicals and Petrochemicals on this subject to ensure that there is no unreasonable customs duty on plastic products exported from India to USA. We have also represented on the Non – Tariff Barriers faced by Indian Plastic Processors while exporting to USA.

US Vice President JD Vance had personal meeting with the Indian Prime Minister on 21st April 2025. Prime Minister Narendra Modi and US Vice President JD Vance welcomed the significant progress made in negotiations over a Bilateral Trade Agreement (BTA).

In a big signal amid fears of the impact of Donald Trump's reciprocal tariffs, US Vice-President JD Vance has said his country and India have finalised terms for a trade deal. Speaking at an event in Jaipur on 22nd April 2025, a day after his meeting with PM Narendra Modi, "Mr. Vance said, "Our administration seeks trade partners on the basis of fairness and of shared national interests."

Indian and US officials will hold three – day talks from April 23 in Washington DC on the Terms of Reference (ToRs) covering about 19 chapters, such as tariffs, non – tariffs barriers and customs facilitation.

On 7th April 2025 there was a meeting between OPPI members and Office Bearers of Plastindia International University. A report and photographs of this meeting appear in this issue of Plastiscope.

On 11th April 2025 delegation of OPPI members visited CIPET and Shibaura Machines India Pvt. Ltd. in Chennai. The details of this visit are also published in this issue.

A Study Mission to the Mahindra Automotive Plant at Chakan is scheduled on 9th May 2025. This Plant is a fine example for the use of latest cutting-edge technology. The members should not miss this opportunity to see the assembly lines designed with No Fault Forward approach which ensures robust build in quality of the product.

With Best Wishes,

Pradeep Rathod
President, OPPI

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Editor: **DEEPAK LAWALE**

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ADVERTISEMENT IN OPPI DIRECTORY- 2026

With the fast changing business environment and the growing competitive world, it becomes important for all those connected with the Plastics Industry to increase the visibility of their activities.

Organization of Plastics Processors of India will be publishing Membership Directory 2026.The directory will be distributed to all OPPI members, Plastic Associations in India, Major Chambers of Commerce and Industry/Industry Associations in India and abroad, Trade Promotion Organizations, Financial Institutions and Diplomatic Missions.

Unique features associated with OPPI Directory 2026:-

- OPPI Directory distributed in all International exhibitions promoted by OPPI. Advertisers get noticed by the importers in various countries.
- Advertisement in OPPI Directory gives wide publicity to products and services of advertising company.
- MNCs setting shop in India refer to OPPI Directory for outsourcing their requirement of plastic products from India.
- Multi-national Retail Chains refer to OPPI Directory for outsourcing their requirements of plastics based goods; flexible packaging material etc.
- Foreign Plastics Processing Machinery Manufacturers, polymer producers etc. consider OPPI Directory as a reliable aid to reach their target customers in India.

Please Contact

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Visit to CIPET

OPPI Delegates with Mr. S. Ilangovan, Principal Director and Head, CIPET, Chennai and Mr. M. Pheer Mohamed, Chief Manager, CIPET

Initially the OPPI Delegates were shown a detailed PowerPoint Presentation on CIPET. Thereafter the participants visited CIPET School for Advanced Research in Petrochemicals (SARP) and Advanced Research School for Technology and Product Simulation (ARSTPS).

During the visit to SARP and ARSTPS, the work done by CIPET in the following areas was shown:-

- Reverse Engineering
- Product Design and Development
- Material Analysis
- Precision Machining of Parts
- Preference and Life Time Validation of Parts
- Indigenization Products

Visit to Shibaura Machine India Pvt. Ltd.

OPPI Delegates with Senior Managers of Shibaura Machine India Pvt. Ltd.

The OPPI delegation was received by Mr. M. Kumar, Managing Director and his team. Each and every member of the delegation was welcomed with a bouquet.

Initially a detailed PowerPoint Presentation on Shibaura Machine India Pvt. Ltd. was made. Thereafter the delegates visited the Sub-Assembly, Final-Assembly and Warehouse Sections of the company.

Interactive Meeting between OPPI Members and PIU Office Bearers was held on 7th April 2025 at Courtyard, Mumbai

A meeting between OPPI Members and PIU Office Bearers was held on 7th April 2025 at Courtyard, Mumbai.

Initially Mr. Pradeep Rathod, President, OPPI welcomed Shri M. P. Taparia Ji, President, Plastindia International University Governing Council.

Shri M. P. Taparia Ji made opening remarks. He said – "Plastindia International University (PIU) has become an autonomous institution, located at Vapi (Gujarat), a pioneering institution that is revolutionizing the plastics industry with well-educated talent. PIU is a beacon of innovation, shaping future leaders who will transform the plastics industry with a focus on sustainability."

Shri M. P. Taparia Ji, President, Plastindia International University further mentioned – "PIU has become an autonomous institution as per the agreement signed between PIU and Plastindia Foundation. It has been decided that PIU will further grow with philanthropic and CSR contribution from Plastic Industry and collaboration with the esteemed **University of Massachusetts, Lowell (USA),** a global leader in Plastics and Polymer Education, Research and Innovation."

Thereafter Mr. Kamal P. Nanavaty, President, Reliance Industries Limited made PowerPoint presentation on Plastindia International University.

The presentation covered the following points:-

- PIU is a Philanthropic initiative by Plastics Industry to develop Worldclass talent for Plastics Industry.
- Developing Industry-Oriented Education and Skills
- Why Plastics & Polymer Education?
- Vision And Mission
- Core Values
- Path to Excellence: The Journey of PIU
- Governing Body
- UMass Lowell, USA- PIU Partnership
- UMass Lowell, USA- A Legacy of Excellence in Plastics Engineering!
- Partner for PIU to build Global Excellence in Education, Research and Innovation
- PIU's Strategic Location and Connectivity
- Campus Facilities
- Infrastructure Facilities
- Master Plan: Campus Infrastructure
- Plan for Future Development
- Campus Infrastructure
- Academic Programme

- Insights of Curriculum
- List of Laboratory
- Plastics Sustainability Program : Curriculum (Proposed)
- Faculty Details
- Vision Of Growth
- Programme Launch Plan
- Infrastructure Plan
- PIU Development Campaign
- Benefits to Donor







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Study Mission to the Mahindra Automotive Plant at Chakan on Friday – 9th May 2025

We are pleased to inform you that OPPI is organizing a visit to the Mahindra Automotive Manufacturing Plant at Chakan.

Please find below programme schedule for your ready reference and use:-

1040 Hrs	Arrival at the Mahindra Automotive Manufacturing Plant
1040 – 1050 Hrs	Welcome note and group introduction
1050 – 1100 Hrs	Introduction to the Mahindra Automotive Manufacturing Plant
1100 – 1300 Hrs	Round of Mahindra Automotive Manufacturing Plant
1300 - 1315Hrs	Q & A Session
1330 Hrs	Lunch
1415 Hrs	Departure for Mumbai

I am writing to you to take advantage of this opportunity by nominating concerned delegates from your organization.

Participation Fees – Rs. 4000/- (per participant for OPPI Members) +GST and Rs. 5500/- (per participant for non OPPI Members) + GST.

Please note – there are only 20 seats for this programme and participation will be strictly on first come first serve basis.

Kindly mail the duly completed Registration Form at the earliest.

Look forward to receive your nominations.

Best Regards,

Mahindra Automotive Manufacturing Plant at Chakan

The Mahindra Automotive Manufacturing Plant at Chakan in Maharashtra is a fine example for the use of latest cutting-edge technology.

Augmenting the seven other manufacturing facilities of Mahindra and Mahindra, the auto sector giant, is this sprawling 650+ acre fully integrated, state of the art unit in Chakan.

This ultra-modern, technologically sophisticated plant. (Smart Factory) which was set up in 2009, incorporates the latest in robotics and automation to roll out well over half a million vehicles a year.

This plant is a unique combination of complexity and flexibility and is in fact the amalgamation of many plants within one.

Here, the All new Born Electrical Vehicles, XUV 700, Scorpio N, Bolero NEO, KUV100 can be rolled out with equal ease as can be the Pickups, trailers, tippers and cargos from 7 ton to 55 ton capacities.

Veera, Supro, Bolero, pickups, Earth moving equipments and several other vehicle models make up a formidable and vast portfolio of offerings from the renowned Mahindra brand.

All our lines are designed with No fault Forward approach which ensures robust build in quality of the product.

While the Mahindra Chakan Manufacturing Plant follows the TPM methodology and the Mahindra Quality System has been benchmarked with global OEMs.

Mahindra Chakan plant follows the TPM methodology and while the Mahindra quality system has been benchmarked with global OEM's, the company is working aggressively towards 4.0.

Technically qualified and experienced, but young force with a high percentage of women which is constantly assessed and skills are upgraded using innovative virtual reality and hands on training.

The Plant has NET ZERO Policy and has targeted doubling the energy Productivity with the focused approach on efficiency improvements, technology adoptions, Maximum usage of renewable energy using captive solar power plants, as well as rain water harvesting.

The Mahindra Automotive Manufacturing Plant at Chakan is bringing the technology of the future to you...today!

Deepak Lawale, Secretary General, ORGANIZATION OF PLASTICS PROCESSORS OF INDIA

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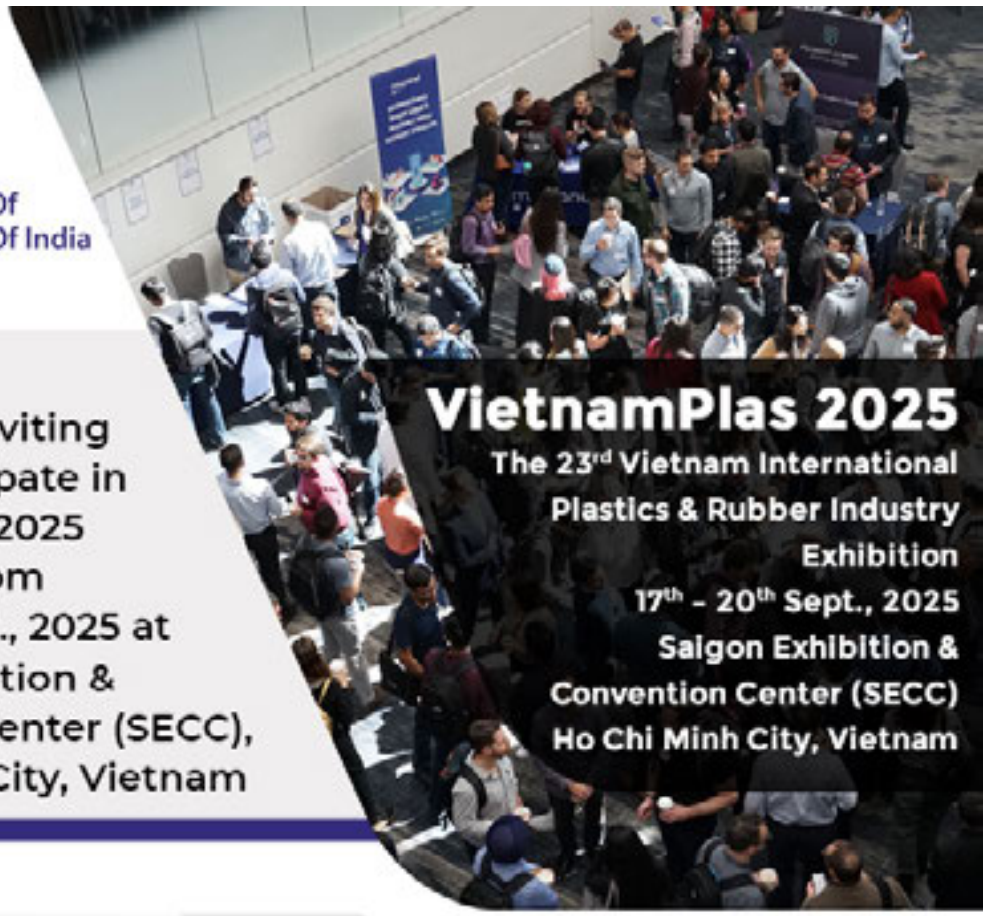

We have the pleasure of inviting you to participate in VietnamPlas 2025 scheduled from 17th – 20th Sept., 2025 at Saigon Exhibition & Convention Center (SECC), Ho Chi Minh City, Vietnam

VietnamPlas 2025

The 23rd Vietnam International Plastics & Rubber Industry Exhibition

17th – 20th Sept., 2025

Saigon Exhibition & Convention Center (SECC)

Ho Chi Minh City, Vietnam

SHOW REPORT 2024

GROSS SPACE 23,000 SQM	EXHIBITORS 700
BOOTHS 1,100	COUNTRIES & REGIONS 20
VISITORS 20,390	EXHIBITOR SATISFACTION 88%
VISITOR SATISFACTION 86%	

PARTICIPATION FEES:

- Shell Scheme (Minimum 9 sqm): 340 / sqm
- Includes 1 Set Fascia Name, 3 Sides System Panel, Carpet, 1 Unit Reception Desk, 1 Unit Round Table, 3 Units Chairs, 3 Units Spotlight 100W, 1 Unit Waste Basket, 1 5AMP/220V Single Phase Socket Plug
- Raw Space Only (Minimum 36 sqm): USD 310/sqm

Please fill up the contract form attached herewith and Email scanned copy of filled Application form to secretarygeneral@oppindia.org

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VIETNAMPRINTPACK 2025

The 23rd Vietnam Int'l Printing & Packaging Industry Exhibition
10-13 September 2025
Saigon Exhibition & Conference Center (SECC)
Ho Chi Minh City, Vietnam

We have the pleasure of inviting you to participate in VietnamPrintPack 2025 scheduled from 10-13 September 2025 at Saigon Exhibition & Conference Center (SECC), Ho Chi Minh City, Vietnam

2024 VIETNAM EXPO AT GLANCE

Exhibitors	Gross Space (sqm)	Booths	Visitors
382	19.850	900	20.880

PARTICIPATION FEES:

- Shell Scheme (Minimum 9 sqm): USD 320
- Including Needle Punch Carpet: Wall Partitions, Carpet, Company Fascia, 3
- Folding Chairs, 3 Spotlights, 1 Reception Table, 1 Round table, 1 Dustbin, 1 Single Phase 5 amp/ 220v Plug.
- Raw Space Only (Minimum 36 sqm): USD 300/sqm

Please fill up the contract form attached herewith and Email scanned copy of filled Application form to secretarygeneral@oppindia.org

GET IN TOUCH Deepak Lawale, Secretary General, ORGANIZATION OF PLASTICS PROCESSORS OF INDIA

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The World's No. 1 Trade Fair
for Plastics and Rubber
8–15 October 2025
Düsseldorf, Germany

K 2025 – INTERNATIONAL TRADE FAIR ON PLASTICS AND RUBBER – IS TO BE HELD IN MESSE DÜSSELDORF GMBH, GERMANY FROM 8TH – 15TH OCTOBER 2025.

In K 2025 it will once again be the most prestigious event on the industry's calendar and the starting point for decisions that shape future products, processes and solutions.

SPECIAL DISCOUNT FOR BOOKINGS THROUGH OPPI

HOT TOPICS OF K 2025

- Circular Economy
- Digitalisation
- Coding about people

Organization of Plastic Processors of India has tied up with Tibro Tours Pvt. Ltd. for K 2026 packages.

All Companies booking Tibro Packages for K 2026 through Organization of Plastic Processors of India will be eligible for special discount.

Please find attached herewith Tibro's Standard packages based on hotel options.

Kindly write to us to secure your travel arrangements on confirmed basis.

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HanoiPlas

The 13th Hanoi Int'l Plastics and Rubber Industry Exhibition
4th to 7th JUNE 2025
Hanoi International Center for Exhibition (I.C.E) Hanoi, Vietnam

EXHIBIT PROFILE

Plastic & Rubber Machinery, Chemical & Raw Materials, Machinery Auxiliary Industry, Heat & Control Equipment, Mould, Hydraulic & Pneumatic, Recycling, Dosing equipment, Mixers, Silo systems, Software

POST SHOW REPORT 2024

Exhibitors	Exhibitors From	Visitors	Space
220	13 Countries	7,832	9000 sqm

PARTICIPATION FEES

Standard Booth:

USD 310 / sqm (Min. 9 sqm) = USD2790

Standard Equipped : Wall Partitions, Carpet, Company Fascia, 3 Folding Chairs, Three 50W Long Arm LED Light, 1 Reception Table, 1 Round table, 1 Dustbin, 1 Single Phase 5 amp/220v Plug.

Raw Space:

USD 280 / sqm (Min. 18 sqm)

Corner fee: 10% surcharge 5% VAT will be applicable on invoice

Form is attached. Kindly email the scanned copy of duly filled Space Application Form to secretarygeneral@oppindia.org

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Indian Oil Corporation Signs MoU with Government of Odisha

Indian Oil Corporation (IndianOil) has signed Memorandum of Understanding (MoU) with the Government of Odisha to set up a world - class Petrochemical Complex at Paradip.

With an investment of Rs. 61,077 crore, this marks IndianOil's largest-ever investment at a single location and a transformative step in India's petrochemical and industrial growth.

The upcoming complex will house a dual-feed cracker and associated downstream units for the production of wide range of petrochemicals including Phenol, Polypropylene (PP), Isopropyl Alcohol (IPA), High-Density Polyethylene (HDPE), Linear Low-Density Polyethylene (LLDPE), Polyvinyl Chloride (PVC), Phenol and Butadiene.

These products will serve as key raw materials for specialty chemical sectors like pharmaceuticals, agrochemicals, coatings, and adhesives, significantly reducing import dependency and supporting the Aatmanirbhar Bharat and Make in India missions.

With this strategic investment, IndianOil continues to reinforce its position as a national energy leader committed to driving industrial transformation and inclusive growth, while strengthening energy security.

Indian Oil Corporation is the largest enterprise in the country and the foremost ranked Fortune Global 500 Company in India and has presence in the complete hydrocarbon value chain from downstream refining and marketing, pipeline transportation, Petrochemicals, E&P and Gas Marketing.

India's Plastic Pipe Industry Set for Rs. 500 Billion Market in FY25

India's plastic pipe industry holds substantial growth potential due to its significantly lower per-capita pipe consumption compared to global standards, according to a recent report by investment bank Jefferies.

This untapped market potential positions the sector for considerable expansion, particularly when compared to consumption rates in the US, Europe and China.

The industry has demonstrated robust performance with an 8 percent compound annual growth rate from FY15 to FY24. Market projections indicate the sector will reach Rs. 500 billion in FY25, driven by renewed capital expenditure and a strong housing cycle.

This projection aligns with Techsci Research's valuation of the market at Rs. 474.47 billion in 2023, highlighting the sector's crucial role in infrastructure development, including water supply, sewage systems, and gas distribution.

However, the industry faces significant challenges from volatility in polyvinyl chloride prices, a key raw material in pipe manufacturing.

Recent market data shows PVC prices fluctuated from Rs. 75 per kg in September 2024 to Rs. 78 per kg in November 2024, before declining 4 percent in December.

These price variations can lead to inventory losses and impact profit margins, as manufacturers typically pass through these costs.

The first half of FY25 experienced slower growth attributed to weak capital expenditure activity and high base effects from the previous year.

Nevertheless, Jefferies forecasts a recovery in volumes during the second half of 2025, supported by renewed capital investments and increased business - to - business activity.

The plastic pipe segment has notably outperformed the tiles sector in volume growth over the past two years, a trend analysts expect to continue.

Despite the near-term challenges posed by raw material price volatility, the long-term outlook for India's plastic pipe industry remains optimistic.

The sector's growth trajectory is supported by favorable market dynamics and increasing infrastructure investments, positioning it for sustained expansion in the coming years, according to the Jefferies report.

HUL Board Approves Investment to Strengthen Flexible Plastics Circularity

Hindustan Unilever Limited

The Board of Directors of Hindustan Unilever Limited (HUL) at its meeting approved the investment for acquiring 14.3% stake in Lucro Plastecycle Private Limited (Lucro), a leading player in recycled flexible plastics. It is a well-integrated waste management, recycling and product manufacturing company, working to create a circular plastics economy for a better tomorrow.

HUL's investment is a step forward towards its sustainability goals to scale up the use of recycled flexible plastic content in packaging, in line with the Government's vision of zero plastic waste in future. The investment aims to strengthen plastic circularity by increasing the availability of recycled content for flexibles, providing a roadmap for businesses to move towards sustainable plastic packaging and address the challenge of hard-to-recycle flexible plastic.

Rohit Jawa, HUL CEO and MD, said, “This investment is a significant step in building the capabilities in recycling and developing the circular economy model for plastic, which is in line with our firm belief that what is good for India is good for HUL.”

Ujwal Desai, Managing Director, Lucro, said, "At Lucro, we turn the challenge of recycling post-consumer flexible plastics into an opportunity to create high-quality, recycled plastics while driving the circular economy. This investment by HUL paves the way for increasing our recycling capacity, driving large-scale commercial adoption of post-consumer resin and setting a new benchmark for sustainable plastics.”

(**Source:** Hindustan Unilever Limited (HUL) / 20.03.2025)

GAIL's 12 LNG Cargoes a Year Deal with Qatar Energy Starts from April

Synopsis: GAIL (India) Ltd. will begin receiving LNG from Qatar Energy Trading under a five-year deal, starting in April 2025, with 12 cargoes per year. In addition, GAIL has signed long-term LNG contracts with Vitol Asia and ADNOC Gas to meet India's rising energy demands. These agreements support India's goal to increase natural gas's share in its energy mix to 15% by 2030.

State gas utility GAIL (India) Ltd. will start receiving LNG under a five-year 12 cargoes per year deal from Qatar Energy Trading from next month as it augments sourcing to meet rising demand of the world's fastest growing economy. "Purchases under the deal will start from April," GAIL chairman and managing director Sandeep Kumar Gupta said.

GAIL had in December last year awarded a liquefied natural gas (LNG) purchase tender for procuring 12 cargoes per year starting in April 2025 for a tenure of five years to Qatar Energy Trading.

Besides the Qatar Energy deal, GAIL has in recent months signed long-term LNG procurement deals with suppliers. It has inked a long-term deal with commodity trader Vitol Asia for around 1 million tonne a year for a period of about 10 years, commencing 2026. Under this deal, Vitol will deliver LNG from its global LNG portfolio to GAIL in India on a pan-India basis.

GAIL has also signed a long-term deal to purchase around 0.5 million tonne a year of LNG from the UAE's ADNOC Gas from 2026 onwards for 10 years across India.

The deals will help in meeting India's rising energy needs and are in line with India's ambition of enhancing the share of natural gas in the energy basket to 15 per cent by 2030 from the current levels of around 6-7 per cent.

Other than GAIL, Indian Oil Corp (IOC) has signed binding heads of agreement deals with Abu Dhabi National Oil Co. LNG and TotalEnergies. IOC's deal with ADNOC LNG is for 14 years for 1.2 million tonne a year and with TotalEnergies for 10 years for 800,000 tonne per year.

Mr. Gupta said GAIL is looking at medium and long-term LNG contracts to cater to the increasing downstream demand in India and supply natural gas to various sectors.

The company has an existing LNG portfolio of 14 million tonne per annum which is well diversified among various indexes. Till 2030, GAIL will source additional 7-8 million tonne per annum of LNG through long/mid-term contracts (2.25 million tonne already signed).

It has two long-term agreements to buy a combined 5.8 million tonne of LNG from the US on an FOB basis and a 2.5 million tonne supply contract with Germany's state-owned Securing Energy for Europe GmbH on a DES basis. GAIL's long-term US contracts are linked to Henry Hub while its contract with SEFE is linked to crude oil prices.

GAIL owns and operates a network of over 16,000 km of natural gas pipelines spread across the country and holds a 70 per cent market share in gas transmission and has a gas trading share of over 50 per cent.

Industry sources said the Qatar Energy deal is priced at a slope of 115 per cent to Henry Hub plus a constant of USD 5.66 per million British thermal unit with deliveries on the west coast of India.

Its existing contracts with Sabine Pass and Cove Point in the US are priced at 115 per cent Henry Hub plus a constant of nearly USD 3 per mmBtu.

(**Source:** The Economic Times / 30.03.2025)

Cosmo Specialty Chemicals Unveils Eco-Friendly Barrier Coatings for Sustainable Packaging

Cosmo Specialty Chemicals, a 100% subsidiary of Cosmo First and a one-stop solution for a range of Adhesives, Masterbatches and Coating Chemicals, has launched its innovative range of Oil and Grease Resistant (OGR) barrier coatings. These advanced solutions offer sustainable alternatives to traditional polyethylene coatings, addressing growing environmental concerns while maintaining superior performance.

Cosmo Specialty Chemicals, a 100% subsidiary of Cosmo First and a one-stop solution for a range of Adhesives, Masterbatches and Coating Chemicals, has launched its innovative range of Oil and Grease Resistant (OGR) barrier coatings. These advanced solutions offer sustainable alternatives to traditional polyethylene coatings, addressing growing environmental concerns while maintaining superior performance.

Globally, various governments have implemented phasing out traditional polyethylene coatings focusing on sustainable packaging solutions. Cosmo Specialty Chemicals is moving in this direction by launching two distinct grade OGR coatings - OGR 145B and OGR 145S - designed to meet diverse packaging requirements across industries. These water-based formulations are a sought-after solution for the packaging industry in its efforts toward green manufacturing.

“Our new range of OGR barrier coatings reflects Cosmo Specialty Chemicals' commitment to innovation and sustainability,” said Raj Sharma, Business Head of Cosmo Specialty Chemicals. “By developing eco-friendly alternatives that maintain high-performance standards, we are addressing the current market demands and anticipated future needs. These solutions deliver exceptional barrier properties while supporting our customers' environmental goals and regulatory compliance requirements.”

The OGR 145B, a non-heat sealable barrier coating, offers excellent oil and grease resistance for food packaging applications. Its unique formulation provides superior water and oil resistance properties, versatile coating application compatibility, anti-blocking properties, zero VOC emissions and is FDA compliance for direct food contact.

Complementing this, the OGR 145S variant introduces heat - sealing capabilities, specifically engineered for paper cup manufacturing. This coating delivers enhanced heat-seal properties for paper-to-paper bonding, excellent resistance against water, moisture, oil, and grease, flexible application options including gravure, flexo, and air knife coating and food-grade compliance for safety.

Both products undergo rigorous testing through KIT and Cobb Index measurements, ensuring optimal performance in grease resistance and water absorbency. These scientifically validated parameters guarantee consistent quality and reliable barrier protection across various applications.

India Hopes to Tackle Plastic Waste with Improved Tracking Facilities

India's Ministry of Environment, Forest and Climate Change has amended its Plastic Waste Management Rules that were first introduced in 2016. The new amendments, set to be introduced as of the 1st of July 2025, add a new sub-rule to marking and labelling, requiring producers, importers or brand owners to provide under rule 11.1, using new mediums.

Scene from Patthargatti Road, Hyderabad India

Under rule 11, plastic carrier bags and multilayer packaging must feature information including the name and registration number of the manufacturer, which is generated by the Central Pollution Control Board's (CPCB) centralised online portal. Additionally, carrier bags must also include information relating to their thickness, excluding carrier bags made of compostable plastics (these must comply with Indian Standard IS 17088:2008).

Rule changes include the following new mediums:

- A barcode or quick response (QR) code is printed on the plastic packaging.
- In the product information brochure.
- As a unique number displayed on-paco provided all provisions of rule 11 are fulfilled.

The CPCB must be notified by the producers, importers, or brand owners of which labelling method they will be using on their packaging. This information will be compiled onto its website and updated quarterly.

A selection of penalties will also be introduced when the Plastic Waste Management Rules are updated later this year. The addition of rule 19 allows for non-compliant individuals/organisations to be penalised, which is in line with section 15 of the Environmental Protection Act. Penalties that individuals may face when not compliant with the new rules include:

- An initial fine.
- An additional fine that will increase every day that the violation continues.
- For serious or continuing violations, the perpetrator could face jail time.

Tracking plastic waste throughout India

These new rules aid with tracking plastic waste in India and attempt to make industry players more responsible regarding the environmental impact of their products. This is in line with the country's Extended Producer Responsibility (EPR) scheme.

Sudarshan Chemical Completes Acquisition of Heubach Group

Sudarshan Chemical Industries Limited ("SCIL" or "Company") recently announced that through its wholly owned subsidiary Sudarshan Europe B.V., it has completed its previously announced acquisition of Germany-based Heubach Group ("Heubach") in a combination of an asset and share deal.

- Expands Sudarshan's global presence with operations across 19 sites in all regions.
- Creates a broad pigment portfolio with state-of-the art technologies.
- Sudarshan's Managing Director, Mr. Rajesh Rathi, will lead the combined entity as CEO.
- Customers benefit from best-in-class portfolio, application expertise, global footprint.

This strategic acquisition creates a global pigment leader, bringing together SCIL's operations and expertise with Heubach's technological capabilities. It will enhance SCIL's product portfolio, giving it access to a diversified asset footprint across 19 international sites. The combined company will have a broad pigment portfolio of high-quality products and a strong presence in major markets including Europe and the Americas. With that, the new Sudarshan is ideally positioned to deliver high-quality solutions that fit its global customers' needs. Mr. Rajesh Rathi will lead the combined company as Managing Director and Chief Executive Officer alongside a high-performing leadership team with techno-managerial competencies.

Heubach has a 200-year-old history and became the second largest pigment player in the world after its integration with Clariant in 2022. It had over a billion euros in revenue in FY21 and FY22, with a global footprint especially in Europe, Americas and the APAC region. Heubach faced financial challenges over the past two years due to rising costs, inventory issues, and high interest rates. SCIL's acquisition of Heubach will address these challenges with a clear turnaround plan.

SCIL is proud to have completed the transaction on schedule. The integration team has worked diligently to ensure a smooth transition and has already developed a detailed execution plan across all functions. The immediate priority will be to operate as ONE— unlocking efficiencies, driving synergies, and fully integrating legacy Clariant, Heubach, and Sudarshan into a unified, stronger organization with shared values.

Germany remains a strategic location for SCIL and by establishing its second global headquarters in the Frankfurt area, the company underscores the region's role as a key pillar of its operations and future growth.

The new SCIL stands for boldness, passion and ambition with strong customer centricity and solution orientation. The integration will foster a culture of agility and entrepreneurship, allowing the company to move quickly and effectively. It will implement best practices and create simplicity in structures, systems and processes. SCIL will also focus on financial stability, prudent cash management and investing for the long-term.

Recyclers collected over 2,500 Metric Tonnes of Lithium - ion EV Waste Batteries Since 2022: Government

Recyclers in India have collected 2,570.26 metric tonnes of lithium-ion waste batteries from electric vehicles (EVs) over the past three years, the government informed the Parliament . Union Minister of State for Environment Mr. Kirti Vardhan Singh shared this information in the Rajya Sabha in response to a question from Congress MP Renuka Chowdhury.

However, he did not disclose the total amount of lithium-ion waste batteries generated from Evs.

The minister said improper disposal of waste batteries can contaminate soil and water.

To manage waste batteries in an environmentally safe manner, the government introduced the Battery Waste Management Rules in August 2022, he said.

These rules apply to all types of batteries, including EV batteries, portable batteries, automotive batteries and industrial batteries, he said.

They follow the Extended Producer Responsibility (EPR) principle, requiring battery producers, including importers, to collect, recycle or refurbish waste batteries.

Under EPR, all waste batteries must be collected and recycled or refurbished. Their disposal in landfills or through incineration is prohibited, the minister said.

The rules also require producers to use a minimum percentage of domestically recycled materials in the production of new batteries.

A centralized online EPR portal has been developed for the registration of producers, recyclers and refurbishers. The portal facilitates the exchange of EPR certificates and the filing of returns by producers and recyclers/refurbishers.

The Central Pollution Control Board (CPCB) on 8th April 2025 Issued Show Cause Notice (SCN) to Non - Compliant PWPs & Directions to SPCBs/PCCs for Gross Violations Observed for Plastic Waste Management Rules, 2016 (as amended)

CPCB examined GST E-invoices submitted by the PWPs in support of the sale of recycled plastics, cement, and cement clinker and observed the following anomalies:

- Recycled plastic or cement sold at prices far below prevailing market rates
- Sales invoices uploaded by entities other than the actual PWPs generating the credits
- Invoices include sale of unrelated items
- Single invoices submitted for unusually large volumes, such as approximately 1000 MT

CPCB, as a result, has **temporarily blocked the PWP accounts** restricting further generation of EPR Credits. The SCN directs the following actions to the erring PWPs:

- Cancellation of Registration
- Levy of Environmental Compensation (EC)

CPCB has continued its **enforcement drive against non-compliant PWPs,** building on its earlier directions dated **14th January 2025 and 21st February 2025**, to various SPCBs and PCCs under Section 5 of the Environment (Protection) Act, 1986.

The current directions have more in - depth observations raised by the CPCB with respect to the non - compliances observed on ground and the violations in EPR portal by the PWPs.

Bry - Air Celebrates 60 Years of Innovation and Sustainability

Bry-Air, a global leader in dehumidification and environmental control solutions, celebrates its 60th anniversary, marking six decades of innovation, technological advancement and sustainability. As a flagship company of the Pahwa Group, Bry-Air's cutting-edge, energy-efficient products and solutions touch people's lives around the clock globally.

Bry-Air, a global leader in dehumidification and environmental control solutions, celebrates its 60th anniversary, marking six decades of innovation, technological advancement, and sustainability. As a flagship company of the Pahwa Group, Bry-Air's cutting-edge, energy-efficient products and solutions touch people's lives around the clock globally.

Founded in 1964 in the USA by Art Harms as an offshoot of Bryant, a division of Carrier Corporation that manufactured desiccant-based dehumidifiers, Bry-Air is today a global leader in adsorption-based technologies.

At Bry-Air, energy efficiency and sustainability are not mere futuristic goals rather very pertinent present-day frameworks on which all its products and solutions are based on. With continuous advancement in material science, today Bry-Air has managed to push the boundaries of adsorption-based technologies to create the most cutting-edge products. In the month of October 2024 itself, Bry-Air has filed 7 patents for its future technologies.

Bry-Air is poised to enter new domains such as Carbon Capture, NMP Recovery and Air to Water Generators for Green Hydrogen. These technologies are revolutionary in solving the most pressing issues like climate change.

Within the existing domain of Dehumidification, Bry-Air is set to break new grounds in energy efficiency as it reaches rotor regeneration temperature at 80 degree Celsius significantly reducing the operational cost of running a dehumidifier. Additionally, its Low Dew Point Dehumidifiers are setting new standards in dehumidification for Lithium-ion Cell manufacturing globally.

All its technology, both current and future, is designed to deliver maximum output with least amount of energy consumption, making it the most sustainable and energy efficient choice. With Carbon Capture, Bry-Air is looking to create solutions to actively remove carbon from the atmosphere and with Air Water Generation it will not only help the water scare areas but also participate in the Green Hydrogen revolution.

With a strong commitment to reducing the global carbon footprint, Bry-Air integrates sustainability in every aspect of its operations—from product design and manufacturing facilities to corporate responsibility initiatives. Through relentless innovation, the company ensures that industries worldwide benefit from energy-saving solutions that enhance operational efficiency while preserving natural resources.

Deepak Pahwa, Chairman of the Pahwa Group and Managing Director of Bry-Air, shared his thoughts on this momentous occasion: “It is a moment of great pride to complete 60 years in the industry. Our continuous innovations have resulted in 84 patents, and we look forward to the next decades of progress through a wider reach. Our focus remains on innovating and empowering our product offerings to meet the changing dynamics of the market with a strong customer focus and an eye on the future.

Staying true to our commitment, our offerings transcend commercial and industrial applications and go a long way in addressing the pressing issue of climate change.

As a responsible organization, we are making significant strides aimed at reducing energy consumption across industries with the help of our pioneering adsorption technologies and are determined to keep innovating in the future as well.”

Driven by its ethos of 'Innovation is Life,' Bry-Air will continue to pioneer new technologies and sustainable practices, aiming to lead the industry towards environmentally responsible growth.

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20 Microns Nano Minerals Launches Antiblock Additives

20 Microns Nano Minerals Ltd. has revolutionized an antiblocking high aspect ratio talc namely TALC HFM 25 SD for PE film application, which is giving excellent dispersion along with no leaching / migration, no screen choking due to specialized organic surface modification and spray drying; hence, widely being recognized by the petrochemical industries as well as the antiblock masterbatch manufacturers in India and abroad.

Furthermore, due to its narrow particle size distribution, TALC HFM 25 SD exhibits superior gloss and clarity, very low haze of the PE film, enhanced dart drop impact and puncture resistance as well as tensile strength in PE film.

Also notable is flux calcined diatomaceous earth (DE) based antiblock namely Amorphlos, which is at par with any global standards. Both these products show very low interaction with slip additives like erucamide or oleamide and eliminate their migration on the film surface.

HROC Brings Arkema's Advanced Acrylic Solutions to India

H. R. Organo Chem Pvt. Ltd. (HROC) presents acrylic impact modifiers Durastrength and processing aids Plastistrength from Arkema Inc., France, specifically designed for PVC. These products are widely used in PVC pipes, fittings, window profiles, floorings, foam boards and WPC applications.

Arkema's products are based on patented composite AIM technology that combines a highly efficient AIM with an inorganic additive encapsulated in the shell, which differentiates it from competition. The synergy between the acrylate rubbery core and mineral part enhances impact strength, making it a preferred choice for PVC processors globally.

Sustainability Solutions

- Arkema's IM with mineral encapsulation offers upto 35% CO_2 footprint improvement compared to traditional pure acrylic impact modifiers.
- **Acrylic Processing Aids:** High compatibility of Arkema's processing aids facilitates PVC fusion at lower temperatures, increasing melt strength and improving surface quality and melt homogeneity.
- **Engineering Plastics:** Arkema's MBS based grades Clear strength grades are your best choice to improve the performance, processing and economics of PC, PC/ABS and PC/polyesters.

Nishan Multitrade: One-Stop PVC and C-PVC Raw Material Supplier

Established in 1991, Nishan Multitrade Pvt. Ltd. (NMPL), formerly known as Nishan Marketing, has evolved into a trusted one-stop supplier of all PVC and C-PVC raw materials. It has comprehensive product portfolio of over 200+ products, for all types of PVC industries. Their products include resins plasticisers, stabilisers (CaZn, Tin, lead-based), impact modifiers, processing aids, waxes, lubricants, fillers and speciality chemicals.

Nishan also specialises in catering to the sunrise industries like C-PVC, by providing a full range of materials like C-PVC resin additives, super packs and compounds. Recently, Nishan expanded their portfolio to include raw materials for O-PVC pipes as well. They are committed to providing world-class quality and reliable products to patrons and are distributors of global brands, including KLJ Plasticizers, Valtris Specialty USA, Reagent Italy, Indofil, Epigral etc.

Rollex Trim Winding Machine Offers Customized Solution for All Kinds of Trim Winding

Rollex Machinery Pvt. Ltd. offers a technologically advanced trim winder machine (with over 1,500+ installations worldwide) designed for the converting industry. Equipment automatically synchronizes with any slitter, ECL, blown-film, pouching, foil stamping etc. and operates at speeds of upto 1,000 mpm (metre per minutes).

It effectively addresses trim disposal challenges by efficiently managing trim waste and converting it into rope.

It has helped thousands of customers save power and manage waste efficiently. Rollex's primary goal is to build ergonomic machines

PLACON Launches New Dip Cup Container Line

Placon, an industry leader in innovative, sustainable thermoformed food packaging announced the launch of its new Fresh 'n Clear Dip Cup line for hummus, spreads, and dips. The dip cup line was designed to address rising consumer demand for more sustainable food packaging options for the growing hummus, spread and dip market.

The dip cups and corresponding lids are made with Placon's exclusive EcoStar® material, which consists of a minimum of 10% recycled PET with a #1 resin code. The product line's crystal-clear packaging is recyclable, and the line's round design allows for easy stacking and merchandising.

The dip cups are available in four popular sizes (10 oz., 16 oz., 24 oz., and 30 oz.), and are designed to be film-sealable to ensure party favorites such as sweet and savory dips, hummus and other spreads stay fresh and secure.

"Placon has entered the dip cup market at just the right time, and we hope to capitalize on explosive growth in both the stock and custom food segments," said Robin Camp, Placon Product Manager. The North American hummus market was valued at $1.82 billion in 2023 and is projected to reach $3.39 billion by 2031, according to Data Bridge Market Research.

(**Source:** PLACON / 31.03.2025)

"SC836-20*1," the Thinnest*2 PET Film for Shrink Labels, receives Plastic Recyclability Recognition for APR Design® for Recyclability

Toyobo Co., Ltd.'s "SC836-20*1," the industry's thinnest polyethylene terephthalate (PET) film for shrink labels*2 at just 20 micrometers, has been recognized as meeting or exceeding the voluntary requirements for APR Design® for Recyclability. The recognition was granted by the Association of Plastic Recyclers (APR), a Washington, D.C.-based international industry group dedicated to plastic recycling.

Toyobo is committed to proactively expanding the global sale of this product by highlighting its features that contribute to plastic waste reduction and promote recycling.

"SC836-20," a PET film for shrink labels

Shrink labels can conform to the shape of a container by utilizing their heat-shrinking properties. Their ability to tightly wrap around containers regardless of complexity enhances the scope of designing packaging. These labels are widely used, particularly on PET bottles, for beverages to reinforce product brand identity.

In 2012, Toyobo offered a 20-micrometer-thin PET film for shrink labels, the thinnest in the industry. This product is more than 50% thinner than conventional shrink films, which are usually about 40 to 45 micrometers thick, yet it maintains an equivalent level of performance. Since its introduction, the product has been well-received and widely adopted for PET beverage bottles due to its significant contribution to reducing the volume of plastic used. With the recent surge in environmental awareness, bottle-to-bottle recycling —which involves turning used bottles into new ones — has advanced making it essential for label films to be recyclable.

In response, Toyobo has developed a new 20-micrometer - thick PET film for shrink labels, SC836-20, leveraging film - forming technologies cultivated over many years. Specifically, Toyobo's unique technology for mixing raw materials has enabled the creation of the film with excellent recyclability, ensuring it does not hinder the recovery of PET flakes. Additionally, the new film is free of polystyrene, which would be subjected to future regulations in Europe and other regions.

Based on third-party testing results of the PET film SC836-20, APR determined that the product meets or exceeds the guidance criteria of the Critical Guidance Recognition pathway, enabling it to receive the APR recognition.

Toyobo offers a variety of eco-friendly film options for container labels, including "ReCrystaTM*3" and "CYCLE CLEAN®." ReCrystaTM is a PET film for shrink labels that does not require separate sorting from bottles during recycling and which received APR recognition last year. CYCLE CLEAN®, which has a thickness of 12 micrometers — the thinnest in its category — contains 80% recycled content, representing the highest level in the industry. As environmental awareness increases worldwide, Toyobo is committed to expanding the sale of SC836-20 in the global market while contributing to the establishment of a recycling-oriented society through its diverse range of eco-friendly film products.

Regarding the Association of Plastic Recyclers

The Association of Plastic Recyclers is an international industry group that represents plastic recyclers. It promotes a circular economy through its distinct recognition programs designed to ensure high-quality recycled plastics, and provides methods to assess the recyclability of plastic products, along with various educational initiatives.

1 Product number

2 Based on Toyobo's study as of April 3, 2025

3 Please refer to Toyobo's press release dated May 27, 2024
https://www.toyoboglobal.com/news/2024/release_618.html

ProAmpac Enhances Dairy Packaging Lineup with High Performance Butter Wraps

ProAmpac, a global leader in flexible packaging and material science, expands its dairy packaging portfolio with high-performance butter wraps, including its Butter Fresh Parchment and foil-paper-based options.

Designed to protect butter, margarine, and other oil-based solid products, these wraps offer superior grease resistance and excellent dead-fold properties to maintain freshness and minimize air exposure.

"With Butter Fresh Parchment, we're delivering a wax-free, PFAS-free solution with excellent grease resistance and designed for compostability," said Jim Tierney, vice president of product development at ProAmpac. "Paired with our durable foil-paper-based wrap, these solutions ensure efficient processing and premium product presentation."

ProAmpac's foil - paper wrap offers an excellent grease barrier and UV protection to preserve product integrity. It is designed for high-speed processing, with embossing that enhances runnability, adds texture, and improves dead-fold performance. The product is also designed with a strong bond to resist delamination and curling.

Beyond butter wraps, ProAmpac provides a full range of dairy packaging, including lidding solutions, cheese packaging, and spouted yogurt pouches. PRO-FLEX® films meet the needs of natural chunk, retail shred, and institutional shred cheese markets.

Committed to sustainability and innovation, ProAmpac continues to develop flexible packaging solutions for the dairy industry. For more information, please contact Marketing@ProAmpac.com or visit ProAmpac.com

AI - Powered Drying Technology

Conair's ResinWorks multihopper drying system automatically maintains process - ready resins at perfect temperatures, prevents over drying and delivers big energy savings.

Conair's ResinWorks with Optimizer is an AI-driven, multihopper drying platform that can monitor resin temperatures and adapt heat inputs to optimize resin drying while producing energy savings up to 40% over manual operation.

Introduced in March at PTXPO 2025, Rosemont, Illinois, the system relies on artificial intelligence (AI) to automatically and seamlessly adjust for operating rates, material conditions (incoming and in-process), and live data feedback from each hopper, Conair says. A hands-free operation that requires no operator involvement, the technology is billed as an energy saver: up to 40% in real - world testing.

This is achieved because electrical and mechanical adjustments to power consumption are automatically made based on current drying conditions.

Source: Conair

In real time, the system monitors and adjusts for variations in throughputs, materials, bulk densities, material temperatures, moisture content, drying time, airflow and dew point. In the case of ResinWorks with Optimizer, the manual damper handles, which regulate airflow to the hoppers, are omitted in favor of the AI-driven control logic.

The Optimizer logic monitors overall airflow, first ensuring that only active hoppers are served. Then, it optimizes airflow through each active hopper based on changes in mass flow and temperature.

Once material at the bottom of the hopper achieves the proper temperature, the Optimizer logic holds it steady, while incrementally adjusting airflow through the rest of the hopper to match the actual processing rates, incoming material condition and material drying requirements.

Toray Launches Wide Nano-Multilayer Film for Head-Up Displays that Delivers High Clarity, Free of Double Images, Even for Polarized Sunglasses Wearers

Toray Industries, Inc., announced that it has launched PICASUS™ VT, a wide nano-multilayer film that reflects light only from oblique angles. Applied to head-up display technology, the film can deliver double image-free high-definition displays across a full-screen area of windshields. These displays remain clear even when viewed through polarized sunglasses.

HUD technology helps improve driver safety by displaying relevant information on windshields, so their eyes do not stray from the road ahead. While a limited area on the windshield right in front of the driver shows such information as vehicle speed and map navigation, new projection technologies have emerged in recent years to display navigation, warnings, and other timely driver assistance information more clearly and across a wider area of the windshield.

A good example is panoramic HUD, which projects information across the entire lower part of the windshield. This allows for a more compact dashboard, creating a more spacious and comfortable cockpit environment. Efforts are under way to develop technologies to simultaneously display near and far information across the whole area of the windshield.

Current HUD technology shows information by projecting S-polarized (note 3) images onto the windshield because glass surfaces more easily reflect S-polarized light. Regular windshields, however, reflect images on the front and rear surfaces of the glass, causing double images.

Windshields designed to prevent this issue enable clear display only in some areas. Polarized sunglasses worn widely in Europe and the United States absorb S-polarized light. The trouble is that HUD images become impossible to see when wearing such sunglasses.

Conventional HUD (top), panorama HUD (bottom left) and augmented reality HUD technologies (bottom right)

Toray has endeavored to broaden the application of PICASUS™ VT for HUDs by drawing on its proprietary nano-multilayer technology and advanced optical design capabilities. PICASUS™ VT provides glass-like transparency when viewed from the front, and selectively controls reflectivity for light entering from oblique angles. Combining PICASUS™ VT with a light source emitting P-polarized (note 4) images, which are not reflected by glass surfaces, can resolve these issues.

PICASUS™ VT offers the following key HUD projection features:

- Reflects images only on the film surface, enabling high - definition information display across a full-screen area
- Maintains excellent visibility even when wearing polarized sunglasses
- Supports augmented reality displays with depth perception, allowing projections from near to far distances

Toray enhanced material design, production equipment and process technologies for this film, establishing a structure to supply 1,600 mm wide film rolls compatible with almost all automobile windshields. Full-fledged customer assessments are underway.

Enabling high-definition, double image-free displays that remain visible even when wearing polarized sunglasses allows drivers to receive driving assistance information with minimal eye movement. Toray's technology also ensures visibility even in bright sunlight, helping improve driving safety. It also addresses the display quality issues of panoramic HUDs, which should contribute to more spacious and elegant vehicle interiors. The company will continue striving to realize full-screen windshield displays and augmented reality HUD displays (note 6).

Toray will keep leveraging its core technologies of synthetic organic and polymer chemistry, biotechnology, and nanotechnology to pursue R&D into groundbreaking materials that can transform the world in keeping with its enduring commitment to delivering new value and contributing to social progress.

Notes

1. PICASUS is the brand name for polyester films harnessing Toray's proprietary nano - multi - layer technology, enabling nanometer - level thickness control.

2. https://www.films.toray/en/products/picasus/pis_001.html

3. Head-up display technology directly displays images within driver vision fields so they can check vital information without having to lower their eyes.

4. S-polarized light, the wave vibration direction is perpendicular to the surface on which the light is incident. This contributes to reflections on smooth surfaces, and causes such phenomena as the sparkle on water surfaces and reflections on glass surfaces. Polarized sunglasses mainly aim to cut S-polarized light.

5. With P-polarized light, the wave vibration direction is perpendicular to that of S-polarized light and parallel to the surface on which the light is incident. P - polarized light is not reflected on striking a smooth surface at a specific angle.

6. Augmented reality technology superimposes virtual digital information on the real world.

7. Augmented reality HUD technology displays images with depth within the field of vision. The information can be superimposed on scenery through windshields and can be communicated more intuitively.

New Insulation Board Containing Recycled Material Used in Pilot Project by ABG, BASF and Sto

Ludwigshafen, Frankfurt am Main and Stühlingen, Germany - In a recently completed pilot project, BASF, together with the housing society ABG FRANKFURT HOLDING and the manufacturer of external thermal insulation composite systems Sto, successfully used an insulation board based on expandable polystyrene (EPS) containing recycled material.

The thermal insulation composite manufacturer Sto, BASF as a producer of polystyrene - based raw materials for insulation boards and the Frankfurt housing society ABG have been business partners for decades. This was also the reason for implementing a pilot project with EPS insulation boards with an improved sustainability profile.

For this purpose, around 10 percent of the polystyrene was replaced by an EPS recyclate in the production of the raw material. The technical tests showed that the newly developed board meets the same quality standards as standard market products.

"The result allows us to look to the future with optimism, as our aim is to incorporate a significantly higher proportion of sustainable substitutes into our external thermal insulation composite systems. In the interests of the environment, we aim to keep the carbon footprint of our products as low as possible," says Dr. Frank Börner, Regional Manager Rhine-Main in Project Management at Sto.

ABG, one of the largest housing societies in the Rhine-Main region, has been focusing on sustainable solutions for the thermal insulation of buildings for years. This is why the company also provided significant support for this pilot project. The new insulation board was installed on the façade of one of its existing buildings with 52 residential units in Frankfurt am Main as part of an energetic modernization project.

"Good insulation saves energy, limits heating costs and avoids CO2 emissions. If we as a housing society can help to conserve fossil resources in the production of EPS boards through the use of recycled material, we are happy to support this further development as an active partner," emphasizes Frank Junker, Chairman of the ABG Management Board. There were no differences for the craftsmen compared to conventional EPS products when working with the panels on the ABG property.

The raw material Neopor® F 5 McycledTM developed by BASF is a graphitecontaining expandable polystyrene granulate containing 10 percent recycled material. "The recyclate comes from mechanically recycled EPS waste and contributes to the recycling loop. The aim is to use also other recyclate streams for the production of Neopor® McycledTM in the future, for example EPS off - cuts from construction sites," explains Klaus Ries, Head of Business Management Styrenics Europe at BASF.

"Neopor® McycledTM is just one example of our sustainable portfolio. We also offer the biomass-balanced Neopor® BMB, which has a significantly reduced product carbon footprint compared to traditionally produced Neopor®." All those involved see the pilot project as forward - looking and want to continue working closely together on sustainability issues.

About BASF: At BASF, we create chemistry for a sustainable future. Our ambition: We want to be the preferred chemical company to enable our customers' green transformation. We combine economic success with environmental protection and social responsibility. Around 112,000 employees in the BASF Group contribute to the success of our customers in nearly all sectors and almost every country in the world.

Our portfolio comprises, as core businesses, the segments Chemicals, Materials, Industrial Solutions, and Nutrition & Care; our standalone businesses are bundled in the segments Surface Technologies and Agricultural Solutions. BASF generated sales of €65.3 billion in 2024. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the United States. Further information at www.basf.com

About ABG FRANKFURT HOLDING GmbH: ABG FRANKFURT HOLDING GmbH is the housing and real estate Company of the City of Frankfurt am Main with around 55,000 apartments and around 37,500 other units. Its core tasks are the commercial and technical management of its properties, project development and the further development of its real estate portfolio.

The ABG holding also employs architects and engineers and is active in project management, parking space management and as a lessor of event spaces. As pioneers in energy-efficient buildings, ABG have gained more than 20 years' experience and become experts in building Passive Houses and implementing plus-energy technologies.

The company has around 800 employees. About Sto SE & Co. KGaA Sto SE & Co. KGaA is a major international manufacturer of products and systems for building coatings. The company is a leader in the business field of external wall insulation systems. Sto's core product range also includes high-quality facade elements, as well as renders, plasters, and paints for building exteriors and interiors alike. Another focus is placed on concrete repair, floor coatings, acoustic systems, and rainscreen cladding systems. Further information is available on the Internet at www.sto.com

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Tetra Pak and Schoeller Allibert Launch polyAl Transport Crate at PRSE

Tetra Pak has collaborated with Schoeller Allibert to launch a new transport crate made of polyAl. Ideal for use with beverage cartons, the new solution will debut at the Plastics Recycling Show in Amsterdam. Currently undergoing quality and durability field testing, the crates will be expected to replace over 50,000 crates that Tetra Pak uses at its global spare parts distribution centre in Lund, Sweden.

Schoeller Allibert has developed warehouse crates and other reusable logistics that meet high industry performance and durability standards by integrating up to 50% polyAl from used beverage cartons with raw materials from other recycled streams. Additionally, the crates are more sustainable and cost-competitive than traditional alternatives. The company is already engaging with other potential customers regarding solution adoption.

"For our customers, making supply chains more sustainable is a key priority and material innovation is one of the main drivers in making that happen," said Britta Wyss Bisang, VP Sustainability and Strategic MarCom at Schoeller Allibert. "That's why we are heavily investing in new ways to reduce the use of virgin plastic and use recycled materials such as polyAl. This project demonstrates how advanced recycling solutions can turn waste into durable, reusable packaging that supports circular logistics and thereby the transition to a circular economy."

“Aseptic cartons are crucial to providing food access and safe nutrition. And, at Tetra Pak, we know how important it is to also consider its end of life, keeping valuable materials in use,” added Kinga Sieradzon, Vice President Sustainability Operations at Tetra Pak.

“Over the years, we have been exploring viable applications for the recycled material polyAl, and we are pleased to see that our collaboration with Schoeller Allibert has resulted in a robust, competitive industrial product. We will continue to work with recyclers around the world to develop commercially viable products and expand their end market, thereby helping to reduce virgin plastic use and driving progress towards a circular economy.”

Marie Sandin, Managing Director of Tetra Pak Sweden, concluded, “At the Tetra Pak site in Lund, Sweden, we have actively worked over the past year to introduce sustainable and recycled materials in everything we do.

For instance, we now have both indoor and outdoor furniture for our employees made from polyAl material. Our objective with this initiative, together with Schoeller Allibert, was to develop a sustainable and cost - efficient crate that delivers high performance. The results look very promising for our daily operations, using polyAl crates made from approximately 200 recycled beverage cartons each."

On average, aseptic beverage cartons are made up of 70% paperboard. This material tends to be made from wood sourced from FSC-certified forests and other controlled resources. The remaining material is made up of an ultra-thin aluminium layer, shielding food from light and oxygen and thin layers of polymers that work to block moisture while holding the layers together.

During the recycling process, the fibres found in cartons are extracted at paper mills. The remaining mixture of polymers and aluminium is then turned into polyAl pellets for products like pallets, crates, logistics packaging and outdoor furniture.

DuPont Launches New Liveo™ Pharma TPE Ultra - Low Temp Tubing for the Biopharma Industry

Image credit: DuPont.

New DuPont™ Liveo™ Pharma TPE Ultra-Low Temp Tubing is sterilizable, weldable, sealable thermoplastic elastomer tubing intended for biopharmaceutical processing applications that require low temperatures. It is the second TPE tubing product launched by DuPont in recent years, joining Liveo™ Pharma TPE Tubing in the company's portfolio of solutions for biopharma processing applications. DuPont (NYSE:DD) today announced it has launched DuPont™ Liveo™ Pharma TPE Ultra-Low Temp Tubing, a new thermoplastic elastomer tubing designed to withstand the low temperatures required for many of today's biopharmaceutical processing applications.

Sterilizable, weldable, sealable Liveo™ Pharma TPE Ultra-Low Temp Tubing is an ISO Class 7 cleanroom-manufactured tubing that offers improved elastomer toughness and ductility down to -86 °C; resistance to bend, crush and impact at -80 °C; good pumpability and low spallation; and excellent burst pressure resistance and chemical resistance. The phthalate-free tubing's purity and regulatory data include USP Class VI standards, extractables USP <665>, elemental impurities USP <232> and Biocompatibility ISO 10993 (part 5, 6, 11, 23), among others. A comprehensive data package is available to facilitate qualification and validation.

"In recent years, there's been increasing demand for high - purity materials that can meet the biopharmaceutical processing industry's needs for low-temperature exposure," said Diana Salvadori, DuPont Global Senior Product Marketing Manager for Biopharma Processing. "With our new Liveo™ Pharma TPE Ultra-Low Temp Tubing, DuPont is offering an additional thermoplastic elastomer tubing option for fluid transport and single - use bioprocessing applications, facilitating adoption and compatibility with alternative TPE tubing offerings."

Liveo™ Pharma TPE Ultra-Low Temp Tubing is the second TPE tubing product launched by DuPont in recent years, joining Liveo™ Pharma TPE Tubing in the company's portfolio of solutions for biopharma processing applications – which also includes numerous silicone-based tubing and overmolded assembly (OMA) products.

"DuPont's TPE tubing products complement our silicone-based Liveo™ Pharma range – and they are produced under the same high-quality principles as our products that already are known and trusted by the biopharma industry," Salvadori said.

(**Source:** DUPONT / 01.04.2025)

Medical Plastic Innovations Changing the Face of Healthcare Industry

Medical plastic has transformed several aspects of the healthcare industry, making tools and equipment easier to sterilize and safer for both patients and doctors. But plastic has much greater potential than simply being used for bedpans and scalpels. Find out the amazing ways that researchers are using medical grade plastics to heal and even replace human organs.

Why Plastic ?

Even with all the incredible advancements in prosthetics and artificial organs occurring in the medical industry today, it can still be jarring to think of plastic as a viable option for organ replacement. But medical grade polycarbonate sheet and medical grade polypropylene, as well as acrylonitrile butadiene styrene (ABS), are ideal for these procedures since they can handle multiple sterilizations and extended contact with bodily fluids. Not to mention that several kinds of plastic are hypoallergenic!

Another major factor in the popularity of medical plastic for health care innovations is 3D printing technology. 3D printing became a practical means for creating prosthetics and organs when it was discovered that living cells could survive being "printed" through the nozzles of inkjet printers in the early 2000s. Today, advanced 3D printing technology is used to bind plastic polymers with these living cells in order to create functional, living tissue that can retain its shape. While not every advancement related to medical grade plastics involves 3D printers, the technology helps in many applications.

So, what can be created with the help of medical plastic?

Temporary Artificial Hearts

While the technology is not yet viable as a lifelong solution, artificial hearts made of special medical plastic are helping extend patients' lives as they wait for heart transplants. This plastic was designed for long-term durability and has a high fatigue resistance to help ensure a patient's health and safety until an organic heart is available.

This technology is particularly important for patients whose bodies have rejected organic hearts in the past, or simply experienced heart failure because the plastic's composition is biocompatible. Therefore, a patient's body will not reject the organ and sustain further damage before they receive an organic heart.

Skin Grafts and Skin for Prosthetics

When combined with skin stem cells, plastic can be used as skin grafts to heal burns and ulcers. Additionally, researchers are studying "self-healing"

polymers that can repair themselves after being cut. They simply need to heat or hold the cut edges together for them to join back together and even retain its mechanical properties.

Another innovation being studied are polymers that use electrical conductivity to mimic the sensitivity that organic skin experiences. This form of medical plastic could be used to create prosthetics with touch sensitivity, which would help prosthetic users regain their sense of touch. However, these advancements are still in their infancy. There's still a long way to go before a true skin replacement that can flex, stretch, heal and feel is available.

Dummy Organs for Practice Procedures

One 3D printing application already in use is creating organ replicas for surgeons to practice on before they actually begin the procedure on a patient. MRI and CT scans are fed into a 3D printer and, with the help of a designer, a nearly identical organ is printed. These organs are generally made of medical grade plastics or glass.

The surgeons can then hold the "organ" in their hands and view it up close to plan the best possible approach to the surgery, and even practice their chosen procedure. They can then perform complex operations with far lower risk to the patient.

The Middle Way, Dissolution Recycling Technologies Leave the Polymer Intact

Alternative approaches can produce high yield and high purity with reduced energy demand.

Although traditional mechanical recycling is still the dominant form of reprocessing polymers, a diversity of technologies is used on a smaller scale and could make significant changes to the quality and quantity of recycled polymers available in the future. Mechanical recycling is well established and very efficient — both in terms of yield and resource consumption — but still faces challenges in many applications. Mixed and contaminated streams, such as those from municipalities, are particularly challenging because shear stress and heat degrade the mechanical performance of the polymer; sorting and washing processes are required; and any additives compounded with the material will end up in the recycled product (most obviously, color).

Chemical recycling technology for recycling plastic includes pyrolysis and a variety of depolymerization methods. Pyrolysis creates an oil that can be used to make fuel or processed into industrial chemicals. Depolymerization methods use solvents, heat, pressure, enzymes or a combination of methods to produce monomers. The advantage of these methods is a truly fresh start — the opportunity to build a new polymer with no past. That is, free of the additives, contaminants or degradation which a polymer may pick up in its previous life.

Depending on what technology is used and how, these processes can be energy intensive and/or inefficient from a yield/input standpoint. Comparisons of recycling technologies, such as the one conducted by the NREL in 2022, suggest that the plastic recycling challenge has no single technological solution, because each approach has its own trade-offs, and functional results depend heavily on the polymer type, quality and mixture of feed material.

Still other recycling methods, including dissolution technologies, lie in between mechanical recycling methods with products as good or as bad as their inputs, and chemical recycling methods that produce an oil or other feedstock materials. These methods do not break the polymer back down to create a new monomer, but they do process out contaminants and additives, providing a clean material. Operators of dissolution projects describe it as a type of mechanical recycling (rather than chemical) because the intent is to leave the polymer molecule intact. For some feedstocks, it could provide the shortest path to a quality recycled product.

Meeting the Recycling Challenge of Polypropylene

The very versatility of polypropylene (PP) that makes it so ubiquitous creates a challenge when it comes to recycling. PP packaging appears in every imaginable color in service to consumer brands. This makes a recycling method that can make a refreshed plastic without going all the way back to propylene especially attractive. PP is compounded with a multitude of additives, including every color, and removing these additives could be the key that unlocks greater value for recycled PP.

Three distinct pathways are compared for recycling PP in a paper that appeared in the journal Green Chemistry last year, by Benjamin Caudle, Thu TH. H. Nguyen and Sho Kataoka. Solvent - antisolvent methods use a solvent to dissolve the plastic at high

temperature, then reduce the temperature and add in an antisolvent to precipitate the clean polymer. The temperature swing method follows a similar path but omits the antisolvent. A third method uses a solvent at supercritical conditions, then lowers the temperature and pressure to induce precipitation. In this study, the supercritical solvent method was concluded to have the lowest carbon emissions per kg of rPP produced. It is also a method that has reached the stage of commercial sale.

Clear PP pellets can be produced from postindustrial or postconsumer feedstreams by dissolution mechanical recycling. Source: Purecycle

Purecycle, previously covered in the June 2021 and April 2023 issues of Plastics Technology, uses a supercritical solvent recycling technology that CEO Dustin Olson calls a "molecular wash." At supercritical conditions, solvents have no defined phase, exhibiting both gaseous and liquid properties. These conditions facilitate separation of any additives and contaminants from the polymer. Last year, Purecycle received an expanded No Objection Letter (NOL) from the FDA, which indicates its process produces a material of sufficient purity to be used in food - contact applications.

Purecycle announced its first major sale in January, when Drake Polymers purchased nearly 500,000 pounds of resin that was compounded with Purecycle's PureFive recycled PP. Using recycled material for fiber is particularly challenging due to the fine diameter threads. "The fiber threads are almost invisible," Olson says. "So you can imagine if you're bringing in a recycled stream with a lot of molecular contaminants — it'll break the fiber; the die will plug; you'll have loads of problems. But we've been able to just run, and we're excited about that because it's an indication of the product quality."

The company's flagship production facility in Ironton, Ohio, has run at up to 12,500 lbs/hr. Purecycle also has a sorting facility in Denver, Pennsylvania, that sorts and prepares material and has acquired key equipment for its next production site in Augusta, Georgia. The company also plans to expand internationally with a facility in Antwerp, Belgium.

Dow Program Targets Dissolution Recycling of Polyethylene

In 2024, Dow Chemical announced a collaboration with P&G to use dissolution technology on reclaimed polyethylene (PE) materials. The technology also takes advantage of the properties of supercritical solvents. The goal of the program is to develop a technology capable of recycling collected packaging from households into near - virgin quality PE.

At this year's International Polyolefins Conference, Dow described the process as being at a low level of technological readiness and stated that a target date for commercialization had not been established. The companies' plans for the process even include PE films, which can be challenging to recycle due to their low density and frequently complex design. Both companies bring expertise to the arrangement, with Dow providing process engineering and P&G providing dissolution experience, having developed the dissolution technology being used by Purecycle.

High Yield Dissolution for Styrenics

Trinseo began development of dissolution recycling methods for styrenics such as general - purpose polystyrene (GPPS) and acrylonitrile butadiene styrene (ABS) in 2017, with the aim of developing technology that consumes relatively low levels of energy and produces high polymer-to-polymer yield. In 2019, the company began working on dissolution recycling for polylcarbonate (PC) and PC/ABS blends.

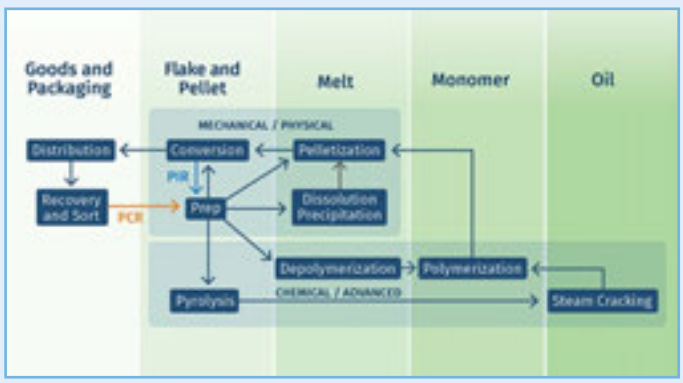
"With all waste streams there are key selection criteria to find the right solvent or combination of solvents — and that depends of course on the polymer that needs to be recovered, but also on the typical architecture of how a part or device is made," says Pascal Lakeman, director of SBS R&D at Trinseo. "All of these affect the selection of the solvents system and process conditions — this makes dissolution-based recycling a very technologically-intensive process."

Processes for recycling styrenics need to enable deep volatile removal or volatile consumption to curb the formation of free styrene. This is necessary for preparing a material appropriate for food contact, which Trinseo has achieved and verified through challenge testing. Challenge testing involves adding contaminants to the feedstock and demonstrating they are effectively removed by the recycling process. Results demonstrated that the rPS resins meet European food-contact standards.

Trinseo hopes to expand its PC recycling facilities in the future, and develop dissolution-based recycling of ABS, HIPS and possibly EPS. "On rubber-containing materials such as ABS and HIPS, recycling is a bit more complicated compared to materials that are not impact-modified," Lakeman says.

Closing the Solvent Loop

After the dissolution process removes unwanted impurities, the recycler has a polymer/solvent mixture which needs to be separated. Sulzer Chemtech is offering a technology called DEVO, adapted from its methods for devolatilizing virgin resin. It uses a heat exchanger to bring the mixture up to temperature, then passes it into a degassing chamber where volatiles are removed. Depending on the polymer type, multiple stages may be needed. According to Sulzer, the process reduces cost and polymer degradation compared to degassing extrusion. Sulzer's first implementation of the technology in a recycling context is currently in the engineering phase.



Dissolution approaches can eliminate steps in situations where it is not necessary to completely reset and rebuild the polymer. Source: Matt Stonecash

The majority of recycling today consists of mechanical recycling of postindustrial or postconsumer materials: anything from press-side regrind to a sophisticated operation that can include washing, pelletization and recompounding. Dissolution / precipitation recycling and other technologies offer the possibility of expanding what is possible with postconsumer materials, especially polyolefins and styrenics, in situations where it is desirable to remove additives and contaminants to achieve properties like clarity while minimizing energy demand.

(**Source:** Plastics Technology / 21.03.2025)

RadiciGroup High Performance Polymers Inaugurates New Production Site in Brazil: More Production Area, Advanced Technology and Greater Sustainability

A significant investment to improve market service by increasing efficiency and production capacity.

RadiciGroup High Performance Polymers has inaugurated its new production site in Brazil, a strategic step to further strengthen the business area's presence in the country, where it has been operating successfully for more than 25 years.

The new plant, located a short distance away from the previous site, offers a leap in quality in terms of efficiency, safety and environmental sustainability and is ready to serve numerous markets, such as automotive, electrical and electronics and consumer and industrial goods.

The decision to move to a new site was driven by the need for a larger area, suitable for meeting current and future production demand. The new plant's surface area is 17,000 square metres (compared to the previous one's area of less than 8,000 square metres) on land area of greater than 20,000 square metres. The increase in production capacity is about 15%. The site's strategic position, with direct access to the motorway, ensures excellent logistics to serve customers all over Latin America.

"Health, safety and respect for the environment are the keywords of our new production site," stated Jane Campos, country manager Brazil of RadiciGroup High Performance Polymers. "We're proud of completing the project in just a little more than one year and are now ready to serve all of South America with the best available quality and technology."

The company has invested heavily in advanced technology to improve the production efficiency and environmental sustainability of the industrial site. The new plant uses 100% renewable energy and a state-of-the art system for process water management, which enables the reuse of more than 95% of the water. In addition, great attention has been given to further reducing pellet loss, in line with the Operation Clean Sweep (OCS) programme for the responsible management of polymer materials.

The plant is equipped with cutting - edge environmental protection systems for the treatment of dust and fumes, which achieve a significant reduction in volatile organic compounds (VOCs) and hazardous air pollutants (HAPs). A new dry suction system allows for reduced waste production, while Zero Landfill certification guarantees that all kinds of waste are disposed of responsibly by qualified companies approved by the competent authorities.

With this important investment, High Performance Polymers has additionally enhanced its presence at the global level and established itself as a partner of reference in a great number of industrial sectors. Thanks to its new production site, the company is ready to confirm its role as a leader in the Latin American market, by ensuring high quality, reliability and increasingly more timely service to customers, with continuous commitment to innovation and sustainability.

SABIC Introduces New Grade Extem RH Resin

Extem RH1017UCL will support data communication infrastructure applications.

Saudi Basic Industries Corp. (SABIC) has announced Extem RH1017UCL polyimide resin for optical applications. According to SABIC, the resin withstands 260ºC reflow soldering and features enhanced properties supporting high - volume production of multilens arrays for optical connect assemblies and subassemblies.

“The optimization of network architecture to handle the explosion of data from AI, cloud, and social and digital media requires infrastructures that can boost transmission speed, bandwidth capacity and reliability,” says Sergi Monros, vice president, SABIC Polymers, specialties business unit.

An expanded beam connector assembly demonstrator uses single-mode optics micromolded from Extem RH1017UCL Resin. Source: SABIC

“SABIC's specialty thermoplastics and dedicated design services can help the industry build these infrastructures at scale. Our materials enhance the performance, precision, cost - effectiveness and manufacturability of components ranging from connectors and optical interconnects to wire and cable,” Monros says.

New Extem RH1017UCL resin is suitable for emerging technologies like onboard and co-packaged optical interconnects. Compared to fused silica and thermosets, this optically transparent material can deliver greater design freedom, support scaled-up production and reduce system costs by avoiding secondary operations. The new product surpasses other Extem grades with improved near-infrared (IR) light transmission, lower moisture uptake and easier processing.

Natureworks Expands Manufacturing Efficiency and Faster Biodegradability of BOPLA Films

BIOMATERIALS manufacturer, NatureWorks (Plymouth, MN, USA), has expanded the capabilities of its product line of Ingeo biopolymers with the introduction of the Ingeo Extend platform. The new platform is designed to enable faster rates of biodegradation and disintegration and achieve new levels of productivity that enable the commercial-scale use of biobased Ingeo PLA.

The new grades within the Ingeo Extend platform are designed for faster compostability, up to 8x faster, than other existing PLA grades. They can also be blended with other existing Ingeo PLA grades to enhance their comparative biodegradation and disintegration rates.

Allrounder 720 E Golden Electric

The ALLROUNDER 720 E GOLDEN ELECTRIC with a clamping force of 2,800 kN extends the product range of the electric series of the same name upwards. Its main advantages in a nutshell? A slimline design with a price to match. The electric injection moulding machine, which was launched on the market in 2024, combines electrical precision, process stability and a small installation area with high component quality, low investment costs and short delivery times.

Significantly reduced installation area

ARBURG has optimized the design of the new ALLROUNDER 720 E GOLDEN ELECTRIC to ensure that, with a width of just 1,848 millimetres, it has a significantly smaller installation area than other machines in its class. This has been achieved through features such as a new safety door with recessed handles. At the same time, the door opening has been widened to 1,400 millimetres, making the ejector area more accessible, for example. Due to its smaller installation area, the new ALLROUNDER fits into existing production grids and lines. This is of particular interest when old machine technology needs to be replaced. However, any space that can be saved is also a valuable resource for any new production facilities being planned. Thanks to the slim design, more machines can be set up in injection moulding production, resulting in an increased output per square metre.

(**Source:** ARBURG/ 09.04.2025)

Domino Launches High - Speed Productivity Mode for N730i Digital Label Press

Domino Printing Sciences has launched its new high-speed productivity mode for the N730i digital label press. The new feature has been developed in response to customer and market demand for faster and more efficient label printing solutions to facilitate the uncompromised production of high-quality labels with a quicker return on investment.

An N730i digital label press featuring the new high-speed productivity mode will be on show at Labelexpo Southeast Asia in Bangkok, Thailand from 8–10 May 2025, with regular live demonstrations at Domino's stand G36.

"Our customers asked for higher printing speeds that would enable them to maximize the number of labels produced on their Domino N730i digital label press," says Michael Matthews, global product manager – DP Colour, Domino. "The high - speed productivity mode significantly enhances the speed and efficiency of the N730i press, allowing our customers to achieve up to a 28% increase in productivity."

With the new maximum print speed of up to 90 m/min, compared with the standard 70m/min, Domino's N730i provides converters with significant efficiency gains, including up to 28% increase in label output, up to 22% reduction in production time, and an annual ink saving of up to 8%. These improvements can translate to over £5,000 in annual ink cost savings, making the N730i a highly cost-effective solution for label printing.

Through balancing process resolution and line speed, the high-speed print mode retains high-quality output with no perceptible difference in print quality compared with the standard operating mode.

"By reducing the cost per label and allowing converters to increase the number of jobs completed per shift, we are providing a solution that not only meets – but exceeds – the growing demands of the label printing industry," continues Matthews. "We are thrilled to be able to demonstrate the new functionality at Labelexpo Southeast Asia and invite converters to join us at stand G36 for a live demonstration and to see the quality of the labels produced first - hand."

Domino's high-speed productivity mode will be available for new presses and as an upgrade for existing N730i customers. The simplicity of the upgrade makes it an attractive option for all businesses, current and new, looking to increase their output, achieve a competitive edge in the market, and maximize the return on their investment.

Alongside the new high-speed print mode, the N730i digital label press on show at stand G36 will also feature the Domino R-Scan monitoring and inspection system.

The R-Scan provides peace of mind during unattended operation of the press by ensuring that, when a defect is detected, the press automatically comes to a stop, enabling the operator to remedy the error, reducing the number of labels rejected and helping to maximize efficiency and minimize waste.

A K300 monochrome printer will also be available for demonstrations as part of a hybrid press at the Nilpeter stand, F32. The printer will feature alongside vision inspection from Domino Group Company Lake Image Systems.

Mark Herrtage, Asia business development director, Domino, adds, "Our commitment to innovation and customer satisfaction drives us to continuously improve our products, so we can help our customers stay ahead in a competitive market. We are delighted to be able to demonstrate this commitment at Labelexpo Southeast Asia and look forward to meeting with converters across all stages of their digital printing journey to discuss how Domino's expertise and solutions can help support them."

Injection Molding Machine Maker Haitian Posts Record Sales for 2024

Sales were up 23.4 per cent compared with the prior year, despite what the firm calls 'ongoing global economic challenges.'

Ningbo, China-based injection molding machine maker Haitian International has announced "record-high" financial results for the fiscal year ending Dec. 31, 2024.

The information was contained in a March 18 annual report issued by the company.

Despite what it calls "ongoing global economic uncertainties," Haitian officials say the firm achieved sales revenue of US$2.3 billion (RMB 16.12 billion), reflecting a 23.4 per cent increase compared to the previous year.

Domestic sales totalled US$1.4 billion (RMB 10.11 million), a 27.7 per cent increase year-on-year, driven by what the company calls “strong demand in consumer goods and home appliances in the first half of the year, followed by a recovery in the automotive sector in the second half.”

Outside China, Haitian says year-over-year sales increased 16.8 per cent year to US$830 million (RMB 6.01 billion) with strong growth in Southeast Asia, North America, and South America, where early investments in regional production and service networks provide a competitive advantage.

“In 2024, the global economy kept the momentum of slow recovery with different paces across regions,” the report says. “The developed economies lacked growth momentum due to high interest rates, high inflation and geopolitical conflicts, while some emerging markets and developing economies showed strong resilience in their economies, which was attributable to favourable factors such as the shift of the manufacturing industry chain and the recovery of tourism.”

The company's injection molding machine business grew by 23.8 per cent, with total sales reaching US$2.1 billion (RMB 15.40 million). “Among the key product lines, the servo-hydraulic Mars and electrical Zhafir series saw strong demand, fuelled by the rapid expansion of the consumer goods, home appliances, and electronics industries,” the company said. “The two-platen Jupiter series, designed for large-scale applications, continued to perform well, supported by the ongoing expansion of new energy vehicle production. In total more than 53,000 units were delivered in 2024, representing a growth of 35.5 per cent compared to the previous year.”

Looking ahead, Haitian officials expect technological innovation, green transformation, and new industrial developments will become key drivers of economic growth on the domestic side. “Internationally, Haitian will strengthen its global footprint, with new factories in Japan and Serbia set to begin production in 2025, further enhancing regional supply chain efficiency and local market responsiveness,” they said.

(**Source:** Canadian Plastics / 19.03.2025)

Kiefel Investing in the Future

The company's strategic investments and new leadership are designed to set the stage for continued growth and success.

The first machines have been installed in the Customer Innovation Center, which is expected to be completed by the second quarter of the year. KIEFEL GMBH

Kiefel GmbH is marking a milestone in 2025, celebrating its 70th anniversary with a forward-looking approach that includes strategic investments to ensure future growth.

The company's Customer Innovation Center (CIC) Polymer in Freilassing, Germany, is currently under construction and is expected to be completed by the second quarter of the year. According to the company, the facility will play a key role in driving innovation and strengthening Kiefel's position in the market.

In tandem with the expansion, Kiefel said it is reinforcing its management team by appointing new leaders in technology, engineering, and packaging. The company said these appointments are part of the company's ongoing efforts to strengthen its strategic development and continue delivering options for customers. Kiefel said its latest machine technologies are already gaining traction in the marketplace, underscoring the company's commitment to both innovation and market success.

Customer Innovation Center Polymer

Kiefel is set to enhance its innovation capabilities with the development of its new Customer Innovation Center (CIC) Polymer at the company's headquarters

in Freilassing. The company noted the center is designed to further the company's commitment to providing advanced solutions, and offers customers access to state-of-the-art machinery and advanced laboratory resources to optimize packaging solutions. While the center's official completion is expected in the second quarter of 2025, the company said customers are already utilizing the facility to advance their projects with enhanced efficiency.

According to the company, the CIC Polymer gives customers the opportunity to use Kiefel's latest series machines for tool and product sampling, as well as customer-specific prototyping. In addition, the center offers specialized laboratory capabilities, including microscopic examinations, material and layer thickness measurements, punching force analysis, and comprehensive statistical evaluations. These advanced services ensure that Kiefel's clients can refine and perfect their packaging solutions at every stage of development.

“We have stood for technological excellence for 70 years," said Matt Sieverding, CEO of Kiefel GmbH. "By investing in another CIC, we are creating a first-class development environment that enables us to bring innovations to market even faster.”

New division heads

Kiefel also announced that it is setting the course for the future with the appointment of new heads of division for technology, engineering, and packaging in February. The new leaders include:

- Sven Engelmann, vice president of technology, who will be responsible for the Customer Innovation Center and the overall technological development of Kiefel's product portfolio;
- Bengt Schmidt, vice president of packaging, who will strategically develop the packaging division and continue to build the global sales organization in this area;
- Bernd Stein, PhD, vice president of engineering, who will oversee the implementation of efficient development processes and the continuous optimization of machine and tool solutions.

Sieverding pointed out that with these new additions to the company's management team, Kiefel is gaining experienced professionals from the packaging and plastics industries with whom the company can continue to grow.

“The investments and strategic decisions we have implemented as part of our 'ONE Kiefel' future strategy are already showing success in the market, which is reflected in our strong order intake,” he said.

New machine solutions

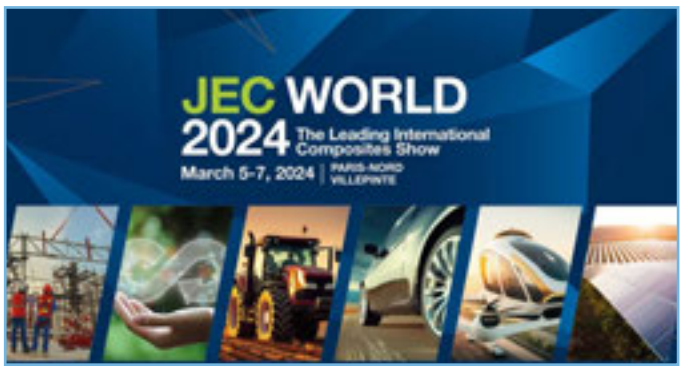
According to the company, the machines showcased during the Packaging Dialogue Days at the end of 2024 are in high demand. A notable example is the recent installation of several new Natureformer KFT 90.1 machines at a customer site in France, where they are being used to produce natural fiber packaging.

Additionally, there is positive news in the tilting machine sector. The latest KTR 6.2 model, which offers enhanced performance, is already being installed at customer locations.

Kiefel has 900 employees at 10 locations. It is a part of the Brückner Group, a family-run, medium-sized corporate group focused on the production of machine and plant engineering, with individual companies and more than 2,900 employees worldwide.

(**Source:** Plastics Today / 11.03.2025)

KraussMaffei Showcases Composite Solutions at JEC World 2025 in Paris



JEC World 2025 was held in Paris, France from March 4 to 6. During the event, KraussMaffei showcased its innovative composite material technologies and complete solutions in composite materials.

KraussMaffei displayed carbon fiber wheel hubs and electric vehicle battery housings produced using the high-pressure resin transfer molding (HP-RTM) process, along with ColorForm exhibits featuring self-healing surfaces. The company also introduced

its new battery encapsulation technology for electric vehicles, which utilizes highly reactive polyurethane materials to provide robust protection for battery cells, supporting the industry's growth.

Additionally, the company showcased innovative products such as tractor fenders made with long fiber injection (LFI) technology and durable materials and concrete reinforcements produced through the extrusion process, providing versatile solutions for agriculture, construction, and other industries.

In additive manufacturing, KraussMaffei displayed its innovative solutions for industrial-grade and large-format additive manufacturing, with the printCore extruder gaining significant attention for its high output and flexible applications.

The company also had a team of experts on-site to provide consultations and offer customized solutions to meet specific customer needs.

(**Source:** KraussMaffei / 14.03.2025)

A Purge Solution for the Blow Molding and Compounding Industries

New commercial purge compounds for new industries from Chem-Trend.

When transitioning, especially from dark to light colors, purge compounds can save plastics processors time and money in lower scrap rates and reduced downtime. Source: Chem-Trend.

Commercial purge compounds (CPCs) have traditionally been developed and marketed for the injection molding industry. Most injection molders are familiar with CPCs and have likely tested various products to find the most effective solution for their needs. Over the past 40 years, CPC suppliers have tailored numerous products specifically for injection molding, resulting in a wide range of effective options. However, industries such as blow molding and compounding have not been a primary focus for CPC suppliers — until now. New CPC formulations are now available to address the unique cleaning requirements of these industries' equipment, providing a safe and efficient solution.

Blow molders and compounding companies face similar equipment cleaning challenges as injection molders such as dark-to-light color changes, carbon removal, material changes and shutdowns/start-ups. In the past, their options were limited to virgin resin, regrind or homemade solutions. With the introduction of CPCs designed for their specific needs, these industries can now experience the same benefits of reducing downtime and scrap as the injection molding sector.

Why should blow molders and compounding companies consider a CPC?

Downtime and scrap caused by dark-to-light color transitions and carbon speck contamination can be costly for blow molders and compounders. The primary objective of using a CPC is to minimize these inefficiencies, ultimately saving money. While CPCs may have a higher cost per pound compared to virgin resin or regrind, the overall savings from reduced downtime and scrap result in a lower total purging cost. Plastic processors should focus on the “price per purge” rather than the “price per pound” when evaluating different purging methods.

Blow molders

Blow molders often struggle to clean heads and accumulators due to dead spots and polymer flow challenges inherent in equipment design. During dark-to-light color transitions, much of the color is typically removed with ease. However, residual color contamination often persists in the knit line — the area where two molten plastic flow fronts meet but fail to fully merge. Using a purge compound that effectively and quickly eliminates dark color from the knit line can significantly reduce downtime and scrap during color changes. Another advantage of using a CPC during dark-to-light color changes is its ability to eliminate carbon buildup within the machine. Each color change also serves as a form of preventive maintenance, helping to remove carbon deposits and maintain equipment efficiency.

In addition to reduced downtime, CPCs can help eliminate carbon buildup in a machine. Source: Chem-Trend

Compounders

Thermoplastic compounders have specific purging needs due to the variety of materials and colors they work with. Color compounders frequently switch between colors, often experiencing significant downtime when transitioning from dark to light colors. Using a commercial purge compound for these transitions can greatly reduce both downtime and scrap.

Compounders working with different fillers and resins often need to perform material changes or adjust screw profiles, sometimes requiring screw removal. In such cases, commercial purge compounds offer significant benefits. Utilizing a purge compound with a "self-emptying technology" will result in screw pulls and cleanings that are faster and take less labor.

A commercial purge compound solution

Chem-Trend has recently introduced Ultra Purge 3615, a specially engineered purge compound designed to clean blow molding and compounding equipment. This advanced formulation effectively reduces downtime and scrap during dark-to-light color changes while also removing carbon buildup from machines. Ultra Purge 3615 efficiently cleans the screw and barrel, die and heads/accumulators, ensuring a thorough purging process.

One of the key advantages of this product is its self-emptying technology, which makes it ideal for machine shutdowns and startups, screw pulls and material changes. This feature ensures that after purging, the screw remains free of residue, preventing material degradation during shutdowns. It also speeds up the screw removal process, as there is no remaining CPC or resin on the flights, making the process quicker, easier and less labor intensive.

Additionally, Ultra Purge 3615 is both recyclable and food contact certified, making it a sustainable and compliant choice for manufacturers. In today's rapidly evolving marketplace, plastic processors must take proactive measures to improve efficiency and reduce costs. Ultra Purge 3615 is a proven solution that helps companies stay competitive.

(**Source:** Plastics Technology / 01.04.2025)

Stork IMM Launches New All - Electric Injection Machines to Meet Packaging Sustainability Goals

Netherlands - based Stork IMM (Stork Plastic Machinery B.V.), a leading manufacturer of injection molding machines for the packaging market, has extended its machine range with the launch of a new all-electric line that delivers greater sustainability and the same high-performance capabilities of standard Stork IMM machines.

The new all - electric offering – scheduled to be showcased at the upcoming K show in Dusseldorf, Germany in October – boasts lower energy consumption, an innovative rack-and-pinion drive system, and highly customized process tailoring for a range of applications in thin-wall food packaging and industrial paints/buckets.

Stork has already delivered all-electric units to leading packaging manufacturers in Europe. The new all-electric series enables the company to deliver highly flexible, customized solutions for its customers by pairing clamping units from 250 up to 700 tons with a range of injection units with screw sizes from 45 up to 84 mm.

Stork's new all-electric units achieve 15% greater energy savings compared to similarly specified hybrid machines and operate at injection speeds suitable for thin - wall packaging applications. The new machine series also features a heavy-duty rack-and-pinion drive that is highly rigid, energy efficient and provides reduced wear and longer life. The drive provides higher speed forces for the clamp and injection units compared to ball bearing and spindle drives.

The all-electric units also feature a breaking energy feedback system whereby recovered energy can be fed back into the customer energy grid. Stork reports significant global interest in the new all-electric line and a healthy pipeline of orders.

(**Source:** Plastics Business / 01.04.2025)

CIRCULAR ECONOMY/ BIO-PLASTICS/ RECYCLING

PTXPO Recap: Turning E - Waste into Durable Building Materials

Recycling household electronics like printers is notoriously difficult due to the wide variety of plastics involved.

At PTXPO 2025, Canon and Repolytex showcased a unique solution that skips the costly and complex plastic separation process entirely. Instead, Repolytex separates out the metals and processes the mixed plastics into a powder, creating a hybrid material used to manufacture durable sheeting. The resulting boards are weather-resistant, dimensionally stable and suitable for construction and marine applications.

This PTXPO 2025 highlights an alternative recycling approach that turns complex plastic waste streams into useful new products—without sorting by polymer type or color.

Innovations in Plastics Technology: Pushing the Boundaries of Material Science

Plastics have become an integral part of our daily lives, transforming industries and everyday products with their versatility and affordability. As the demand for more sustainable, durable and high-performance materials grows, innovations in plastics technology are pushing the boundaries of material science. This article explores the latest advancements in plastics technology, shedding light on their potential applications and impact on various industries.

The Evolution of Plastics

The journey of plastics began in the early 20th century with the invention of Bakelite, the first synthetic plastic. Since then, the field has seen tremendous growth, leading to the development of a wide array of plastics with diverse properties. Today, plastics are used in everything from packaging and electronics to automotive and medical devices.

Biodegradable and Bio-based Plastics

One of the most significant innovations in plastics technology is the development of biodegradable and bio-based plastics.

Traditional plastics are derived from petroleum, a non-renewable resource and contribute to environmental pollution due to their long decomposition times. In contrast, biodegradable plastics are designed to break down more quickly and bio-based plastics are made from renewable resources such as corn starch or sugarcane.

- **Polylactic Acid (PLA):** PLA is a popular bio-based plastic derived from fermented plant starch. It is used in a variety of applications, including packaging, disposable cutlery, and medical implants. PLA is biodegradable under industrial composting conditions, making it an eco-friendly alternative to traditional plastics.

- **Polyhydroxyalkanoates (PHAs):** PHAs are produced by microorganisms that consume plant oils or sugars. These bioplastics are highly biodegradable and are used in packaging, agricultural films and even medical applications such as sutures and drug delivery systems.

- **Starch-based Plastics:** Made from corn, potato or other starches, these plastics are used in packaging, agricultural films and disposable items. They offer the advantage of being compostable and reducing dependency on fossil fuels.

High - Performance Polymers

While biodegradable and bio-based plastics address environmental concerns, high-performance polymers are designed to meet the demanding requirements of advanced applications. These plastics offer superior strength, heat resistance and chemical stability, making them ideal for industries such as aerospace, automotive and electronics.

- **Polyetheretherketone (PEEK):** PEEK is a high-performance polymer known for its exceptional mechanical properties and resistance to high temperatures and chemicals. It is used in aerospace, automotive and medical applications, including implants and prosthetics.

- **Polyimides:** These polymers exhibit excellent thermal stability and mechanical strength, making them suitable for applications in electronics, aerospace and automotive industries. Polyimides are used in flexible printed circuits, insulating films and high - temperature adhesives.

- **Liquid Crystal Polymers (LCPs):** LCPs have unique molecular structures that provide high strength, rigidity and heat resistance. They are used in electronics, automotive parts and high-performance fibers.

Recycling and Circular Economy

The environmental impact of plastic waste has driven the development of new recycling technologies and the adoption of a circular economy approach. Innovations in this area aim to reduce plastic waste, increase recycling rates and create sustainable production cycles.

- **Chemical Recycling:** Unlike traditional mechanical recycling, which involves melting and reshaping plastics, chemical recycling breaks down plastics into their basic chemical components. This process allows for the recycling of mixed or contaminated plastics that are difficult to process mechanically. Technologies such as pyrolysis and depolymerization are being developed to convert plastic waste into valuable raw materials.

- **Advanced Sorting Technologies:** Innovations in sorting technologies, such as near-infrared (NIR) spectroscopy and artificial intelligence (AI)-driven systems, enhance the efficiency and accuracy of plastic recycling. These technologies enable the identification and separation of different types of plastics, improving the quality of recycled materials.

- **Design for Recycling:** Manufacturers are increasingly adopting design principles that facilitate recycling. This includes using single-material packaging, reducing the use of additives and incorporating recycled content into new products. By designing products with their end-of-life in mind, companies can improve the recyclability of plastics and support a circular economy.

Smart and Functional Plastics

The integration of smart and functional materials into plastics is another exciting area of innovation. These materials can respond to environmental stimuli, such as temperature, light, or pressure and provide additional functionalities beyond their basic structural properties.

- **Conductive Polymers:** These plastics can conduct electricity and are used in applications such as flexible electronics, sensors, and energy storage devices. Conductive polymers offer the potential for lightweight, flexible and cost-effective electronic components.

- **Shape-Memory Polymers (SMPs):** SMPs can return to their original shape after being deformed when exposed to a specific stimulus, such as heat or light. They are used in applications such as self-healing materials, actuators and medical devices.

- **Self-Healing Plastics:** These materials can repair themselves when damaged, extending the lifespan of plastic products and reducing maintenance costs. Self-healing plastics are used in coatings, automotive parts and electronics.

Nanocomposites and Hybrid Materials

Nanotechnology is revolutionizing the field of plastics by enabling the development of nanocomposites and hybrid materials with enhanced properties. By incorporating nanoparticles into plastics, researchers can create materials with improved strength, barrier properties and conductivity.

- **Carbon Nanotubes (CNTs):** CNTs are used to reinforce plastics, creating materials with exceptional strength and electrical conductivity. Applications include lightweight structural components, conductive films and advanced composites.

- **Graphene:** This single layer of carbon atoms arranged in a hexagonal lattice offers remarkable mechanical, electrical and thermal properties. Graphene-enhanced plastics are used in electronics, energy storage and high-performance composites.

- **Clay Nanocomposites:** Incorporating clay nanoparticles into plastics improves their barrier properties, making them ideal for packaging applications. These nanocomposites provide enhanced protection against moisture, gases and UV light.

Sustainable Manufacturing Processes

In addition to developing new materials, innovations in plastics technology also focus on sustainable manufacturing processes. These processes aim to reduce energy consumption, minimize waste and lower the environmental impact of plastic production.

- **3D Printing:** Additive manufacturing, or 3D printing, allows for the creation of complex plastic parts with minimal waste. This technology is used in prototyping, customized products and small-scale production, reducing the need for traditional manufacturing processes.

- **Green Chemistry:** The use of environmentally friendly chemical processes and renewable feedstocks in plastic production is gaining traction. Green chemistry principles aim to reduce hazardous substances, energy consumption and waste generation, promoting sustainable plastic manufacturing.

- **Efficient Polymerization Techniques:** Advances in polymerization techniques, such as controlled radical polymerization and catalytic processes, enable the production of high-quality plastics with precise properties. These techniques improve the efficiency and sustainability of plastic manufacturing.

Conclusion: Innovations in plastics technology are transforming the material science landscape, offering solutions to some of the most pressing environmental and industrial challenges. From biodegradable and high-performance plastics to smart materials and nanocomposites, these advancements are pushing the boundaries of what is possible.

As researchers and manufacturers continue to explore new frontiers in plastics technology, the potential for creating sustainable, durable, and multifunctional materials is vast. By embracing these innovations, we can pave the way for a more sustainable and technologically advanced future.

(**Source:** Plastics Technology)

The Significance of Post-Consumer Recyclates (PCR) in the Plastic Industry

The global plastic industry is at an important juncture, facing the dual challenges of satisfying consumer demand while addressing the environmental consequences of plastic waste. Among the most promising solutions to this pressing issue is the utilization of Post-Consumer Recyclates (PCR). These materials are derived from products that have completed their life cycle as consumer goods and have been recycled for reuse. As the world gears up to increasingly acknowledge the importance of sustainability with adoption of circular economy, PCR plays a vital role.

The significance of PCR extends beyond mere environmental considerations. With growing regulatory pressures and shifting consumer preferences towards sustainable products, companies that embrace PCR can enhance their competitive edge.

By incorporating recycled materials, businesses can reduce their dependence on virgin plastics, thereby decreasing their carbon footprint and contributing to a more sustainable future. Furthermore, the use of PCR can lead to cost savings, open new market opportunities, and improve brand reputation among environmentally conscious consumers.

There are exciting opportunities to address the challenges of plastic waste. As we look on the year passed by, i.e., 2024, projections indicate that approximately 450 million tons of plastic was produced, a substantial portion of which was utilized for innovative and sustainable commodity applications. While it is true that plastic waste has raised important environmental concerns, it also presents a unique chance for the industry to lead the way in developing effective recycling solutions and sustainable practices.

The emergence of microplastics, tiny particles resulting from the breakdown of larger plastic items, has sparked a global dialogue on the importance of responsible plastic use and management.

While proving the effect of such particles in the lifecycle of living beings is yet to be seen, this conversation is driving advancements in recycling technologies, improved waste management systems, and innovative product designs that prioritize sustainability. By harnessing creativity and collaboration, the plastics industry can not only mitigate its environmental impact but also contribute positively to ecosystems, wildlife and human health, paving the way for a cleaner and more sustainable future.

One of the rational decisions that have been taken in response to the inability of current waste management systems by the governments and organizations worldwide is implementing stricter regulations aimed at reducing plastic waste.

Initiatives such as bans on certain single-use applications and incentives for recycling practices are becoming increasingly common. The plastic industry must adapt to these changes, and the integration of PCR offers a viable pathway to align with regulatory requirements and consumer expectations. As the industry faces scrutiny regarding its environmental impact, the need for sustainable practices has never been more urgent, making the role of PCR increasingly significant.

PCRs are materials that have been used by consumers and subsequently discarded. The recycling process involves collecting, sorting, cleaning, and processing these materials into new products, thereby extending their life cycle.

PCR can include a variety of plastics, such as PET from beverage bottles, HDPE from containers, LDPE from bags and films, PP from tubs and trays, PVC from pipes, vinyl siding, flooring, etc, PC from bottles and electronic casings, ABS from electronic housing, automotive parts, etc.

Unlike pre-consumer recyclates, which are materials recycled before reaching the consumer, often from manufacturing waste such as feed system (gate and runner) during injection molding process, PCR has a more direct impact on reducing plastic waste in the environment by reintroducing materials that would otherwise contribute to landfill overflow. The importance of PCR lies not only in its potential to reduce waste but also in its ability to contribute to a more sustainable production model. By utilizing PCR, manufacturers can decrease their demand for virgin plastics, which is typically derived from fossil fuels. This shift not only conserves natural resources but also helps mitigate the greenhouse gas emissions associated with plastic production.

The incorporation of PCR into plastic production offers numerous benefits that extend beyond environmental considerations. From an ecological perspective, utilizing PCR significantly reduces the amount of plastic waste that ends up in landfills and oceans.

It also lowers the carbon footprint associated with plastic production, as recycling typically requires less energy compared to producing virgin plastics. This energy efficiency is particularly important in the context of global efforts to combat climate change, as every effort to reduce emissions contributes to a healthier planet.

Economically, companies can achieve cost savings by using PCR, especially as the price of virgin plastics fluctuates due to market dynamics. The growing demand for sustainable products opens up new market opportunities for businesses that prioritize recycled materials.

Moreover, brands that incorporate PCR into their products can enhance their reputation and appeal to a growing demographic that values sustainability,

Consumers today are increasingly making purchasing decisions based on a brand's environmental impact and companies that embrace PCR can position themselves favourably in this evolving marketplace.

Despite the numerous benefits associated with PCR, the widespread adoption of these materials faces several challenges. One of the primary hurdles is ensuring the quality and consistency of recycled materials. Contaminants and variations in material properties can affect the performance of end products, making it essential for manufacturers to invest in advanced sorting and processing technologies.

More often than not, it is the buffer resin that helps in meeting the property requirements than the actual PCRs. Ensuring that PCR meets the necessary standards for quality and safety is of immense importance for manufacturers looking to incorporate these materials into their products.

Technological barriers also pose significant challenges in the recycling process for PCR. The complexities involved in recycling different types of plastics require specific technologies that may not be available in all regions. Also, sorting becomes essential to ensure that PCRs are recycled at their highest value. If not, there are challenges arising from mixed plastic materials wherein the materials have different melting points along with presence of varying dyes/pigments, fillers and additives in materials suited for them.

Investments in infrastructure and technology are crucial to improving the efficiency of PCR processing. Furthermore, the current recycling infrastructure may not be sufficient to meet the growing demand for PCR. It is pertinent that there is a need for collaboration between industry stakeholders, governments, and recycling facilities to develop robust systems for collecting and processing PCR effectively.

To overcome the challenges associated with PCR, the industry is exploring innovative approaches that can enhance its usage. Advances in recycling technologies, such as chemical recycling and advanced sorting techniques, are being developed to improve the efficiency and effectiveness of PCR processing. These innovations can enhance the quality of recycled materials and expand the range of plastics that can be recycled, making it easier for manufacturers to incorporate PCR into their production processes.

Numerous companies have successfully integrated PCR into their products, serving as models for others in the industry. For instance, global beverage brands are using 100% PET bottle waste for making new packaging for their products, demonstrating the feasibility and benefits of PCR utilization. Also, leading cosmetic brands have walked the same path wherein their packaging is also coming from PCRs.

These case studies from companies such as Coca-Cola, Recycling Technologies, Hero Packaging, Sealed Air, Nova Chemicals, SABIC, Plastipak, Amcor, Berry Global, Corbion, Dow, Unilever, PepsiCo, Mondi, Nestle, etc. provide valuable insights into best practices and the potential for PCR to transform product lines across various sectors.

Collaborations between manufacturers, recyclers, and policymakers are essential for creating a sustainable ecosystem for PCR. By working together, stakeholders can improve recycling infrastructure, enhance consumer education, and increase investment in recycling technologies. These collaborative efforts will be crucial in driving the widespread adoption of PCR and fostering a more sustainable plastic industry.

The significance of PCRs in the plastic industry cannot be overstated. As the industry faces increasing scrutiny regarding its environmental impact, embracing PCR offers a pathway to sustainability and innovation.

The benefits of incorporating PCR-ranging from environmental and economic advantages to improved brand reputation-make it an essential component of modern plastic production. However, to fully realize the potential of PCR, the industry must address the challenges associated with quality, technology, and infrastructure.

By fostering collaboration among stakeholders and investing in innovative solutions, the plastic industry can pave the way for a more sustainable future. The call to action is clear: industry stakeholders must prioritize the integration of Post - Consumer Recyclates into their operations. By doing so, they can contribute to a circular economy that not only mitigates plastic waste but also enhances the resilience and sustainability of the plastic industry as a whole.

From Manual to Automated: CODEX Improves Waste Handling with a Lundberg Tech Solution

In Hungary, an increasing number of companies are recognizing the benefits of implementing efficient waste handling solutions.

CODEX Zrt., a Hungarian pioneer in printing, began with security printing in the late 1980s and later also expanded into labeling solutions. Recognized for its multi-page, fold-out labels, CODEX supplies industries like pharmaceuticals, food, and chemicals, where products require extensive information.

Sustainability also plays a key role in the company strategy. With five specialised production lines and numerous awards, including the FTA FORUM AND INFOFLES 2024 in the label category, CODEX continues to innovate.

To align with their broader business goals, CODEX was looking to make their waste handling processes more efficient and environmentally friendly. After careful consideration they chose Lundberg Tech as their partner. In September 2024, a MatrixCompactor 200 All-in-one Unit was installed at their facility.

József Tóth, Production Manager, shares his experience with the Lundberg Tech waste handling solution:

“At CODEX we produce innovative, high - quality printing products under strict controls, meeting customer expectations and driving their success. Our focus on continuous innovation is evident in measures to prevent forgery and in product development.

Safety, quality, social responsibility, and environmental sustainability have been our core values for decades. The MatrixCompactor from Lundberg Tech helps us boost productivity while maintaining a clean and environmentally friendly workplace.”

The shift from manual to automated waste handling has been transformative for CODEX. József Tóth adds,

“The waste handling solution also prepares our waste for recycling which aligns perfectly with our sustainability goals. We are therefore very satisfied with our investment.”

At CODEX, waste from two Flexo machines is granulated and collected using the MatrixCompactor 200. Further upgrades and developments are planned, and Lundberg Tech, together with our Hungarian partner Prosystem Print, is ready to assist with any future upgrades to the waste handling setup.

(**Source:** LUNDBERG)

MP Learns about UK Plastics Recycling Industry Challenges

Conservative MP Nick Timothy has visited Chase Plastics in Brandon, Suffolk. Timothy toured the factory, met the workforce, and held discussions regarding the current challenges that the UK Plastics Recycling industry is facing.

Said discussions revolved around the UK's reliance on exporting plastic waste, as well as the UK's lack of competitiveness due to issues like high operating costs.

During the factory tour, Timothy was shown through the polythene recycling process by Mehmet Hussein, Production Director, who talked about the various products that recycled polythene can be used in and how this can help reduce the use of virgin polymer in the UK.

David Harris, CEO of Chase Plastics, on Timothy's visit:

The UK is in a dire economic position and is unable to compete internationally; the only areas of export growth are jobs and waste. Specifically, the UK's Plastics Recycling Industry is in a state of trauma, with more than 25% of its capacity closing in the last year, with the loss of hundreds of jobs. Without urgent intervention, this puts many of the 250,000 jobs in the wider UK Plastics Industry at risk.

Our MP's visit was an opportunity to highlight the factors impacting our industry at a parliamentary level - from high energy costs to the influx of cheaper imports from countries with much lower standards of environmental protection.

Plastics perform a vital role in society and a successful UK Plastics Recycling Industry is crucial to ensure that the country is handling its plastic waste responsibly, rather than allowing it to be dumped or burnt overseas.”

(**Source:** Interplas Insights / 02.04.2025)