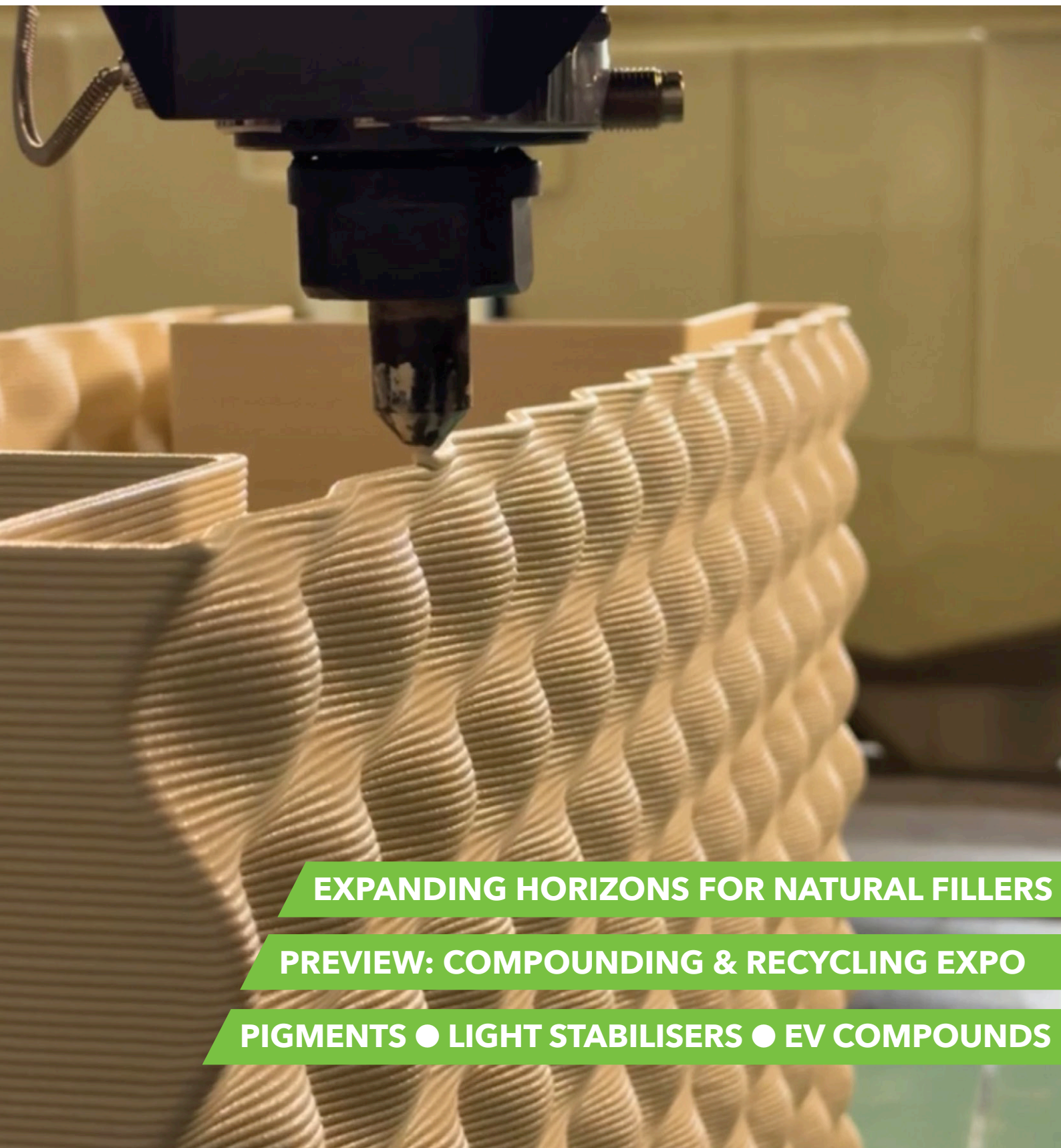


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BYK invests at sites in Germany and China

Additives group BYK has expanded its production and storage capacities in Schkopau, Germany, with the new facility at the Dow ValuePark specialising in thermoplastic and high-performance modifier production. With the construction of the new extrusion line, BYK can now produce granulated products to be used in household appliances, among other things.

"In Schkopau, we're using technologies that are new to BYK in this form," said Matthias Kramer, Managing Director Production. "The experience gained here will be invaluable when it comes time to implement these technologies at other BYK sites."

With the €12m investment, production capacity will increase by about a quarter at the site which has approximately 50 employ-



BYK's site in Schkopau, Germany

ees. Additionally, a state-of-the-art warehouse with 600 extra pallet spaces and a loading ramp for containerized goods has been built.

The company has also opened a new mini-plant in Shanghai, China, providing local customers with faster, more flexible, and customised additive solutions. The mini-plant has highly flexible production capacity tailored to meet the rapidly changing demands of the Chinese market with a production

capacity of 500 tonnes/yr.

BYK further cemented Chinese operations with new laboratory facilities at the South China New Material Industrial Park in Guangzhou where the floor space has grown from 150 m² to 280 m².

The range of services at the new facilities will gradually expand to include additional application areas such as adhesives, printing inks, and materials for new energy projects.

> www.byk.com

Epoch acquires PA 66 facility

UK biotech startup Epoch Biodesign is acquiring a 52,000 tpa PA 66 plant in Blanes, Spain, for over €4m.

The site was formerly run

by Domo Chemicals, whose Spanish entity entered insolvency earlier this year. It will fully integrate Epoch's production of recycled PA

66, made using an enzymatic process. Epoch's demonstration plant is expected to open later this year.

> <https://epochbiodesign.com>

Clariant expands China R&D

Clariant has launched two new research and development laboratories for its additives business in China: one at the Daya Bay production site in Huizhou, and the other at the One Clariant Campus in Shanghai. The newly established labs will enable the full synthesis and development of new additives entirely on Chinese soil.

"The new facilities will enable us to develop high-value specialty additives for plastics, coatings, and adhesives with greater speed and precision, tailored to the needs of our customers in China," said Manuel Mueller, Head of Strategy and Innovation, Business Unit Adsorbents & Additives.

This twin launch is the latest investment in Clariant's Chinese ecosystem. In November 2025, it announced a joint venture with Fuhua to develop phosphorus-based flame retardants, and in the same month inaugurated a second production line at its Cangzhou joint venture with Beijing Tiangang.

> www.clariant.com

New compounder Qualis sets up in Indiana

A former co-founder of Omni is part of a group of investors which has launched Qualis Engineered Plastics, a custom compounding operation located in a former Lucent Polymers plant in Evansville, Indiana, US.

"Indiana's excellence in manufactur-

ing and our commitment to supporting entrepreneurs and small businesses make our state the ideal destination for companies like Qualis Engineered Plastics," said Mike Braun, Governor of Indiana.

The new company, which is expect-

ed to create over 30 jobs within five years, will operate from a site with 50-plus years of plastics manufacturing history, fitted with new equipment and new capabilities and will serve industrial, automotive and other markets.

> <https://qualisengineeredplastics.netlify.app>

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Hexpol acquisition helps its wire and cable market offering

Swedish polymer group Hexpol has acquired Vipa, a compounder with a focus on the wire and cable market.

Vipa Group, headquartered in Ancarani, Italy, is being acquired from the Paolini family who founded it in 1969 and has since developed the business into a profitable specialty compounder. Current CEO Nicola Vigolo will continue to manage Vipa as a subsidiary within the Hexpol organisation.

"The acquisition marks an important step in executing the growth strategy for the new business area Thermo-plastic Compounding that



Vipa Group is headquartered in Ancarani, Italy

was presented at our Capital Markets Day in November 2025," said Peter Rosén, acting CEO of Hexpol. "It also demonstrates our ambition to build a leading thermoplastics platform

through both organic growth and acquisitions."

Current Vipa operations include two production sites in Italy, as well as a state-of-the-art R&D centre. In 2025 the company had a turnover

of €76.4m, around 80 employees, and capacity to grow within the current footprint.

Vipa Group will significantly strengthen Hexpol's wire and cable offering with exposure to electrification, data centres, telecom, and smart buildings. With this greater critical mass in its offering to the wire and cable industry, Hexpol said its subsidiaries Hexpol Izmir and Hexpol Vilafranca will become part of the Thermo-plastic Compounding business area instead of its Rubber Compounding business area.

➤ www.hexpol.com

➤ vipa.it

Recycler is back in business

UK-based chemical recycler Plastic Energy has come out of administration with a new ownership structure and confirmed the return of founder Carlos Monreal as CEO. The company's proprietary TAC technology will remain at the core of the business, with operations and development continuing across Europe and at its research labs at Loughborough University in the UK.

TAC technology has processed over 40,000 tonnes of plastics to date.

➤ <https://plasticenergy.com>

Econ forms subsidiary in Brazil

Austrian pelletising specialist Econ has opened a new subsidiary, Econ Brasil, in Antônio Carlos in the state of Santa Catarina.

"We see significant potential in Brazil, particularly in the compounding sector," said Dominik Kline, CEO of Econ Brasil. "Our customers need stable and

flexible processes for a wide range of materials. This is where our technology and local presence provide genuine added value. The combination of global innovation and local proximity is key."

The new Brazilian location combines sales, service, assembly, and

logistics. Spare parts and machine assemblies are stocked locally, ensuring significantly shorter response times, said the company.

Econ's international network also includes locations in the US, China and India.

➤ [Econ LinkedIn page](#)

Norway chemical recycling agreement

Ineos and Norwegian recycler Recuro have signed a Memorandum of Understanding to develop a 33,000 tonnes/yr chemical recycling facility at Ineos' Bamble site in Norway. The initiative, named Full Circle,

is designed to combine environmental responsibility with economic viability.

By reusing an existing industrial site, optimising infrastructure, and locating the plant next to a steam cracker facility, the company

can recover and reuse both oil and gas streams.

Ineos intends to use the recycled product to produce ethylene at its Rafnes cracker.

➤ www.ineos.com

➤ www.recuro.no



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NexPoint becomes the newest player in ETPs

NexPoint Materials, operating as NexPoint, has launched as a standalone engineering thermoplastics (ETPs) company following the finalisation of its acquisition from Sabic's Engineering Thermoplastics business by Mutares. The new company employs approximately 2,800 people and operates an integrated manufacturing, technical, and commercial network across Europe and the Americas.

The name NexPoint is meant to reflect the value the company provides at the precise point where customers need responsive collaboration, deep materials expertise, and practical solutions.

NexPoint offers a broad portfolio of thermoplastics including Lexan polycarbon-

IMAGE: NEXPOINT



NexPoint has been formed from Sabic's Engineering Thermoplastics business by Mutares

ate (PC), Cycolac acrylonitrile butadiene styrene (ABS), and Valox polybutylene terephthalate (PBT) resins and blends which are widely used in the automotive, healthcare, electrical/electronics, building/construction, consumer, and industrial markets.

The launch marks a new

chapter in the engineering thermoplastic sector, said NexPoint, with a sharper focus on customer, supplier, and partner collaboration. NexPoint said it will continue to deliver products, technical expertise, and responsive support, with no disruption to ongoing operations.

> www.nexpointmaterials.com

Pulva opens test lab in US

Pulva, the family-owned US manufacturer of industrial size reduction and pulverizing equipment, has opened a new test laboratory at its headquarters in Pennsylvania.

Occupying nearly 2,500 square feet, the facility offers proof-of-concept material testing on full-size, production-scale pulverizing machinery and auxiliary equipment to replicate actual operating conditions across a wide range of grinding applications.

The test laboratory houses Pulva-Sizer hammer mills in multiple configurations and sizes including the tabletop Pulvette Pulva-Sizer for seamless scale-up to full production, and the cryogenic Pulva-Sizer for grinding plastics and other materials that clump when milled at ambient temperatures.

The new lab enables processors to test new products and formulations in development without using their own processing lines or disrupting their production, it said.

> https://pulva.com

HydroGraph makes progress in US

Graphene company HydroGraph has opened a new headquarters in Austin, Texas, US.

The facility is designed to provide up to 30 tons per

year of pristine graphene production capacity to support HydroGraph's commercialization and customer engagement efforts.

The company's commercial-scale Bellville, Texas manufacturing facility is expected to begin operations in 2027.

> https://hydrograph.com

Mitsui Chemicals joins AI materials network

Mitsui Chemicals has become a founder member of AI Materials Foundry, an international network that aims to accelerate material development through the use of generative AI. More than 45 leading companies and research institutions worldwide are participating in the project, including

NVIDIA, Meta, Samsung, Henkel, Applied Materials, and Tokyo Electron.

"We expect AI-driven materials discovery to significantly improve the speed of R&D and the success rate of new business creation, generating tangible value," said Omote Toshihiko, Mitsui Chemicals CTO and Managing

Executive Officer.

With CuspAI's proprietary AI platform MIRA at its core, AI Materials Foundry intends to combine generative AI with the existing framework by integrating training data, computational resources, test facilities, and expertise.

> https://jp.mitsuichemicals.com

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www.ShamrockTechnologies.com

New US-UK additives merger

Metals and Additives (MAC), based in the US, has merged with UK-based William Blythe to create an international specialty chemicals group with a product portfolio that includes additives.

MAC founders Gregg Bennett and Mark McCaughey will remain as shareholders and continue in their leadership roles while working alongside the William Blythe management team.

The new entity is a producer of flame retardants, smoke suppressants, catalysts, absorbents, foam technologies, polymer additives, and other high-performance inorganic chemical solutions. It will benefit from a complementary product portfolio and extended customer reach.

MAC said the merger brings together two highly regarded businesses with deep technical expertise and strong manufacturing capabilities.

➤ <https://williamblythe.com>
➤ www.addendallc.com

Milliken dedicates new PP clarifier production

Milliken has announced the successful startup of dedicated production capacity for Millad ClearX 9000, the company's fifth-generation clarifier technology designed to deliver exceptional clarity, performance, and processing efficiency in polypropylene (PP) applications.

The increased capability strengthens Milliken's ability to support customers with reliable supply and consistent quality as demand for advanced PP solutions grows.

"Customers are looking for ways to improve product appearance and performance while maintaining production efficiency," said Allan Randall, global



IMAGE: MILLIKEN

Milliken said Millad ClearX 9000 represents the latest advancement in its PP clarifier portfolio

product line manager for Milliken's plastic additives business. "ClearX 9000 helps them do both."

The dedicated production capacity strengthens the resilience of the company's global manufacturing network, complements its existing opera-

tions, increases flexibility to respond to changing market requirements, and helps ensure consistent product availability.

Milliken said Millad ClearX 9000 represents the latest advancement in its PP clarifier portfolio.

➤ www.milliken.com

Sumika plans auto PP recycling

Sumika Polymer Compounds Europe said it will produce a range of recycled polypropylenes at a new recycling unit in France to meet the needs of the automotive sector in response to the EU's

regulation on end-of-life vehicles.

The company is investing €13m in the plant in Saint-Martin-de-Crau which will have production capacity of more than 10,000 tonnes/yr of recycled PP. Its feedstock

will come from the automotive industry.

Added to another plant in Turkey, Sumika will have annual capacity of more than 25,000 tonnes of recycled PP.

➤ www.sumikaeurope.com

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Tioxide restarts UK TiO₂ pigment production

Tioxide has recommissioned the titanium dioxide (TiO₂) pigment production facility at Greatham in Hartlepool, UK, following LB Group's acquisition of the site and its assets earlier this year. The facility was previously operated by Venator Materials UK Ltd, which entered administration in late 2025.

Production has now commenced, with single-stream operation underway and Tioxide and Deltio products returning to the market. The restart follows four months of commissioning, testing, and maintenance work, and a phased ramp-up is now underway with a clear roadmap to achieve full operational capacity by early 2027.

"Drawing on more than 50 years of manufacturing heritage, the site at Greatham has a proud history of producing high-quality TiO₂ pigments,"



IMAGE: TIOXIDE

The facility at Greatham is aiming for full operational capacity by early 2027

said Karen Askwith, Managing Director at Tioxide.

"With production now underway, our focus turns to delivering our ramp-up programme, stepping the site up to full manufacturing operations, and ensuring our customers have access to a reliable and sustainable source of TiO₂ pigments for many years to come."

The facility has a total nameplate capacity of 150,000 tonnes/yr, with

production supported by the company's new research and development centre in Wynyard and its headquarters in Stockton-on-Tees.

The company has now launched the second phase of its recruitment programme. Recent appointments in finance, business services, and operations, have increased the company's workforce to more than 200.

➤ <https://tioxide.com>

Lanxess low-TPP FR additives

Lanxess has launched Disflamoll Advance plasticising flame retardants featuring extremely low triphenyl phosphate (TPP) content of less than 0.1%. Tailored to diverse applications, it is designed to help manufacturers navigate an increasingly complex regulatory landscape.

"Disflamoll Advance helps customers stay ahead of regulatory developments

while continuing to achieve outstanding product performance," said Heiko Tebbe, Head of Application Development for Polymer Additives at Lanxess. "The platform brings together regulatory preparedness, technical performance, and sustainability in a flexible portfolio designed to help customers address both current and future market requirements."

The first product introduced under the new platform is Disflamoll Advance OT, which is specifically designed for polar polymer systems. Key applications include flexible PVC used in flooring, tarpaulins, and synthetic leather, insulation foams, thermoplastic polyurethanes, synthetic rubbers, and cellulose esters.

➤ <https://lanxess.com>

IN BRIEF...

CAI Performance Additives

has launched ST-FS-A330T, an antimony-based flame retardant synergist developed for soft PVC wire and cable compounds which delivers lower lead and arsenic heavy metal content than pure ATO.

www.caiadditives.com

KraussMaffei Group

has announced that effective 1 September 2026, Ren Xinting will assume the role of Managing Director at KraussMaffei Extrusion in addition to his role as Managing Director of KraussMaffei China.

www.kraussmaffei.com

Swiss machine manufacturer **Maag Group** is introducing the Extrex EC, the first gear pump specifically designed for the continuous conveyance of rigid PVC.

<https://maag.com>

Teknor Apex has introduced TekVentures, a corporate venture created to build a more systematic bridge between Teknor Apex and the founders reimagining materials and manufacturing.

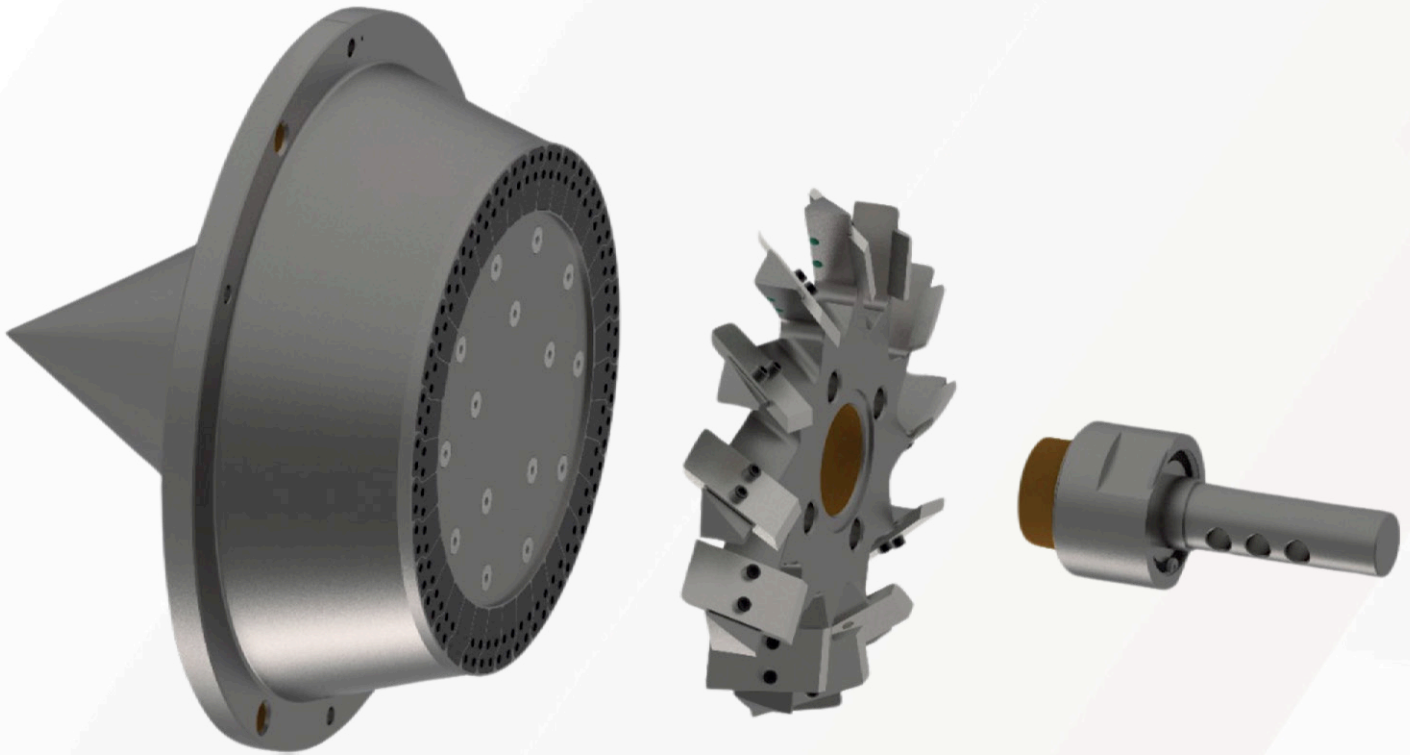
www.teknorapex.com

India-based pigment and colour solutions provider

Sudarshan has inaugurated a second global head office (in addition to one in India) in Schwalbach am Taunus, near Frankfurt, Germany, following on from its acquisition of the Heubach Group in March 2025.

www.sudarshan.com

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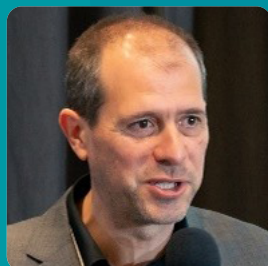
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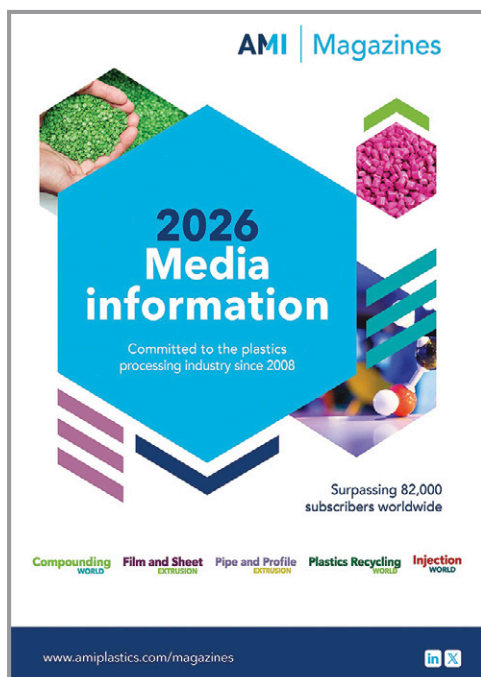
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Suppliers serve up colouring and marking solutions



IMAGE: LANXESS

The most recent developments in colour platforms target sustainability, safety and durability while integrating function and enhancing performance. By Laura Florez

As the plastics industry evolves, so do the requirements towards colour. Innovations revolve around safety marking, traceability and durability. A significant innovation is the incorporation of functionality into colour additives, particularly in laser-linked applications.

As in other areas of the plastics industry, sustainability is at the front and centre. Additives to colour bio-based materials as well as solutions to detect and sort coloured plastics in recycling continue to make progress.

According to Mark Ryan, Product & Market Manager at **The Shepherd Color Company**, a major trend is extending capability beyond just colouring into adding functionalization features. "The future is colour and function," he said. As an example, he quotes the capability of the company to tailor infrared properties to reduce solar heat build-up in building products.

He continued: "Black pigments that have been used in engineering polymers for decades can now be specifically engineered to support Laser Direct

Structuring, enabling conductive pathways to be integrated directly into plastic components. This technology allows antennas and electronic circuits to be incorporated into moulded plastic parts."

Americhem also ventures into functional additives, with a new technology enabling laser marking solutions and therefore improving traceability. The new masterbatch and engineered compounds platform enables distinctly coloured laser markings on dark polymer substrates, expanding design and branding possibilities beyond traditional monochrome laser marking.

"Traceability requirements continue to increase across healthcare, transportation, electronics and industrial applications," said Parminder Agarwal, Chief Technology Officer at Americhem. "Marking performance depends on how the material interacts with the laser system. By engineering that interaction directly into the polymer, manufacturers can improve consistency, reduce secondary operations and optimize marking performance for specific application requirements."

Main image:
Lanxess' Colotherm iron oxide pigments provide thermal stability even at extremely high application temperatures. They exhibit no discernible colour shift and can be processed at temperatures well in excess of 300° C

Right: Finke has launched a new laser-activated additive, which can deliver a holographic effect inside the component, without surface damage

This technology was developed to help OEMs meet growing traceability, compliance and product identification requirements, and it delivers durable, machine readable markings for applications in healthcare, transportation, building and construction, electronics and industrial markets. Because marking performance depends on factors such as polymer chemistry, pigments, additives, laser wavelength and processing conditions, Americhem works closely with customers, to reach solutions tailored for each material and end-use requirements.

The German supplier **Finke** has launched a new laser additive to produce a hologram effect inside the component, instead of achieving a laser marking at the surface. The energy from the laser activates a reaction within the plastic. The surface remains locked, flat and unchanged, while the optical properties of the material are modified from the inside. The result is a clean, rich marking of the polymer, without removal of the material or changes in the surface structure.

The hologram effect is particularly appealing in coloured translucent plastics, such as PET, PETG, PC and PMMA. Here it is possible to achieve structures with high visual deepness and defined contrast. It is possible to achieve the effect with common near-infrared (NIR) and green laser systems, and no special laser sources are required, according to the supplier. This makes integration into existing production lines straightforward. Also, recycling properties are not affected.

Heat stability

As the use of technical plastics in high-tech applications increases, so does the requirement profile for the pigments used for colouring. Heat stability of colourants is becoming a decisive quality factor.

Lanxess features the Colourtherm brand, including a range of synthetic red iron oxide pigments that provide high thermal stability due to its proprietary manufacturing process. The company fabricates the red types using pigments that are heated to up to 800° C; as a result, the micronized pigments show no visible colour shift, even at extremely high application temperatures, and can be processed without compromise at temperatures above 300°C, according to the supplier. As a service to its customers, Lanxess also conducts in-depth tests on the effect of pigments in polymer applications, measuring the heat stability in customer-specific formulations.

For yellow colouring of polymers, Lanxess offers the modular Colourtherm Yellow product range, covering both saturated yellow shades and orange



IMAGE: FINKE

tones. These special pigments are suited for HDPE, PS, ABS or PA, for example. Depending on the type of plastic, varying levels of thermal stability are required.

"The special feature of our Colourtherm Yellow product range is the high flexibility in pigment selection," said Stefano Bartolucci, Global Market Segment Manager for Plastics at the Inorganic Pigments business unit. "In the case of colouring polyethylene, for example, it is sufficient for the pigments used merely not to exhibit any colour changes at processing temperatures of around 240°C. However, for applications using polyamide, polypropylene and polyphenylene sulphide, thermal stability of around 300°C is essential."

In the middle yellow, formulators have often been forced to choose between the brightness of organic pigments and the durability and opacity of inorganic alternatives. Traditional inorganic pigments are valued for their excellent opacity, heat stability, and resistance to weathering, but they typically lack the clean, vibrant colour associated with organic pigments. Conversely, organic pigments provide high chroma but often fall short in long-term stability and hiding power.

Shepherd Colour has developed new technologies to eliminate this trade-off. The NTP Yellow (Pigment Yellow 227) is a highly engineered inorganic pigment, based on niobium tin pyrochlore (NTP), designed to bridge the gap between chromaticity and durability. The NTP Yellow 10P150 is chemically inert, non-migratory, and highly resistant to heat, UV exposure, and chemical attack, according to the company. Its ability to combine strong chromaticity with excellent opacity and durability makes it a solution for coatings, plastics, and other high-performance applications where colour retention and coverage are critical.

Complementing this mid-shade yellow is



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Above: Lanxess exhibited its diverse polymer additives and colorants for plastics at K 2025

Shepherd Colour's RTZ Orange technology, available as Orange 10P340 and Orange 10C341 for coatings. Based on rutile tin zinc (RTZ) chemistry, these pigments extend the same performance balance into the orange-red region of the colour space. RTZ pigments are known for their excellent opacity, lightfastness, and resistance to environmental degradation, making them well-suited for demanding outdoor applications. This range of pigments provide a chromatic orange with strong redness, offering formulators a tool for adjusting "a*" values in colour matches. At the same time, they maintain the core benefits of complex inorganic pigments, including exceptional weatherability, heat stability, and chemical resistance, according to Shepherd Colour.

Safety in EVs

The safety requirements of e-mobility have opened a full new range of demands for orange marking. The particular shades that need to be achieved require also excellent heat stability, lightfastness and weather resistance. Properties such as colour strength and brilliance are also required. For this application, Lanxess offers two complementary products: Macrolex Orange HT, a soluble organic dye, and Bayplast Orange TP LXS 51137, a pigment solution.

The halogen-free Macrolex Orange HT allows plastics to be permanently coloured in the RAL 2003 orange shade, ensuring that the colouring and its critical safety marking are durable and highly visible, to support accident prevention and compliance with industry standards. One of its most important attributes is its compatibility with most engineering plastics requiring heat stability at high processing temperatures, a feature that is not shared by most conventional dyes. According to Lanxess, colour strength and cost-efficiency belong to the solution delivered to manufacturers.

Also designed for high-voltage and other engineering plastic components, such as housing

of outdoor power tools, the Bayplast Orange TP LX 51137 (Pigment Orange 68) stands out for its weather resistance and durability, which makes it particularly suitable for long-lasting outdoor and safety relevant applications. This pigment solution is preferred in applications with high UV exposure and where resistance to extreme environmental conditions is required over many years, to reinforce accident prevention.

Milliken also provides a solution for orange safety marking. Its Resist XTR is a high chromatic orange, designed to meet the extreme colourant performance required in highly demanding applications, such as high-voltage battery connectors in electric vehicles. The formulation can be adapted to meet the RAL 2003 shade with different base materials: PA 6, 66 and 46, PBT, PPA and PSU.

According to Milliken, the product reaches a thermal stability of up to 300°C or more, has improved lightfastness and weather resistance under UV exposure and maintains key electrical properties of the polymer. It also has an excellent ratio between performance and compatibility with other additives and fillers, such as glass fibres, glass spheres, flame retardants and heat stabilizers.

For the EV market, **Sun Chemical** has developed a comprehensive range of colouring solutions for engineering compounds such as PA, PBT and PPS. These pigments are designed for heat and chemical resistance, and according to the manufacturer exhibit both light and weather fastness, as well as low migration.

Bio-based developments

One of the leaders in nature-based colour solutions is **Sparxell**, a University of Cambridge spin-out. This colour platform is 100% plant-based. The patented technology derives cellulose from wood pulp, extracts cellulose crystals and assembles them into structures, able to reflect specific wavelengths of light. According to the developing team, this is the same process that creates the colours on butterfly wings. The pigments are designed to be biodegradable at the end of life.

The company has recently raised €4.2m in pre-Series A funding, to scale its plant-based colour technology for packaging and industrial uses. The objective is to scale the operation from pilot programs to commercial-scale manufacturing.

Within its portfolio of BioColorants, **Avient** highlights colour concentrates under the brand OnColor, providing a broad portfolio of colour options for bioplastics while satisfying industry requirements and legislation. According to Avient, these colour concentrates are specially designed to



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IMAGE: UPM

Above: UPM has introduced Circular Renewable Black, a bio-based, NIR-detectable black

perform with PLA, PHA, PHBV, PBS, PBAT and blends of those materials, without compromising their biodegradation properties.

"Combining OnColor Bio with bio-based polymers helps to reduce the risk and cost of post-process testing," said the company in a release. "This then enables converters to take full advantage of the emerging market for home-compostable bags and packaging." The OnColor Bio concentrates have received OK compost HOME certification from TÜV Austria.

The latest amendment to EU Plastics Regulation 10/2011, often referred to as the 'Quality Amendment', significantly strengthens migration limits for substances in food contact materials. In practice, this raises the bar for pigment and colorant purity, placing greater emphasis on controlling the levels of non-intentionally added substances (NIAS). Pigment purity is fundamental to regulatory compliance. For pigment manufacturers, this means greater scrutiny of raw materials, increased analytical monitoring, and robust risk assessment processes.

Sun Chemical has invested in high-purity colorant technologies for sensitive applications, minimizing substances of concern. The company says it has a philosophy that aims to go "beyond compliance", supported by advanced analytics and comprehensive regulatory certification aligned with the latest EU requirements. This enables pigment users to meet or exceed evolving compliance standards without compromising performance or consistency.

Circularity needs

For years, black packaging has been associated with recycling challenges, as conventionally used pigments, and particularly carbon black, inhibit NIR detection and thus make the material invisible to sorting systems in recycling facilities.

To face this challenge, **UPM** introduced the new Circular Renewable Black, a bio-based, NIR-detectable black, which enables premium packaging solutions that combine design with recyclability. The new pigment is derived from renewable lignin and certified by third party standards, amongst them ISCC Plus. It delivers deep black colour for premium aesthetics and a carbon-negative footprint, being derived from nature.

Sun Chemical's new pigments for plastics recycling include Sicopal Black K 0098 FK, which exhibits exceptional heat stability with global food contact compliance, and has been adopted in food packaging to replace non-sortable carbon black. These inorganic pigments possess a spinel structure, based on various metal oxides, and offer high fastness to light and weather exposure. The NIR-reflective black pigments, with high colour strength and opacity, are especially recommended to enable sorting of black plastics in polyolefins and PET.

Shepherd Colour is also contributing to solve this problem by providing the FDA-approved Arctic Black 10F925, and for colour-tinted materials the Arctic Black 10F951. The pigments do not absorb infrared wavelengths, increasing the value of the recycle stream. "Shepherd Colour's Arctic Black 10F951 is specifically designed for the PCR market due to key properties," said Mark Ryan. "The inherent high-heat stability of the pigment, over 600°C, means that it can be used in any polymer, and will not change properties with multiple recycle passes, and does not cause warping in polyolefins."

The low-use rate, relative to other NIR-sorting compatible pigments helps to reduce colour variability in PCR stream plastics.

Rowasol, based in Germany, produces NIR-Deep Black, an alternative to black colourants that can be identified in sorting facilities by NIR technology, and provides a deep coverage, bright under visible light. According to the supplier, even at a dosage of just 1% the highly pigmented liquid colours achieve high opacity levels and provide uniform coverage, even over coloured recycled materials. It is appropriate for applications in contact with food, and it is not magnetic and can be used in polar thermoplastics, such as PS, PET, ABS, PC and PMMA. A second variant with less colour depth is also appropriate for PE and PP.

Both versions also offer a cooling effect by reflecting heat-generating infrared radiation: components heat up less, which improves thermal management depending on the application - such as packaging, facade elements, or automotive interiors.

For automotive interiors, the Macrolex Black types from Lanxess offer a solution to achieve

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Right: Rowasol offers liquid black colours which are detectable by NIR, and offer enough coverage for recycled plastics. They are also approved for food contact applications

deep, piano-like black shades with exceptional gloss. These black dyes provide not only intense colour and durability, but are also compatible with modern recycling processes, to meet the growing circularity goals in the automotive sector.

A new technology called DamaBlack offers a new black pigment derived from waste biomass through pyrolysis. The supplier, **Dama BioPlastics**, claims that it can replace petroleum-based alternatives such as carbon black, and reduce their carbon footprint while maintaining high performance standards. The material is carbon-negative, meaning that for every tonne of DamaBlack 3 tonnes of CO₂ are sequestered. It offers pigment intensity comparable to traditional carbon blacks, ensuring deep, rich colouration in plastics, rubbers and coatings. It also demonstrates high dispersibility, providing consistent colour uniformity across various polymer systems; it integrates with HDPE, PP, PVC and bioplastics, and it is an easy-to-adopt solution for industries such as automotive and construction.

Glow effects

Chroma Color is providing a new glow-in-the-dark colour concentrate, popular for eye-catching visual effects. Photoluminescent colour concentrates are increasingly being used in safety applications, such as emergency exits, safety equipment and marking. These materials can be charged both by natural and artificial light. The company continues to explore materials and technology to improve efficiency and performance, and with their new ChromaGlowUltra Masterbatch they promise to improve activations yielding, with longer hours of glow (up to 32 hours), light-stable formulations and differentiated indoor and outdoor applications. (Also see *Compounding World* March 2026.)

Shepherd Colour said it has produced the “perfect” cobalt blue with the highest chromaticity through increased red and blue values. Blue 20G599 is also more transparent than standard cobalt blues to highlight special effect pigments, like the StarLight elemental silver coated glass flakes.

The German supplier **Lifocolor** has introduced a new masterbatch to give PET bottles a velvety-soft touch look, similar to that achieved in PEAD bottles. This makes it possible for brands to combine the sensory brand experiences with the economic and environmental advantages of PET. Particularly in the context of PPWR, this enhances mono-material designs and recyclability. According to the supplier, velvet PET can be processed as an additive masterbatch on existing ISBM lines and is approved for food contact.



Eckart has focused on intense metallic effects, such as blue metallic and red glitter. A new trend towards replacing coatings with mass colouring is being observed, and the company answered with the new Mastersafe Silvershine product series. The product was launched at the last K Show 2025 and stood out because of the high bright and covering power. The possibility of producing clean metallic effects without flow lines was appreciated.

As post-consumer recycled materials are increasingly used for consumer goods in the plastics industry, minimizing colour imperfections, standardizing colour tone, and enhancing the texture of plastics parts have become common challenges. Sun Chemical has launched four new premium Benda-Lutz Compal K aluminium effect pigments to enable greater formulation flexibility from silky to sparkling metallic effects, without the need of carbon black. These pigments provide superior brilliant sparkle and opacity with a non-dusting, non-hazardous and low VOC delivery form with improved shelf life.

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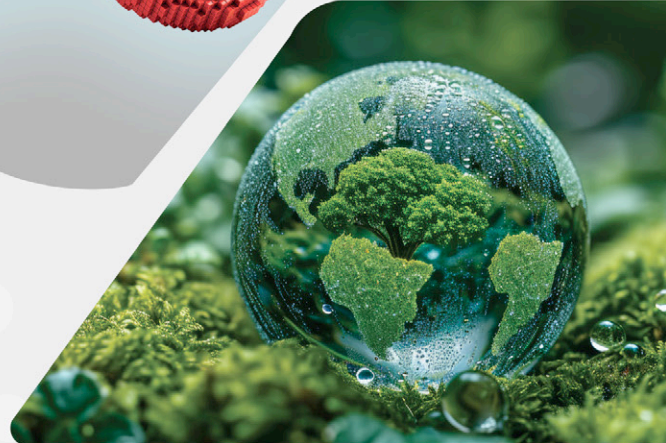
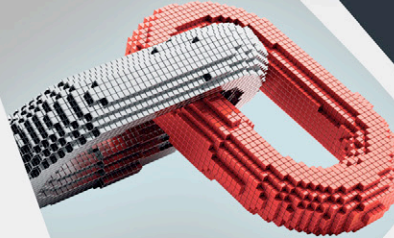
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Expanding horizons for natural fillers

Compounds that incorporate fillers from natural sources are appearing in a wide variety of places, from moulding to 3D printing and possibly even in space. By Jennifer Markarian

IMAGE: CIRCDAL

Natural fibres and fillers offer a way to reduce carbon footprint using bio-based content and, in many cases, use materials that would otherwise be waste. Compound and masterbatch producers have put their expertise into solving challenges related to moisture, dispersion and handling to maintain or improve properties of the filled compounds. Another benefit is that natural colour and grain are increasingly desirable.

"Designers call it visible sustainability, or honest materiality – the principle that bio-content should be evident rather than hidden," said LD Sheftel, Director of Industrial Products at US-based **Lignetics Group**. "Flawless plastic invites suspicion [from consumers] of greenwashing, while visible fibre reads as proof. Customers are asking for the fleck rather than asking us to minimize it."

NaturFil bio-based and biodegradable fillers are produced from sustainably sourced wood residuals using Lignetics Group's patent-pending densification technology to make a processable form for thermoplastics that meters like a masterbatch and eliminates the dustiness and feeding challenges of conventional wood flour, said Sheftel. In addition, he suggested wood residual supply is more reliable than agricultural residuals.

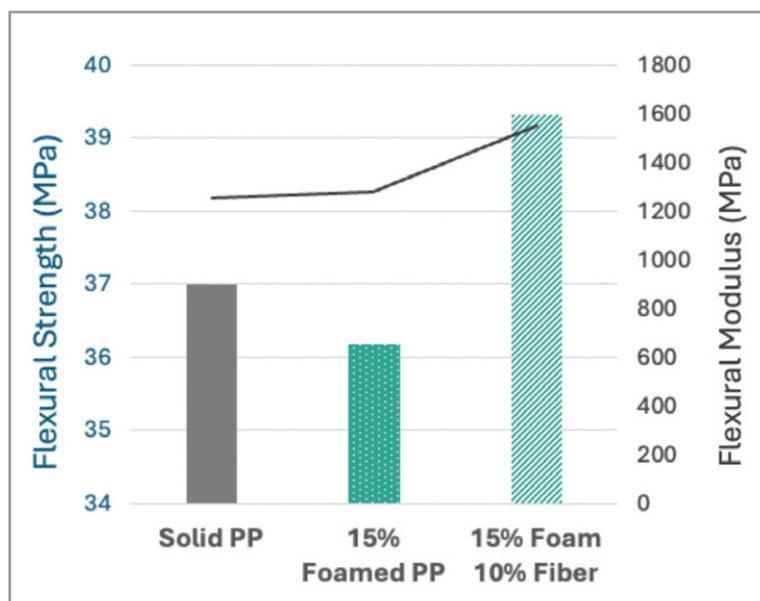
"Wood residuals come off an existing industrial base year-round, already collected and processed," he explained. The filler is being used or tested in PP, PE, PVC, ABS and various biopolymers.

The company recently introduced NaturFil WP1050, a bio-based filler with FDA food contact approval at up to 50% loading in finished polymer systems. Target applications include rigid and semi-rigid single-use food-contact applications, such as cutlery and containers, for brands and converters who want to reduce material footprint, the company said.

Lignetics also recently experimented with a combination of approximately 10% NaturFil with 1.5% of **Moxietec's** Proprietary Foaming Additive (PFA), with the goal of achieving weight reduction without reducing properties such as stiffness, structural integrity, and impact resistance. The combination created a uniform cellular structure while improving filler dispersion. NaturFil contributes additional nucleation sites for foam formation, reinforces foam cell walls, enhances load transfer, and increases overall stiffness and mechanical performance, the company reported.

UPM Biochemicals produces wood-based UPM BioMotion Renewable Functional Fillers (RFF) from

Main image:
Large-format additive manufacturing is used by Printerior Designs for architectural products, such as wall panels, partitions, and screens



Lignetics has tested its NaturFil wood-based fillers in PP with Moxieterc's foaming additive to achieve weight reduction without reducing properties such as stiffness, structural integrity, and impact resistance

Source: Lignetics

its biorefinery in Germany. Use of the filler is focused in PP and PE compounds and masterbatches, but engineering plastics and bioplastics are also being explored, said Klemens Unteutsch, Business Segment Director for Plastics, Adhesives, Sealants and Rubber at **Krahn Chemie Deutschland**, a regional distributor for UPM BioMotion. He explained that benefits include high bio-based content that helps reduce carbon footprint and a lower density than conventional mineral fillers that provides the ability to lightweight. It is black in colour but detectable with NIR, which allows sorting in recycling facilities.

"We expect bio-based functional fillers to become an increasingly important part of future compound formulations, particularly in applications where sustainability targets are driven by consumer brands, automotive OEMs and evolving regulatory requirements," said Unteutsch.

Hemp and corn

US-headquartered **Heartland Industries** produces its Imperium engineered hemp-fibre additive as a masterbatch for use in a range of polymers, including PP, HDPE, rigid PVC, PA6, and ABS. The masterbatch successfully addresses challenges such as thermal stabilization, dispersion and moisture, and it is being used in applications such as pallets. Testing in automotive PA6 applications is proceeding towards commercial use, said Tim Almond, Chairman and Founder of Heartland. He also sees opportunities for growth in adding the filler to PC/ABS for electronics applications.

FiberX, based in Indiana, US, has developed a proprietary process to transform corn stover, which is a local agricultural waste stream, into microfibrils and powders for use as a functional filler in thermoplastics.

"Corn stover is a strong fibre that is relatively inert, without the oils or acids that other biomass might contain. In many use cases, corn stover adds strength and is cost-competitive versus other materials," said David Skibinski, President and CEO of FiberX.

The start-up is growing and plans to scale capacity up to an industrial level to meet customer orders. The anticipated expanded capacity will range from 7,000 to 50,000 lbs/hr of microfibre/powder, the company reported. The company sells both fibres/powders and custom compounds.

The fibre/powder can be used as a functional filler in PE and PP or in bio-based plastics, including PLA and PHA. The filler is being tested in a variety of plastics applications including sports-related products, consumer goods, and construction materials.

One of the challenges for sourcing corn stover is weather, as there is a single harvest season. "We must find a suitable time to harvest so we can manage the moisture content of the bales we harvest," said Skibinski. He said that two years of data collected and analyzed by Purdue University demonstrate a responsible approach to harvesting appropriate amounts of stover. "The data from Purdue suggests that removing up to half of the stover on a cornfield can, in fact, improve soil health for future crops. And with current market corn prices, we provide some margin back to the farmers from their fields," he said.

Local supply

Thailand-based **Unique Polymer** uses local sources of natural fillers to produce compounds and masterbatches with bio-based content in a wide range of polymers including polyolefins, PLA, PBAT and recycled plastics. The company has been using agricultural waste including rice husk, starch and bagasse as fillers. Its latest product line uses a marine filler produced from scallop or oyster shells, which are waste-streams from the local seafood industry. This functional filler, which can be made into a masterbatch with a loading up to 70%, reduces carbon footprint and cost, and it increases bio-content and rigidity.

The company has a wide range of certified bio-compostable compounds for blown film, straw extrusion and injection moulding. However, in single-use plastics, such as bags, straws and cutlery,

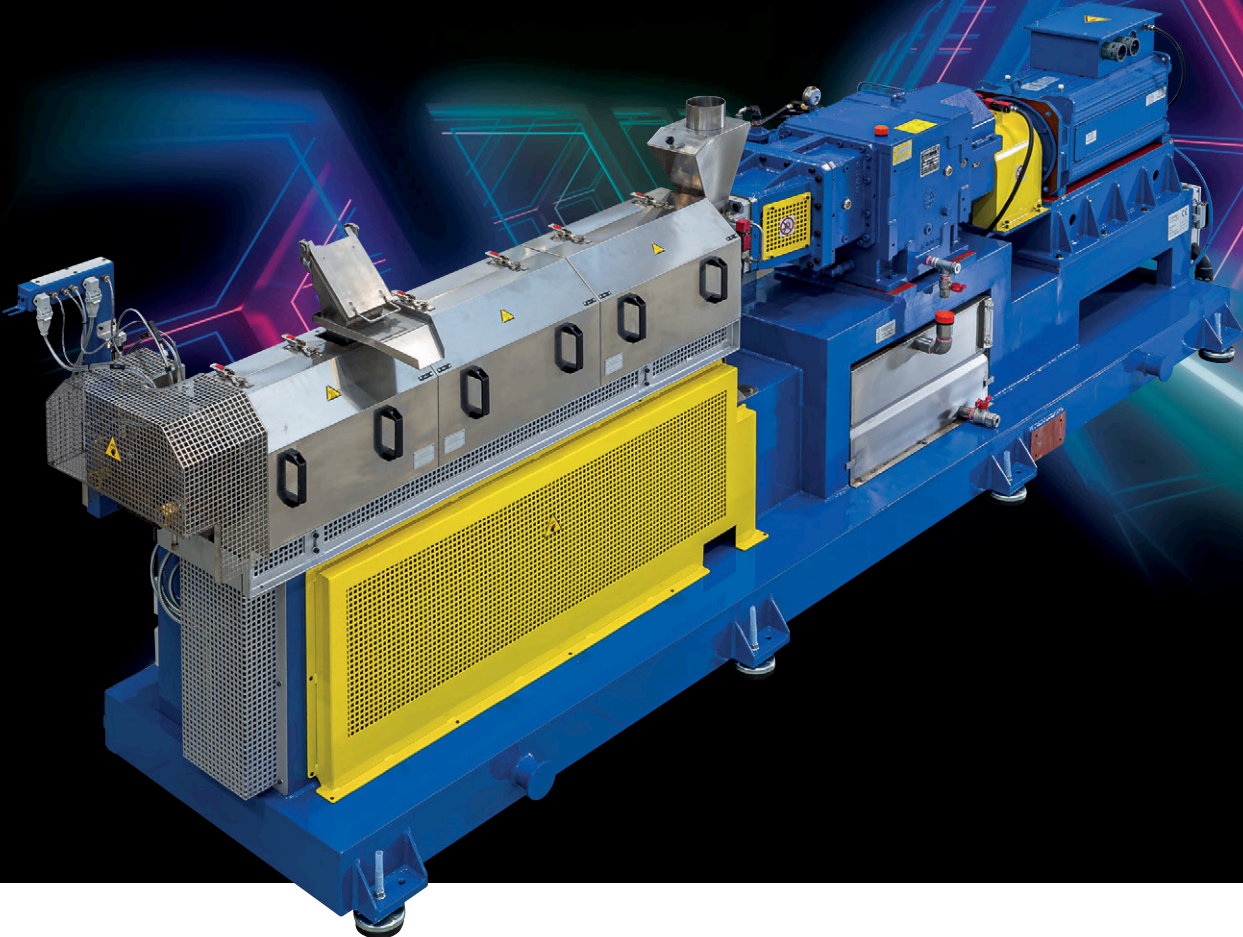
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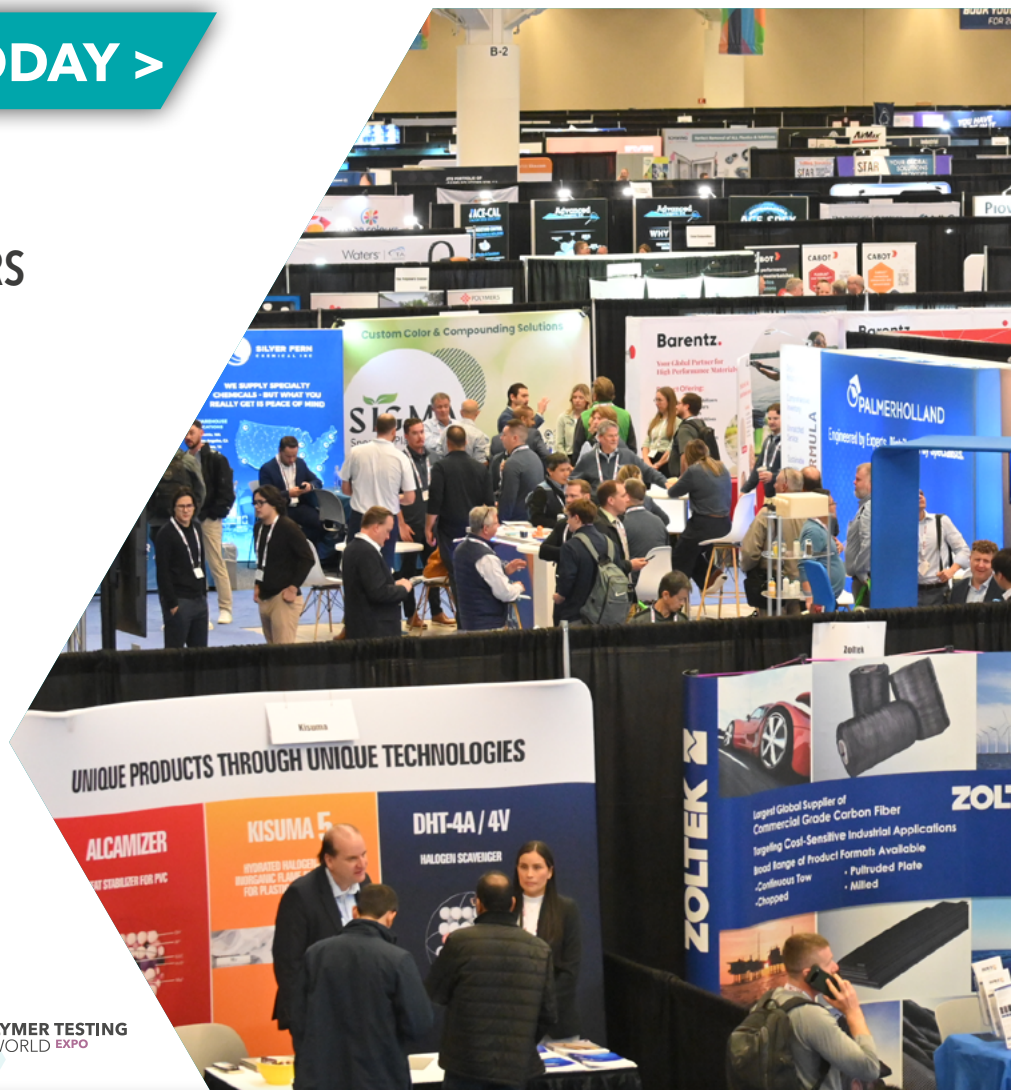
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Ng Jun Jye, Managing Director at Unique Polymer, sees a shift away from compostable plastics, both for cost savings and because not all regions can handle compostable waste.

"We are focusing on carbon footprint, as major corporations are also focusing on this," he said. Bio-based compounds containing biomass reduce cost and carbon footprint, and biomass from "upcycled waste" has zero carbon footprint, said Jye. Japan is one region of growth for low carbon footprint products, and the company's NX-70 masterbatch was recently certified to use the JORA Biomass mark in Japan.

Film has been a more challenging application for bio-fillers than thicker moulded or extruded parts, but Jye said that the company can now produce particle sizes small enough to work in blown film as thin as 10 microns. Possible applications include shopping bags, lamination film, and garbage bags.

Bamboo composites

YTC America (YTCA), a US-based advanced materials and energy research centre that is a wholly owned US subsidiary of Japan's Yazaki

Corporation, has developed a sustainable PP/bamboo composite designed to reduce carbon emissions while maintaining performance for demanding applications. The formulation replaces part of the fossil-based polymer and conventional mineral filler with renewable bamboo, which was selected for its mechanical properties and its rapid growth and high carbon-sequestration capacity.

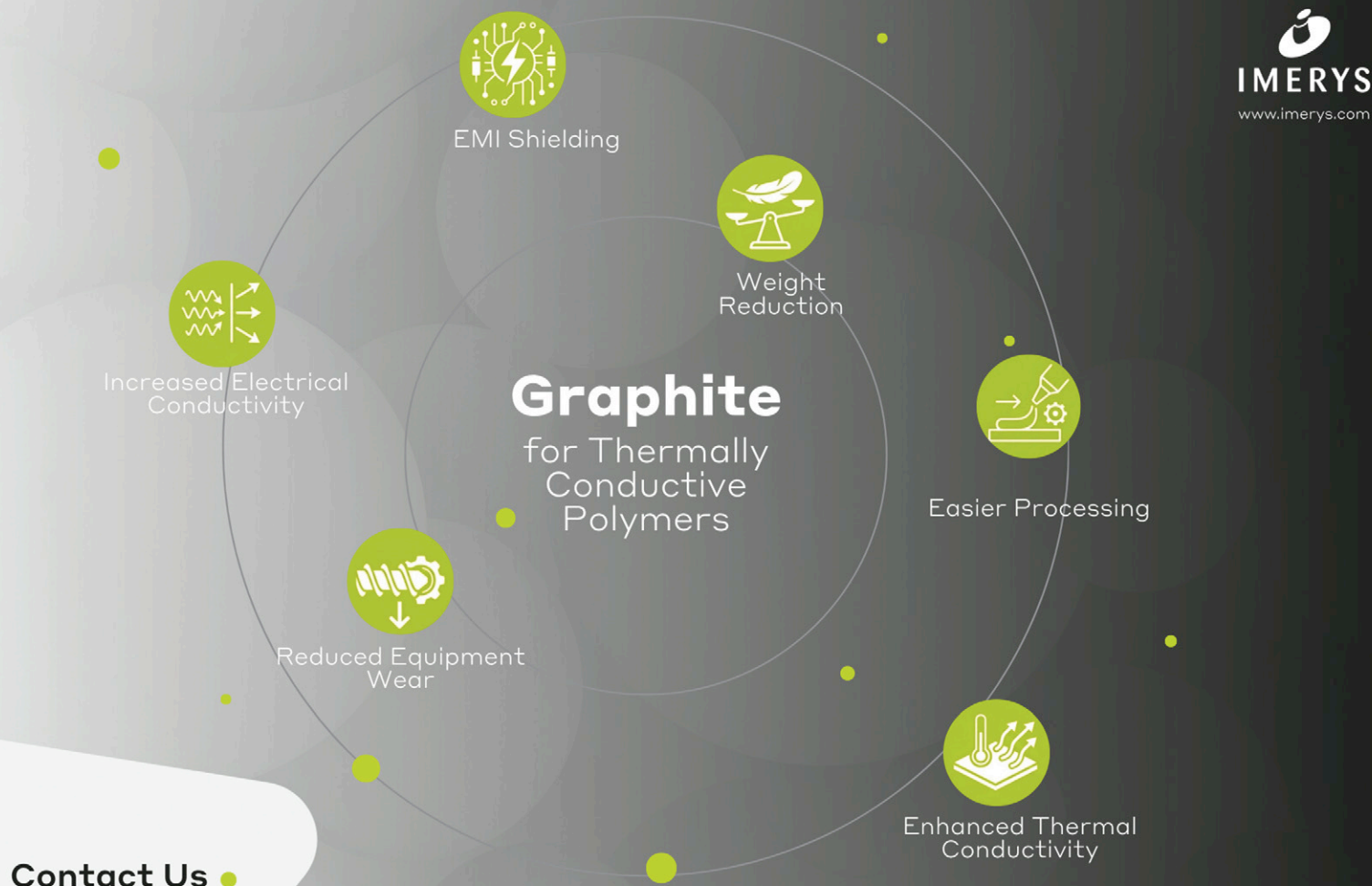
"The PP/bamboo eco-composite provides an approximately 50% lower carbon footprint than a conventional PP/talc composite based on the materials utilized. Several bamboo species were evaluated to understand differences in structure, consistency and supply-chain suitability," said Rajkiran Tiwari, R&D Manager at YTCA.

The researchers optimized the adhesion between bamboo fibres and the PP polymer matrix, resulting in improved load transfer. "The resulting material offers the impact strength, heat resistance, and other key properties comparable or superior to those obtained by conventional PP and PP/talc composite formulations. The mechanical properties of the PP/bamboo composite can be tailored to meet specific application requirements



IMAGE: YTCA

Above: Battery cap moulded in PP/bamboo composite from YTCA



Right: Neen cosmetic pencils made with biodegradable plastic with wood flour filler from Sulapac

ranging from high stiffness and high thermal stability for rigid structural components to high toughness for more flexible resilient parts,” said Tiwari.

The PP/bamboo composite has passed relevant automotive test requirements, including flammability testing, and is available for commercial evaluation. Current work is focused on further improving performance in high-temperature, high-humidity conditions, which remain challenging for natural-filler composites for exterior applications, Tiwari noted. Potential future applications may include automotive and other electrical and electronic equipment components, protective housings and enclosures, industrial packaging and reusable containers, material-handling and logistics equipment such as warehouse storage systems, and other moulded plastic products where lower-carbon material alternatives as desirable.

“As manufacturers face mounting pressure to reduce Scope 3 emissions and satisfy circular-economy regulations, Yazaki is actively engaging with product developers, sustainability leaders, and manufacturers to explore commercial adoption of the PP/bamboo composite material,” Tiwari said.

Finland-based **Sulapac** produces bio-based materials for packaging applications. The company recently announced that US-based makeup brand Neen chose Sulapac Flow 1.8 material for its cosmetic pencils. Sulapac Flow 1.8 is made with FSC-certified wood flour from industrial side streams and biodegradable, bio-based plastics. It is certified as industrially compostable by BPI and the European Bioplastics Seedling Certification Scheme and meets FDA requirements for food contact materials.

Below: Printerior Designs recently introduced natural-fibre-filled PETG and PP pellets for large-format additive manufacturing under its Circdal brand



IMAGE: SULAPAC

The material is a drop-in for compounds made with ABS, AES or PVC that is processed in the same way and has the same look and feel, said the company. With a high bio-based content (72%), brands can reduce their carbon footprint by approximately 50% compared to styrene-based pencil materials, Sulapac said.

Fibres in 3D printing

Compounder and 3D printing manufacturer **Printerior Designs** recently introduced natural-fibre-filled PETG and PP pellets for large-format additive manufacturing (LFAM), which the company prints into architectural products, such as wall panels, partitions, and screens, under its **Circdal** brand. The products include wood-filled recycled PETG and glass-fibre reinforced grades. The company is also developing UV-stable, flame-retardant wood-filled PP and PETG pellets, said Trenton J Esser, Printerior Co-founder and CEO.

“The demand pull for us is architects and designers,” said Esser. “The sustainability story – recycled polymer plus natural fibre – resonates more than we expected, and the aesthetic matters just as much: natural fillers give a matte, organic finish that makes a printed part read as a designed material rather than plastic. In large format, fillers also help with the practical side: lower shrink and warp on big sections, and better cost per pound.”

Natural fibres are hygroscopic and require drying prior to the extruder and again at the printer, Esser said. Other challenges include dispersion and the need to use hardened wear parts to withstand abrasion. Managing the “thermal window” is key. “Wood fillers start to degrade right

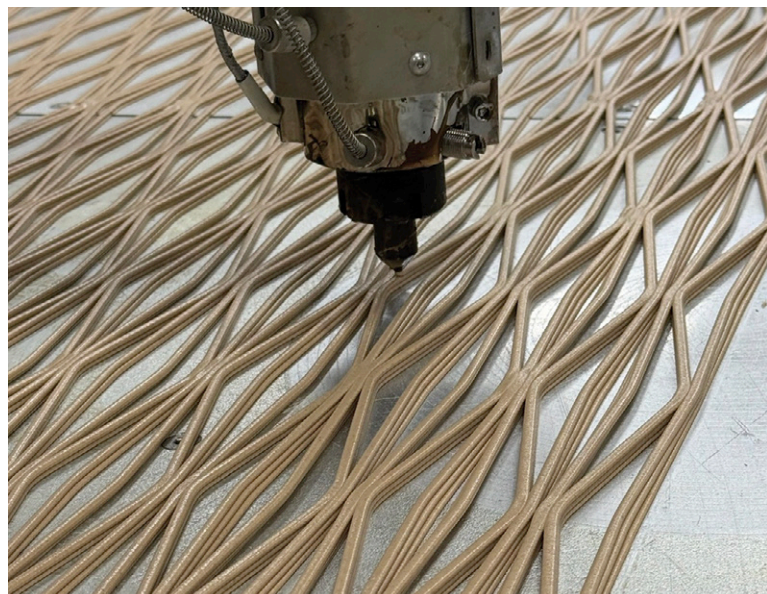


IMAGE: CIRCDAL

in the range some polymers want to process. We have developed a compounding process that allows us to maximize the benefits of natural fibres while not risking degradation," he said.

For 3D printing, fibre length and particle size must be the correct size for the process. LFAM beads can handle larger particles than filaments. "Finer particles give better surface finish and consistency; longer fibres buy stiffness but cost flowability. We optimize with tight screening on incoming fibre, moisture control, and twin-screw compounding for dispersion before anything gets printed," Esser said.

The company also supplies wood-filled recycled PETG and hemp-filled PLA filament for 3D printing applications ranging from consumer and prototype parts to retail displays. The filament is available in North America, with plans to expand to the EU.

FR compounds

Researchers at the **Fraunhofer Institute for Wood Research (WKI)** in Braunschweig, Germany recently conducted a project to create flame-retardant, continuous natural fibres and test them in a fused filament fabrication (FFF) printing process. While

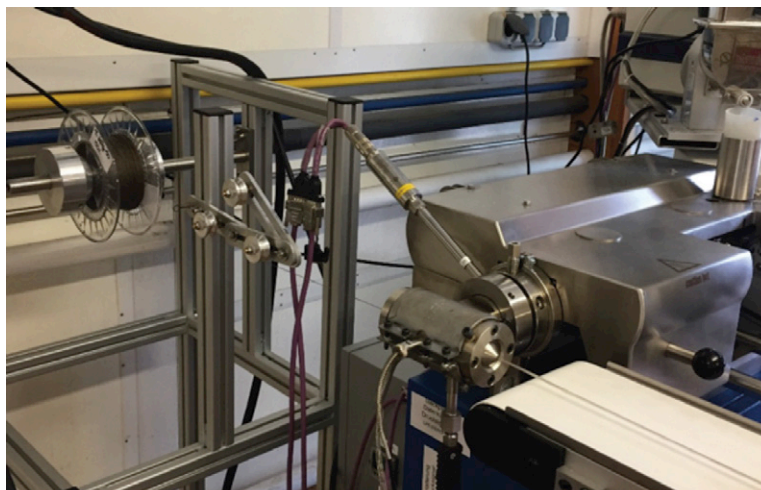


IMAGE: FRAUNHOFER WKI

short natural fibres have been used extensively in FFF, continuous fibres have rarely been used, said Dr Arne Schirp, leader of the project.

Continuous flax fibres and rayon rovings were treated with flame retardant (FR) consisting of inorganic salts, combined with an organic phosphorus-nitrogen compound, using a dip bath, Schirp explained. The treated yarns were dried and co-extruded with PLA using a die extrusion process. The PLA was flame-retarded using

Above:
Fraunhofer
WKI's set-up
for filament
processing with
continuous
fibres



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R&D institute **RISE PFI** recently joined forces with the Centre for Interdisciplinary Research in Space (CIRiS) in Trondheim, Norway to carry out the European Space Agency-funded BioStep project.

"The BioStep project was based on the premise that future lunar and Martian habitats will cultivate crops to provide food and oxygen for astronauts. However, only a fraction of the plant biomass is edible. Stems, leaves, roots, and other residual biomass represent a considerable resource stream that would otherwise be treated as waste," said Gary Chinga Carrasco, Lead Scientist of the Biopolymers and Biocomposites research area at RISE PFI. "These inedible fractions contain cellulose-rich fibres that can be recovered and used as reinforcement in biocomposites. Rather than discarding these materials, we can convert them into a valuable manufacturing resource."

The project explored the feasibility of producing biocomposites from two waste streams that are expected to be generated during long-duration space missions: inedible plant biomass from food production systems and discarded plastic packaging materials. The biocomposite compounds could then serve as feedstocks for the on-demand manufacturing of products in space.

"By compounding recycled plastics with fibres obtained from inedible plant biomass, future habitats could transform waste into spare parts, tools, and other functional products whenever needed, using technologies such as 3D printing," explained Chinga Carrasco. "This would represent a major step toward sustainable, autonomous, and resilient human exploration of the Moon, Mars, and beyond. At the same time, the technologies being developed for space have clear relevance for circular-economy solutions on Earth."

The BioStep project concluded that biocomposite production in space is technically feasible in principle, while also highlighting the need for further development of compact, automated, and resource-efficient processing technologies suitable for off-Earth environments. The project provides a roadmap for future research aimed at transforming biological and plastic waste streams into valuable materials for manufacturing in space and on Earth.

ammonium polyphosphate, which was added using a side feeder. The filament diameter was continuously monitored using a laser-based measurement system and controlled to achieve a target diameter of 2.85 ± 0.1 mm, said Schirp. The filament was then printed by Laser Zentrum Hannover to make test specimens, and mechanical and flame retardant properties were measured.

"Printed test specimens achieved V-0 classification in UL-94 tests at 4 mm thickness and exhibited a limiting oxygen index (LOI) of up to 34 %. The peak heat release rate (pHRR) was reduced by 45-50% compared to non-flame-retarded PLA-flax or PLA-rayon composites," reported Schirp. "Future work aims to increase the fibre volume fraction to further enhance the mechanical performance of printed composites. The project introduces a viable pathway for the development of flame-retarded, bio-based, continuous natural fibre composites suitable for reliable 3D printing."

A recent study by researchers at **RISE PFI** based in Trondheim, Norway, on biocomposites comprising recycled HDPE, thermomechanical pulp (TMP) fibres, and kaolin clay demonstrated the potential of using concentrated masterbatches as an efficient route for biocomposite manufacturing. The results suggested that the use of masterbatches containing 60-80 wt% TMP fibres and clay fillers has the potential to reduce compounding costs by increasing the proportion of fibres and minerals in the formulation, optimize logistics by enabling transportation of higher concentrations of reinforcing materials from compounders to conversion companies, and provide greater flexibility for converters to tailor the biocomponent content in final products. More efficient transportation and processing may contribute to reducing the overall global warming potential of biocomposite products.

CLICK ON THE LINKS FOR MORE INFORMATION:

- <https://lignetics.com>
- <https://moxietec.com>
- www.upmbiochemicals.com
- www.ottokrahn.group
- <https://heartland.io>
- <https://fiberxproducts.com>
- www.unique-polymer.com
- www.ytca.com
- www.sulapac.com
- <https://printeriordesigns.com>
- www.circdal.com
- www.wki.fraunhofer.de
- <https://rise-pfi.no>
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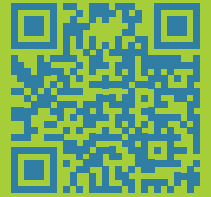
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Compounding combines with recycling in Frankfurt

Europe's compounding and recycling value chain will present innovations at AMI's expo and conference in Frankfurt later this month

The free-to-attend Compounding & Recycling Expo, taking place on 23-24 September at Messe Frankfurt, Germany, showcases the growing overlap between polymer compounding and recycling, bringing the full value chain together for two days of innovation, collaboration and technical insights.

The organiser AMI (publisher of *Compounding World*) calls the event "a unique platform for the industry to explore the future of polymer performance, sustainability and circularity".

The exhibition will showcase cutting-edge solutions from leading suppliers of compounding machinery, raw materials, additives, recycling technology, and testing equipment. Exhibitors include BASF, Sun Chemical, SI Group, JSW, Hosokawa Alpine, Farrel Pomini, Maag, Invista, Orion, Gneuss, Theysohn and many other industry leaders.

Find out about the companies exhibiting at

Compounding & Recycling Expo from p40.

Attendees also gain free entry to two focused conference theatres offering expert-led sessions on markets, technology, applications and regulation. Featured presentations from industry leaders include:

EU recycled plastic content targets: advancing a coherent framework in a global context - Maria Vera Duran, Policy Director, **Recycling Europe**;

Innovative strategies for ensuring safety and sustainability in food contact packaging - Marinella Vitulli, CEO, **Food Contact Centre**;

Improving polymer processing with new additive technologies - Kim Van de Velde, Application Engineer, **3M**;

Advancing post-consumer recycling of nylon 6,6 - Michael Heeran, European Technical Marketing Manager for Nylon Polymer, **Invista**.

Key information

Compounding & Recycling Expo
Messe Frankfurt, Hall 11

Wednesday, 23 September 2026: 9am - 5pm

Thursday, 24 September 2026: 9am - 5pm

Free registration can be completed
at the event [website](https://www.compoundingworld.com)

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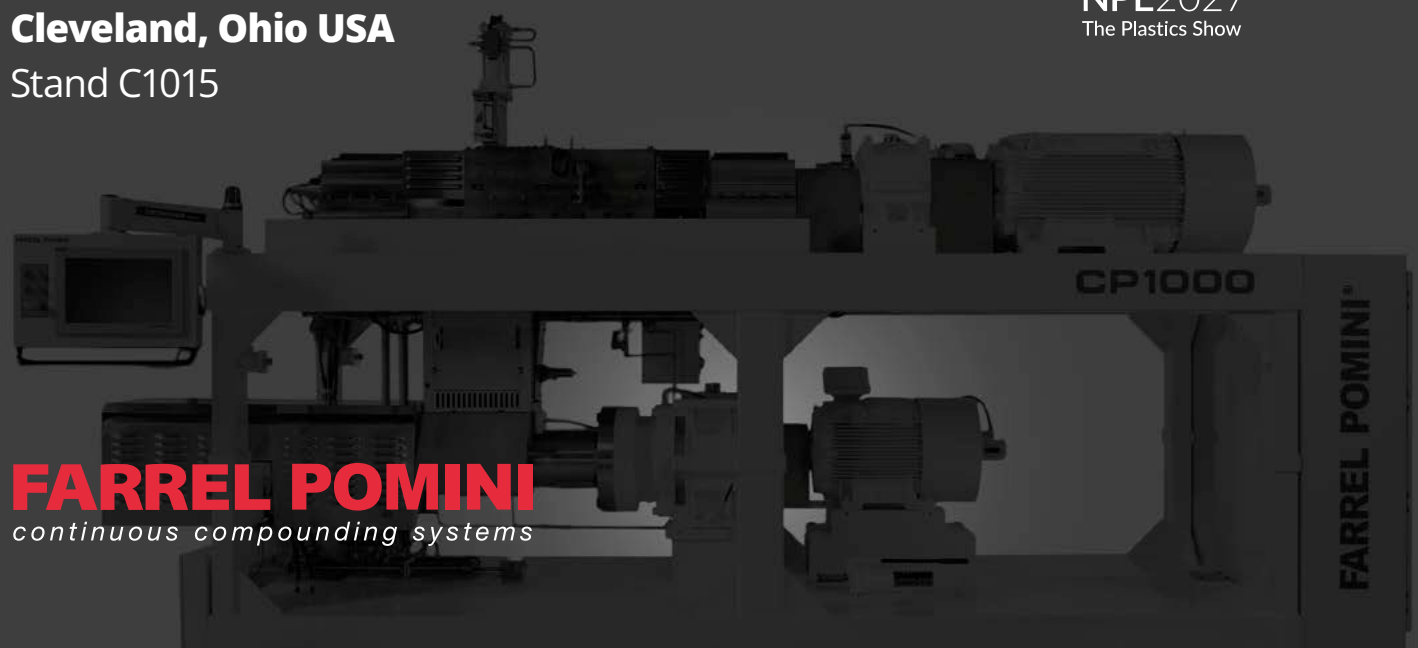
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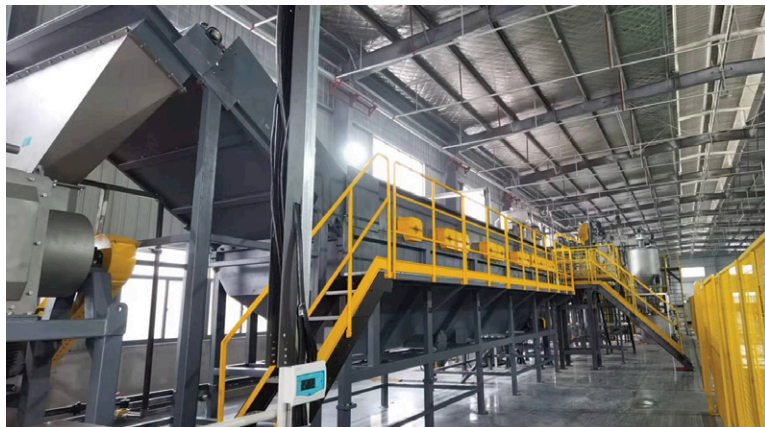
www.farrel-pomini.com

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IMAGE: BORETECH



Above:
Recycled PP
washing line
from BoReTech

3M

The latest addition to the 3M polymer processing additive portfolio is HX 9551, a free-flowing, hydrocarbon-based processing additive developed to deliver robust and consistent extrusion performance. It helps improve optical properties such as haze, clarity, and gloss while reducing extrusion pressure, die build-up, melt fracture, and energy consumption during polyolefin processing. The product is particularly suited for polyolefin formulations containing antiblocking agents, pigments, and other inorganic additives.

➤ www.3m.com

Aimplas

Aimplas is a technology centre with over 30 years of expertise in the plastics industry. It supports companies throughout the value chain, from raw material manufacturers to end users. It has 15,000 m² of state-of-the-art facilities and 50 pilot plants for various plastic processing applications.

➤ www.aimplas.net

BASF Chemetall

In plastics recycling, Chemetall offers specialized cleaning agents and silicone- and non-silicone defoamers for removing residues, labels, inks and adhesives. Chemetall's Gardoclean, Gardobond-Additive, and Gardo Pure products optimize washing and wastewater treatment, ensuring high-quality, cost-efficient and food-industry-compliant recycling, says the company.

➤ www.chemetall.com

BoReTech

BoReTech started in 1989 as a recycler in the PET bottle recycling industry in Taiwan. Now its technology portfolio provides total solutions for plastics recycling systems, polyester staple fibre production, and textiles, as well as bottle-to-bottle plant and services.

➤ www.bo-re-tech.com

BRB International

BRB Silicones, a business unit of BRB International, is a leading specialty silicones producer, offering emulsions, antifoams, water repellents, elastomers, lubricants, silanes, resins and customised formulations, alongside core and specialty intermediates for the global silicone industry. It provides a wide range of organofunctional silanes for compounding applications, including adhesion enhancement, coupling and crosslinking.

➤ www.brb-international.com

CeNTI

CeNTI – Centre for Nanotechnology and Advanced Materials – is a private, non-profit centre for technology and innovation based in northern Portugal. With a team of over 190 researchers and extensive experience in collaborative national and international R&D projects, CeNTI specialises in applied nanotechnology, advanced and sustainable materials, and smart systems, helping companies turn ideas into innovative products and solutions.

➤ www.centi.pt

CMG Granulators

CMG Granulators designs and produces solutions for the recycling industry, represented by granulators, shredders, integral feed conveyors, regrind evacuation and conveying systems and powder separation executions. It says that more than 30,000 CMG units have been installed at customers in Europe, America, Middle East and Asia.

➤ www.cmg-granulators.com

CPM

CPM Engineered Materials is a compounding technology partner which helps customers overcome processing challenges and keep production moving reliably. Challenges include: formulation changes; raw material variability; production ramp-up; and long-term process robustness.

➤ <https://onecpm.com>

Delta Kunststoffe

Delta Kunststoffe – a member of the Kafrit Group – says it is very excited to be working with Plastics App to showcase its products and new projects. Delta's specialties include colour formulations, electrically conductive plastics, and specialty compounds, and it also offers additives and contract compounding.

➤ www.delta-kunststoffe.de

Econ

Econ specializes in the development, production, and global marketing of innovative solutions for

underwater pelletizing technologies and screen changers. It says global producers of virgin resins, compounders, masterbatch manufacturers, and recycling companies all value the quality and efficiency of its equipment.

➤ **Econ LinkedIn page**

Entex Rust & Mitschke

Entex is a leading manufacturer of planetary roller extruders, tempering systems, and calender rolls. With a strong focus on innovation and modular design, Entex serves various industries, including plastics, recycling, rubber, chemicals, and food, providing comprehensive solutions for complex processing needs.

➤ **www.entex.de**

Euro Machinery

Euro Machinery buys and sells used machines within flexible plastic converting and plastic recycling. These include blown film extruders, cast film extruders, flexo printers, laminators, bag machines, winders and slitters. In recycling, it offers extruders, shredders, granulators, agglomerators and other equipment.

➤ **www.euro-machinery.com**

Farrel Pomini

Farrel Pomini designs and manufactures compounding systems for polymer applications. Known for superior energy and maintenance efficiency, its products include the CP Series II Compact Proces-

sor and FCM Continuous Mixer. It also offers extensive aftermarket solutions to enhance operating efficiencies and customer profitability.

➤ **www.farrel-pomini.com**

Filtec

Filtec, established in 1993, specialises in filtering and pelletising equipment for plastic material processing. The company offers solutions for underwater pelletisers, water ring pelletisers, screen changers, and more.

➤ **www.filtecsrl.eu**

Fine-Blend Polymer

Fine-Blend Polymer focuses on developing specialty compounds and polymer additives. It provides a range of innovative products that enhance the properties and performance of plastics, catering to various

industries and applications with customised solutions and technical support.

➤ **www.fineblend.com.cn**

Food Contact Center

Food Contact Center's core business focuses on the analysis of materials, articles and their interaction with food, helping companies in implementing both mandatory and voluntary quality systems, including Good Manufacturing Practices (EU Regulation 2023/2006), ISO 22000, BRCGS and FSSC 22000.

➤ **www.foodcontactcenter.com**

**Left: Entex
L-WE 30
laboratory
roller extruder**



IMAGE: ENTEX

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Gamma Meccanica

Gamma Meccanica designs and produces machines and plants to recycle a wide range of plastic materials. It says its lines are characterised by a high level of automation, maximum quality of the recycled product (granules) and improved energy savings.

➤ www.gamma-meccanica.it

Gates Industrial Europe

Gates Corporation is a leading manufacturer of application-specific fluid power and power transmission solutions. Its product portfolio includes pumps, belts and hoses.

➤ www.gates.com

Georg H Luh

Georg H Luh specialises in mineral raw materials like graphite and mica for various applications, including flame retardancy and conductivity. The company offers comprehensive solutions, from consulting to material supply and testing, ensuring high-quality standards and innovative applications for its clients.

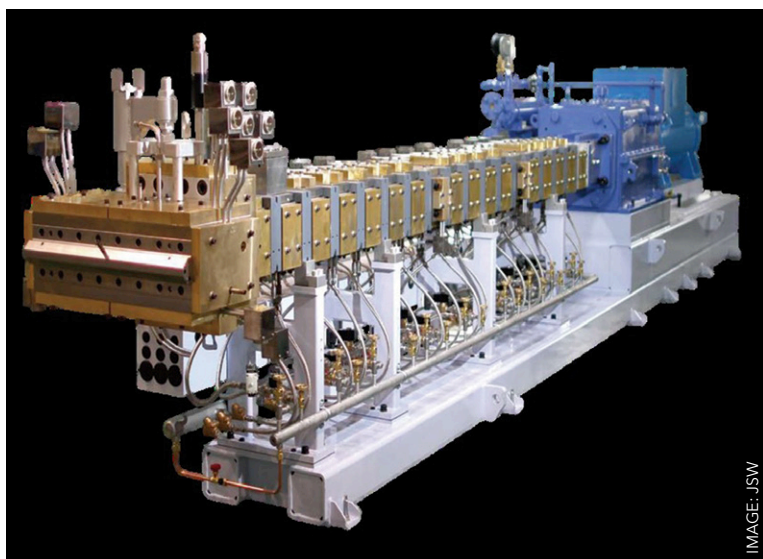
➤ www.luh.de

Gneuss

With over 40 years of experience and over 100 patents, Gneuss is a supplier of innovative solutions for the recycling industry. The patented Gneuss MRS is a key element of the Gneuss OMNI Recycling Systems and offers new possibilities for recycling, with its highly efficient devolatilisation for extrusion of hygroscopic polymer such as polyester and for the extraction of volatile contaminants. Gneuss also offers fully automatic screen changers, making the efficient processing of highly contaminated materials possible.

➤ <https://www.gneuss.com>

**Below: TEX
extruder from
JSW Europe**



Guangzhou Tyrone

Guangzhou Tyrone specialises in environmental technology solutions, offering products and services aimed at improving sustainability and reducing environmental impact in various industries.

➤ www.tyrone8.com

Hosokawa Alpine

The company manufactures machines and systems for processing powders, granules and bulk materials as well as systems for producing and processing blown film. It has developed solutions for the efficient recycling of production waste as part of a closed material circuit. The portfolio includes the design and manufacture of complete systems and machines for dry recycling tasks.

➤ www.hosokawa-alpine.com

ICMA San Giorgio

ICMA designs and manufactures co-rotating twin-screw extruders and complete extrusion systems for advanced compounding, recycling and direct extrusion (in-line compounding). ICMA solutions are used for the production of technical compounds and masterbatches, as well as for the direct extrusion of sheets, foils and customized products, including applications involving recycled, bio-based and highly filled materials, ensuring reliable industrial performance.

➤ www.icmasg.com

IKTR

Institut für Kunststofftechnologie und -recycling (IKTR) is a R&D company supporting industrial companies and SMEs in developing new processes and products. As a service provider for companies, it conducts analyses, investigations, and feasibility studies.

➤ www.iktr-online.de

Invista

Invista is a global leader in the production of nylon 6,6 polymers used in the automotive, industrial, consumer electronic and apparel/textile industries. The company is focused on producing high-quality nylon 6,6 polymer feedstock to compounders, direct-to-mould and fibre spinners. The group operates polymer production assets in Europe, North America and China, providing customers with reliable, regional supply systems.

➤ <https://nylonpolymer.invista.com>

Japan Steel Works Europe

JSW Europe specialises in plastic machinery, including large polyolefin extruders, twin screw

extruders, and film and sheet manufacturing equipment. It provides after-sales services such as maintenance support, barrel/screw measurement, consulting for modification and parts inventory. It offers to carry out extrusion trials with its TEX extruder in its extrusion technical centre in Dusseldorf, Germany

> www.jsw.de

J-Tec Material Handling

J-Tec specialises in automated material handling systems and process engineering solutions for the food and chemical industries. Known for its personalised approach, J-Tec offers customised solutions from conceptual design to installation and maintenance, ensuring tailored project success through its extensive international expertise and in-house knowledge.

> <https://j-tec.com>

LKAB Minerals

LKAB Minerals, part of the Swedish company LKAB, supplies natural minerals engineered for functionality and usability across various industries. Committed to innovation and responsibility, LKAB Minerals partners with customers to deliver high-quality, reliable mineral products.

> www.lkabminerals.com

Maag Germany

The Maag Group is a broadly diversified global solutions provider with integrated and customizable systems in process technology for the polymer, chemical and petrochemical industries. Its pump & filtration systems, pelletizing & pulverizing systems, recycling systems and measurement & control systems divisions consolidate the many years of experience and in-depth know-how of the AMN, Automatik, Ettlinger, Gala, Maag, Reduction, Scheer, Witte, Xantec and Sikora product brands.

> <https://maag.com>

Metalworks

Metalworks (MW) manufactures welded and bolted aluminium silos, stainless steel silos, as well as machinery and components for the storage and the mechanical and pneumatic conveying of bulk materials. MW also produces bulk material equipment, such as: manual systems for emptying bags and bulk bags; automatic bag-emptying machin-

ery; special components for pressure and vacuum pneumatic conveying; continuous dosing and blending of powder, granular, and flake materials.

> www.metalworksal.com

Mixaco

Mixaco, with over 50 years of experience, is a global leader in industrial mixer systems. The company serves many industries, such as powder coating, masterbatch, compounding and plastics, as well as PVC/WPC, rubber, chemical and food industry

> www.mixaco.com

Mixron

Mixron offers a wide variety of mixing systems for bulk materials. Specialising in PVC dry blend, WPC, and masterbatch, it provides turbo mixers, cooler mixers, and container mixers, enhancing blend quality and ease of use while maintaining maximum customer value.

> www.mixron.it

Left: Mixron MTP high-speed turbo mixer for PVC dry blend



MPI Chemie

MPI Chemie, an independent Dutch chemical company, supplies a wide range of additives like UV absorbers, light stabilisers, and antioxidants. With a strong focus on the European plastics and coatings industries, MPI is known for cost-efficiency, excellent service, and compliance with European regulations.

> <https://mpi.eu/chemie>

Netzsch

Netzsch has a wide range of instruments for thermal analysis, calorimetry, the determination of thermophysical properties, rheology and fire testing.

> <https://analyzing-testing.netzsch.com>

Nexam Chemical

Nexam Chemical develops smart additives that repair and upcycle recycled plastics to enhance their performance. Its focus is on easy-to-use masterbatches for rPET, rPE, and rPP that boost properties and processability, enabling customers to safely increase recycled content or incorporate more challenging feedstock in demanding applications such as packaging, films, and technical parts.

> <https://nexamchemical.com>



Orion Engineered Carbons

Orion Engineered Carbons is a leading global supplier of carbon black which has innovation centres on three continents and 15 plants worldwide, offering a diverse variety of production processes resulting in unique performance of the carbon black.

➤ <https://orioncarbons.com>

Pinfa

The Phosphorus, Inorganic and Nitrogen Flame Retardants Association is a Sector Group within Cefic, the European Chemical Industry Council. Pinfa represents the manufacturers and users of non-halogenated phosphorus, inorganic and nitrogen flame retardants.

www.pinfa.eu

Plas Mec

Plas Mec manufactures equipment for mixing plastic materials and other polymers. Known for its durable, high-quality machines, it offers solutions like the Combimix-HC and TRR Container Mixer, catering to various mixing requirements.

➤ www.plasmec.it

Plastics App

Plastics App is a compounding innovation lab specialising in biodegradable and sustainable compounds, EMI shielding, and reactive extrusion. It supports R&D, prototyping, and testing, offering holistic project management from ideation to full-scale development.

➤ www.plastics-app.com

Polycompound

Polycompound, based in Switzerland, produces custom compounds and masterbatches. It has extensive experience and technical knowledge of

compounding with co-kneaders, from lab-scale through to large-scale production. It has flexible production facilities and a big range of equipment including in-house quality control.

➤ <https://polycompound.ch>

Potters

Potters Industries produces solid glass beads and hollow microspheres for different applications like road marking paints, metal finishing, plastics, coatings and many more.

➤ www.pottersindustries.com

Recycling Mondo Plast

The Romanian plastics recycling company has an annual capacity of up to 12,000 tonnes of recycled granules. It operates two Erema recycling lines equipped with laser filters and automatic washing lines.

➤ <https://recyclingmondoplast.ro>

Rianlon

Rianlon provides anti-ageing additives and application technologies for polymers, coatings, and lubricants. Its products include antioxidants, light stabilisers, and customised blend solutions.

➤ www.rianlon.com

Sachtleben Minerals

Sachtleben Minerals markets barite and fluorite products, offering reliable industrial mineral supplies. It is recognised for its innovative solutions and consistent supply capabilities.

➤ www.sachtleben-minerals.com

Schwing Technologies

Schwing offers all advanced thermal cleaning technologies that remove polymers and organic contaminants from metallic tools and machine parts of any type and dimension. In addition to (vacuum) pyrolysis plants and fluidized bed systems for thermal cleaning, it also designs and manufactures application-specific fluidized bed reactors for the thermo-chemical conversion of powdery substances by means of flowing reaction gases in variable atmospheres.

➤ <http://www.schwing-technologies.com>

Sciences Computers Consultants

SC-Consultants optimises twin screw extrusion processes with specialised simulation software. Serving industries globally, it provides tools to master and optimise processes, saving materials and costs.

➤ www.sccconsultants.com

Below: The Plas Mec stand at Plast 2026 in Italy



IMAGE: PLAS MEC

Sun Chemical shows strong range of pigments

At the Compounding & Recycling Expo, Sun Chemical says it is highlighting its focused portfolio of pigment preparations designed to help plastics converters improve colour performance, processing efficiency, dimensional stability and visual impact.

Featured solutions include: Eupolen NQ for polyolefins, with a particular focus on green and blue shades; Microlen Piano Black 0078 MCN, which combines exceptional jetness with optimised value in use; and Microlen Pink 4410 MCN, a brighter, more chromatic pink pigment preparation engineered for polyolefins, rubber and select engineering plastics.

Sun Chemical will also showcase its Microlen and Eupolen non- and low-warping pigment preparations for HDPE applications such as bottle crates, pallets, containers and caps and closures.



Shanghai Qishen Plastic Industry

Founded in 2007, the recycling company's annual production is more than 80,000 tonnes, with its output including PP, ABS, PC, and PC/ABS, PC/PBT.

➤ www.shqishen.com

SI Group

SI Group is a leading global manufacturer of performance additives, process solutions, chemical intermediates, and active pharmaceutical ingredients. With a manufacturing footprint spanning four continents, it serves customers in 80 countries and continues to develop innovative solutions to meet the evolving needs of customers.

➤ <https://siigroup.com>

Siempelkamp Size Reduction Solutions

Siempelkamp Size Reduction (formerly Pallmann) is part of the Siempelkamp Group and one of the leading manufacturers of machines and complete systems for the preparation and size reduction of nearly all materials.

<https://size-reduction.siempelkamp.com>

Sun Chemical

Sun Chemical produces pigment preparations that enhance efficiency and sustainability in colouring processes (see box).

➤ www.sunchemical.com

Theysohn Extrusionstechnik

Theysohn Extrusionstechnik provides extruder systems, from laboratory to large-scale turnkey solutions. It specialises in polyolefins and PVC applications, offering innovative and custom

solutions. Its portfolio includes co-rotating and counter-rotating extruder systems along with advanced Cascade technology.

➤ www.theysohn.com

UniteChem

UniteChem Group, based in China, is a leading supplier of light stabilisers and UV absorbers for plastics. It engages in R&D, production, and application development, serving diverse industrial needs.

➤ www.unitechm.eu

Wells Performance Materials

The UK-based company specialises in the production of additive masterbatches for plastics, offering solutions for enhanced material performance and sustainability.

➤ www.wellspm.com

WIS Kunststoffe

The company, which has five sales offices in Germany and further offices in Austria, Switzerland and Eastern Europe, offers a large portfolio, ranging from standard products, compounds and special offers to reggranulates and ground materials, as well as masterbatches and additives.

➤ <https://wiskunststoffe.de>

X-Compound

X-Compound is a leading supplier of continuous kneaders. It says it provides machinery to achieve excellent compound qualities using its gentle and efficient mixing technology.

➤ <https://www.troester.de/products/x-compound>

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Picking up signals from the EV market



IMAGE: SHUTTERSTOCK AI

Compounders responding to the demands of electric vehicle applications must balance an expanding range of properties in their materials. Chris Saunders reports on new products

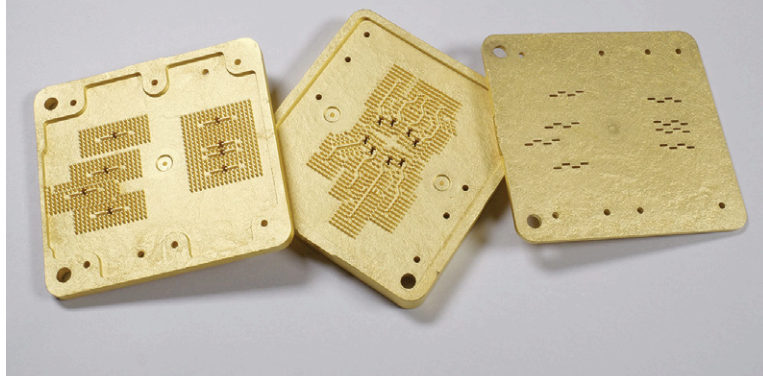
The electric vehicle (EV) industry has entered a new phase of development. While the first trends focused primarily on electrification and range, manufacturers are now concentrating on reducing costs, improving efficiency, enhancing safety, and meeting increasingly demanding sustainability targets, meaning that opportunities now exist far beyond replacing metal with plastic. The automotive industry is currently transitioning from 400V to 800V architectures as manufacturers seek to deliver faster charging, greater driving range, and improved powertrain efficiency. This move is redefining performance requirements for advanced materials which must now deliver a combination of mechanical strength, flame resistance, thermal management, electrical insulation, and recyclability, all while remaining economically viable for high-volume production.

Higher power density and ultra-fast charging

generate greater thermal loads across the charging path, battery system, and electric drive components, so engineers must also maintain insulation, dimensional stability, and long-term reliability under more demanding operating conditions. "The shift to 800V is redefining the role of specialty polymers in electric vehicles," said Nicolas Batailley, EMEA Business Development Manager at **Syensqo**. "Engineers are looking for materials that can simultaneously deliver electrical performance, thermal resistance, and long-term durability, while enabling more compact, lightweight designs. That's where we see innovation in polymer compounds making a real difference for the next generation of high-voltage systems."

Recent material developments further illustrate this trend. For example, new highly flowable polyphenylene sulphide (PPS) compounds make it possible to produce ultra-thin e-compressor

IMAGE: ASAHI KASEI



Above:
Metallised
slotted
waveguide
array antenna
made of Asahi
Kasei's Xyron
mPPE

bobbins that improve motor efficiency without sacrificing durability or electrical performance. Syensqo's Ryton PPS Supreme HF is already being used in this application. Ryton XE3500 Orange is an extrudable PPS grade developed for demanding high-voltage charging busbars, while the recently-introduced Amodel PPA AE-8945 HFFR is being used in battery protection systems such as pyrofuses.

Although technical challenges remain, companies involved in EMI shielding solutions like **Premix** are uniquely positioned to drive innovation. "Traditionally, EMI shielding in plastics has been achieved using metallic additives," explains Christine Van Bellinghen, Business Development & Sales Manager, Premix. "The growing range of carbon-based conductive additives has made EMI shielding plastics a more cost-effective alternative while also reducing wear on processing equipment compared to metal fibre-based solutions. With wall thicknesses of at least 2mm, attenuation levels of 40-60 dB at medium-to-high frequencies can be achieved using highly-filled yet processable polypropylene (PP) and polyamide (PA) compounds in well-designed injection moulding tools. Thicker walls bring higher attenuations, and tailored material developments can combine EMI shielding performance with flame retardancy."

The expansion of 5G networks and the development of 6G technologies are accelerating the use of higher-frequency electromagnetic waves. While these frequencies enable faster data transmission and improved connectivity, they also introduce challenges such as increased transmission losses, signal degradation, and heat generation. Material selection becomes particularly important because dielectric properties can have a direct impact on system efficiency. This is one reason why materials such as modified polyphenylene ether (mPPE) are attracting attention in automotive communication applications.

"Unlike conventional plastics, mPPE combines excellent dimensional stability with inherently low dielectric loss characteristics," said Miki Tokuyama, Technical Engineer, Engineering Plastics Division, **Asahi Kasei**. "In high-frequency applications, a low dielectric loss tangent (Df) helps minimise signal attenuation, improving transmission efficiency and overall system performance. Millimetre-wave radar, commonly used for adaptive cruise control, collision avoidance, and object detection, relies on antenna structures and waveguide components that must maintain extremely tight dimensional tolerances, as even minor warpage or dimensional variation can affect signal quality. With dimensional stability approaching that of metals, mPPE provides a lightweight alternative while maintaining the precision required for high-frequency performance."

The material's potential extends beyond radar antennas. Antenna covers, for example, must combine low dielectric loss with weather resistance and low weight. Advanced mPPE grades offer significantly lower dielectric losses while maintaining long-term resistance to weathering, discoloration, and environmental exposure.

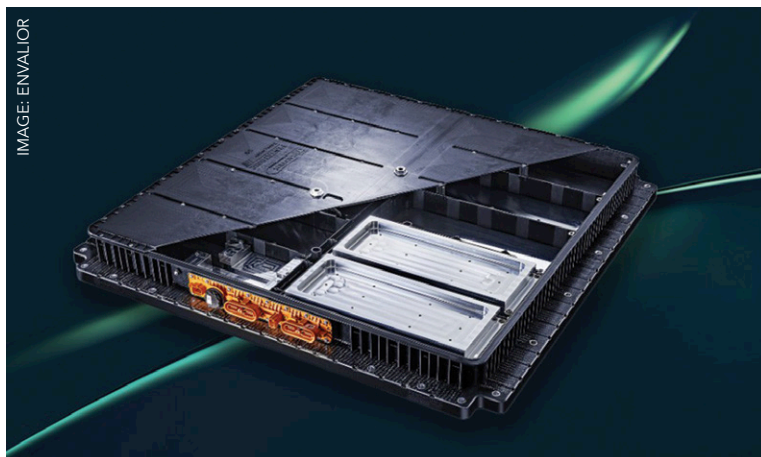
Communication parts

"Certain communication components require a different balance of properties," said Tokuyama. "Phase shifters used in some high-gain antenna systems benefit from materials that combine high dielectric permittivity (Dk) with low dielectric loss, alongside high heat resistance and elevated heat deflection temperatures. Meanwhile, antenna elements increasingly demand materials that can support mass production while maintaining stable thermal expansion characteristics. PPS/PPE alloy systems can address these requirements through low Dk and Df values, lightweight construction, improved plating performance, and reduced warpage. Some development-grade mPPE materials demonstrate dielectric properties as low as Dk 2.6 and Df 0.001 at 28 GHz, highlighting how far engineering plastics have advanced."

In June this year, **Avient** launched Preperm low loss dielectric thermoplastics for mmWave radar dome (radome) applications, a new mPPE portfolio with four grades created for the surge in 5G/6G-enabled radar sensing which provide Advanced Driver Assistance Systems (ADAS) component manufacturers and traffic radar system producers with a high-performance alternative to conventional glass-fibre-reinforced polybutylene terephthalate (PBT+GF) materials. The accelerating adoption of radomes is reshaping material requirements across the automotive industry. As Level 2 through Level 4

driver-assist features proliferate, the radome, the dielectric cover that protects the radar antenna, has become a make-or-break component for system performance as incumbent materials were not created for the higher frequencies (37.5 GHz to 79 GHz and above) now standard.

Manufacturers reportedly told Avient they are hitting four recurring barriers: signal loss from elevated dissipation factor values eroding detection range; narrow detection angles limiting coverage; warpage during injection moulding extending qualification timelines; and Blind Spot Information System certification hurdles blocking European market entry. The new grades can deliver a dielectric constant (Dk) of 2.53 to 2.94 and a loss tangent (Df) as low as 0.001 at 2.5 GHz, while in-house RF testing at 37.5 GHz demonstrated clear improvements in gain, elevation angle, and detection angle compared to PBT+GF materials. High-impact and reinforced laser-weldable grades address the outer radome layer's impact and structural demands, while a dedicated laser-absorbing grade serves as the base layer, enabling fully-welded assemblies compatible with laser assembly processes.



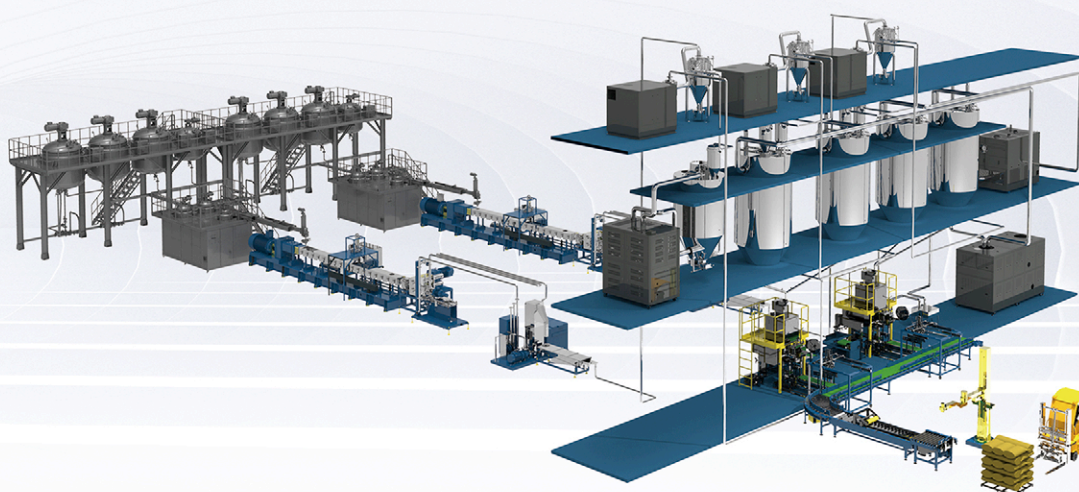
"Tier 1 automotive suppliers in Asia were hitting real performance ceilings with PBT+GF materials," said Flight Xu, General Manager, Specialty Engineered Materials, Asia, at Avient. "Traditional polyesters could not deliver stable dielectric values at high frequencies, and warpage was creating costly assembly rework. With our new Preperm materials, customers are achieving meaningful gains."

As EV charging speeds continue to increase, thermal management is becoming a critical design consideration. Ultra-fast charging generates

Above: Hybrid composite battery cover developed by Envalior in collaboration with Sabic, Siebenwurst, Ensinger, and Forward Engineering

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significantly higher temperatures in battery modules, busbars, connectors, and power electronics, while traditional halogenated flame-retardant systems are giving way to halogen-free alternatives that satisfy environmental regulations without compromising performance. Compounders are also investing heavily in phosphorus-based, mineral-filled and synergistic additive technologies capable of dissipating heat while maintaining dielectric performance. Beyond flame retardancy, the emphasis has shifted towards multifunctional compounds combining high dielectric strength, thermal conductivity, low smoke generation, chemical resistance, long-term hydrolytic stability, and mechanical durability. This integrated approach allows a single material to address multiple engineering requirements while simplifying component design.

Thermal Shock

"Thermal shock is an important issue because modern EVs operate across a wider temperature range," said Arthur Rieb, Business Development Manager e-Powertrain, **Envalior**. "Components may experience rapid transitions from very low ambient temperatures to high operating temperatures generated by fast charging, regenerative braking, or high-power driving conditions. The combination of repeated thermal cycling and increasingly compact designs places greater demands on materials."

Xytron M5080ET was developed by Envalior to address these challenges. Rieb said key features include its thermal expansion behaviour, which is significantly closer to that of copper compared with conventional solutions, and its ductility, which means the material has a higher elongation at break.

"By reducing the mismatch between the copper conductor and the overmoulded polymer, internal stresses are minimised, helping reduce stress cracking during thermal shock events," he said. "Testing has demonstrated more than 70% higher thermal shock stress crack resistance compared with comparable PPS compounds."

At The Battery Show North America, in Detroit last October, Envalior debuted Poca BFN4232ZHR S1, a hydrolysis-stabilised, flame-retardant PBT which helps prevent silver migration and electrical stress, two major causes of breakdowns and arcing in high-voltage environments. The company also showcased the first fully functional high-voltage battery enclosure made entirely of engineered plastics, developed from Durethan B24CMH2.0 + 45% LGF PA6 and Tepex Dynalite 102-RGUD600 thermoplastic composite sheet technology which



IMAGE: CLARIANT

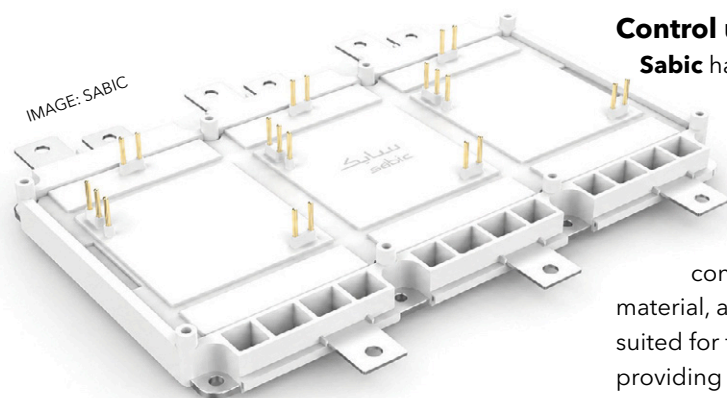
achieves lower weight, cost, and carbon footprint, compared to traditional metal housings.

Flame retardancy

In the field of additives, **Clariant** has expanded its Exolit OP portfolio with two new PBT flame retardants (FR), each targeting a specific engineering challenge. The first, Exolit OP 1242 (TP), addresses hydrolysis stability, an important property in automotive environments where components are exposed to moisture, humidity, and temperature fluctuations over long service lifetimes. Not all FR systems maintain their performance under these conditions and certain synergist combinations commonly used with phosphinate-based flame retardants can reduce hydrolytic stability.

The other new Clariant FR product, Exolit OP 1266 (TP), targets tracking resistance, providing a stable comparative tracking index (CTI) of 600 V in PBT compounds, even after extended storage periods. Both products achieve UL 94 V-0 classification at sample thicknesses as low as 0.4 mm, at dosing levels of 15-20% which supports EV manufacturers looking to reduce component weight and size.

Beyond their technical performance, both new offerings are halogen-free alternatives to traditional brominated FR products combined with antimony trioxide (ATO), which has seen significant price increases and supply chain volatility in recent years. OEM requirements around material composition are also tightening, and a halogen-free, ATO-free, PTFE-free approach helps manufacturers address this trend. Further development is targeting long-chain PA materials like PA 12 where the



Control units

Sabic has introduced LNP Thermocomp WFC061I compound featuring non-brominated/non-chlorinated flame retardance that can help enhance the safety and functionality of critical components, such as electric vehicle control units (EVCUs). This new specialty material, a 2025 Edison Award winner, is well suited for the housing of these applications, providing excellent protection from fire/smoke, impact, moisture, and other threats. Other advantages include colourability, low warpage, and high optical transmission for precision laser welding.

"The EVCU, which manages an EV's electrical systems to ensure peak efficiency and a safe driving environment, relies on high-performance materials," said Jenny Wang, Director, Formulation & Application, APAC, Sabic Polymers, Specialties business. "Based on our broad understanding of automotive power engineering trends and requirements, Sabic developed its new LNP Thermocomp WFC061I compound to help protect the EVCU and optimise its reliability and functionality."

At the most recent Battery Show Europe in Stuttgart, Germany, the company highlighted its

Left: Sabic says its new series of LNP thermocomp compounds are well suited for high-power, high-voltage applications

challenge is to achieve V-0 while maintaining excellent impact properties.

In direct response to growing demand for flame retardants in Asia, Clariant has completed a \$123.87m investment at its Daya Bay facility in China, with a second production line operational since November 2025. "For compound manufacturers working with PBT in EV platforms, the combination of hydrolysis resistance, stable CTI at 600 V, thin-wall V-0 capability, and a cleaner raw material profile represents a practical response to where vehicle electrical systems are heading," said Sebastian Hoerold, Senior Expert Flame Retardants at Clariant.

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newly launched LNP Thermocomp OFM compounds, based on PPS resin, which broaden the scope of Sabic's offering and address increasingly rigorous voltage and power demands. Illustrating its extensive product scope, the company displayed a full-size replica of an EV battery pack, as well as individual battery components including a lightweight honeycomb energy absorber using Noryl GTX resin, a cell retainer and module frame made with LNP Konduit compound, and electrical insulation film extruded from Noryl NHP resin.

"Our customers are under pressure to deliver EV systems that handle more power, run cooler, and operate more reliably," said Sergi Monros, Vice President, Sabic's Specialties BU.

Sustainable expectations

Tisan Engineering Plastics formulates thermally conductive polymers and produces compounds under the Tislamid trademark. Tislamid 66, reinforced with glass fibre and special filler, offers more than 5 W/mK through/plane thermal conductivity as well as advanced flame resistance and maximum glow wire performance, while another grade of Tislamid 6 with special filler has 5.5 W/mK through/plane thermal conductivity, improved mechanical properties, and high strength. Another polymer under the Tisoplen trademark offers 0.95 W/mK through/plane thermal conductivity as well as electrical insulative properties. Tisan's product portfolio also includes PC-based polymers, such as grades under the Tisarbon trademark, which have similar enhanced properties.

Circularity is rapidly becoming a commercial requirement with OEMs increasingly expecting suppliers to reduce embedded carbon while incorporating recycled and renewable feedstocks wherever feasible. Tisan's EcoStar talc-filled recycled PP compound is designed for use in automotive applications, while its EcoStar PA grade is produced from high quality post-industrial recycled PA 66 materials. The most important feature of EcoStar products is that they can be customised to offer ecological and economical solutions in different markets.

The upcoming European End-of-Life Vehicles Regulation (ELVR) is bringing greater focus to circularity. "For material selection, this marks a fundamental shift," explains Kurt Maschke, Senior Director Global Business Development Automotive at **Mocom**. "Mechanical properties will no longer be the only deciding factor. A material's ability to be efficiently returned to the material cycle at the end of its service life will become equally important. At Mocom, we believe the greatest opportu-

nity lies in addressing electrification and circularity together. Our portfolio therefore includes innovative PP, PA, TPV and high-performance polymer solutions as well as materials designed with future ELVR requirements in mind."

Recycled content

One example is the Altech PA FR product family which combine strong mechanical performance with halogen-free and PFAS-free flame retardant technology. Altech PA ECO FR solutions contain up to 35% recycled content while reducing CO₂ emissions by as much as 65% compared with equivalent virgin-material solutions demonstrating that sustainability and technical performance do not have to be at odds. "We evaluate the integration of PCR in every new product development," said Maschke. "Based on current experience, we see PCR shares of 20 to 30% as a realistic and technically sound future standard for many applications. Close cooperation between OEMs, system suppliers, raw material producers, and compounders, will be essential to meet both the technical demands of electrification and the requirements of the ELVR."

Eurotec continues to develop versatile solutions by combining sustainability with cost optimisation. Its Tecomid ECO product series not only meets the high-performance expectations of the industry, but also contributes to more economical and environmentally friendly production processes. For example, Tecomid ECO NB43 GR30 BK012 HS M65I contains 65% post-industrial recycled PA6 and 30% glass fibre reinforcement, offering high strength and impact resistance. With a lower carbon footprint, the material minimises environmental impact while providing a cost advantage, making it suitable for a wide range of automotive applications including sunroof frames, door handles, and electrical parts. Elsewhere, Tecomid ECO NB43 GR15 BK321 HS M50I contains 50% post-industrial recycled PA6 and 15% glass fibre reinforcement whilst offering excellent surface quality.

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IMAGE: XFLOAT

Seeking stability in adverse environments

New light stabilisers and antioxidant additives aim to meet tougher performance and regulatory requirements. And suppliers have formed a global alliance. Jennifer Markarian reports

One way to reduce plastic waste is to choose durable applications and create plastics that last longer in their intended use. Antioxidants (AOs) and ultraviolet light stabilisers (LS) play an important role in preventing polymer degradation and extending product life. Stabilisers enable plastics to function in growing markets, such as agricultural films and photovoltaic panels. Outdoor applications like these must withstand conditions such as increasingly severe weather and temperatures. Additive suppliers are working on new technologies to better prevent degradation and comply with chemicals regulations.

A new global industry group, the Global Antioxidants and Light Stabilisers Alliance (**GALA**), was launched in early July to strengthen industry advocacy and support the safe and sustainable use of these additives, as chemical regulatory frameworks continue to evolve across regions. The group, which represents AO and LS producers and

stakeholders, covers a wider geographic range than the former European-based ELISANA initiative, which is no longer active.

"With international membership and a strong leadership team, we are well positioned to engage effectively with regulators and relevant supply chains to promote the safe and sustainable use of these essential substances worldwide," said Thomas Schmutz, Leader Technology, Regulatory Affairs & Sustainability at **Songwon** and chair of the new group. Other members of the steering committee include Vice-Chair Mira Cancara (BASF) and Secretary Dieter Drohmann (Consortia Management, a subsidiary of the Chemservic Group).

"GALA members unite the collective expertise on AOs and LS to address the product challenges our industry faces. Through dedicated task forces focused on specific technical topics, we will generate the scientific data that will drive better decisions across our industry," said Henry Luo,

Main image:
Xfloat enables solar systems to withstand harsh environmental conditions for over 30 years by incorporating BASF's advanced light stabilizer solution into its HDPE float design

IMAGE: BASF



Above: BASF offers its NOR HALS products in attrition-resistant form which significantly reduces dust formation during handling and processing

Chair of the Technical Committee and Director, Application Technology at Rianlon.

The group plans to establish three task forces covering key additive families used in plastics, coatings, adhesives, rubber and other polymer applications. The task forces will provide a coordinated platform to organise data, engage stakeholders, and support science-based regulatory decisions, the group said.

At the end of July, GALA members provided comments to the European Chemicals Agency (ECHA) as part of the public consultation on the draft recommendation to include UV-326 and UV-329 as priority substances in Annex XIV of the REACH Regulation. The hydroxyphenyl benzotriazole UV additives were included in a list of candidates for possible restriction in 2024 based on their assessment as very persistent and very bioaccumulative.

GALA stated that "the intrinsic properties of certain UV stabilisers may lead to their identification

as substances of concern under regulatory criteria. However, exactly these properties are inherent to, and necessary for, their effectiveness and performance as UV stabilisers. As a result, any substitution would likely require substances with similar intrinsic properties. A ban on this group of substances could leave industry without viable alternatives in Europe, potentially leading to the relocation of manufacturing activities outside the EU."

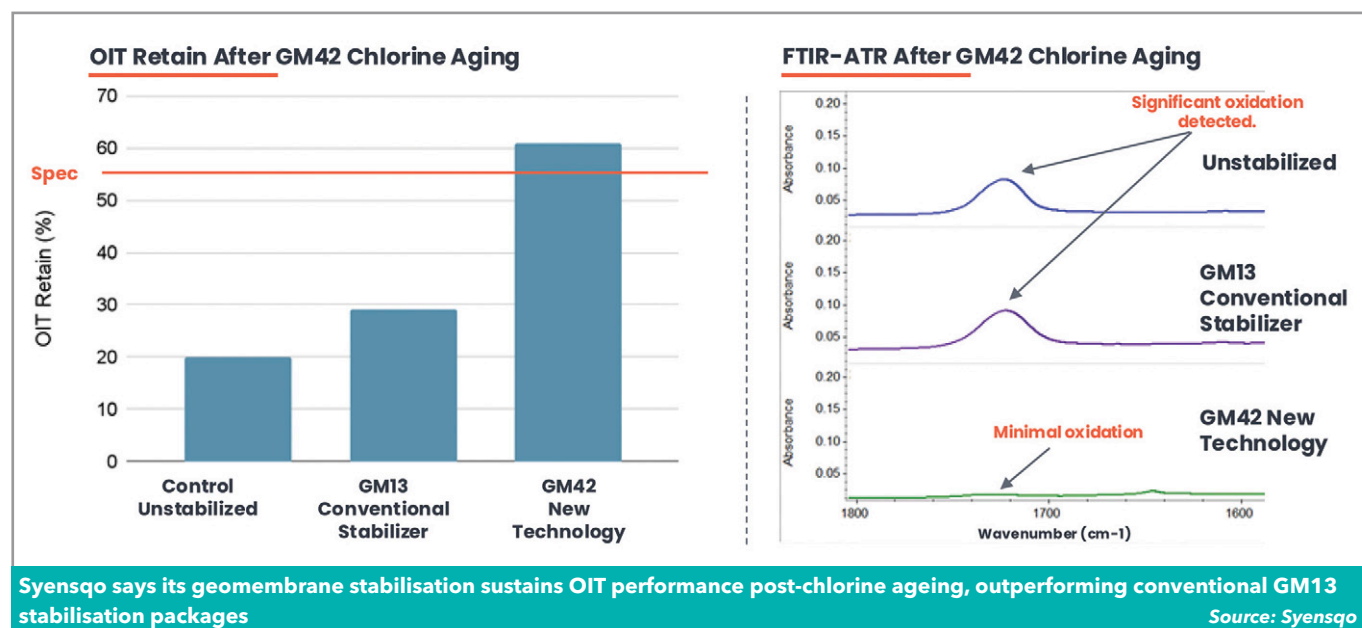
The group suggested that "other risk management measures are available to effectively control emissions and exposure to these substances."

Growing outdoor use

BASF announced in April that it was expanding capacity for standard hindered amine light stabilisers (HALS) and NOR HALS to meet growing global demand. BASF now also offers its NOR HALS in an attrition-resistant product form that reduces dust during handling and processing of the additive and simplifies masterbatch production.

Agricultural films – including greenhouse, mulch, tunnel, silage, and bale wrap – are one area where NOR HALS technology helps resist high UV exposure, elevated temperatures, sulphur-based products that create acidic microclimates, and increasingly harsh pesticides, the company said.

"This robust stabilisation enables enhanced structural and optical integrity for reliable multi-season performance, reducing replacement frequency, labour effort, and waste," BASF said. Maintaining optical clarity and structural integrity is particularly important in greenhouse films, where it is needed to ensure consistent light transmission to help maximise yields. Longer-lasting film means less frequent replacement, fewer breakages and



easier recollection at end of use.

Another growing area for UV stabilisers is in solar systems. BASF pointed to a new collaboration with Xfloat, which makes floating photovoltaic systems with a sun-tracking platform. The HDPE in the float design uses BASF's Tinuvin 2730 ED, a proprietary light stabilisation solution that enables the floats to withstand harsh environmental conditions for more than 30 years. The stabiliser complies with stringent drinking water regulations, which was important because the Xfloat systems are NSF-certified as suitable for deployment in sensitive environments such as drinking water reservoirs.

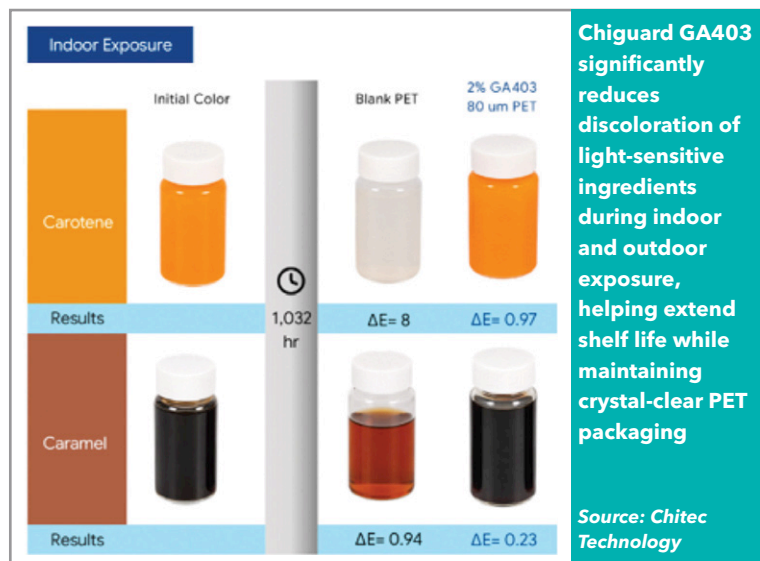
In agricultural films, **Syensqo's** Cyasorb Cyastab A8220 is the most recent addition to the company's UV stabiliser portfolio for greenhouse films that are exposed to intense UV and aggressive sulphur- and chlorine-based pesticides. The stabiliser helps maintain tensile properties and increases pesticide resistance and light transmission, which provides longer service life and more consistent growing conditions.

Another new stabiliser from Syensqo aims to meet new, more stringent tests for HDPE geomembrane liners. "Durability requirements are increasing, and asset owners are increasingly focused on long-term performance in aggressive environments," said Jeff Xu, Polymer Additives New Business Development Manager Americas at Syensqo.

He explained that the Geosynthetic Institute GRI GM42 standard, which was revised in November 2025, raises expectations compared with GM13 by introducing chlorine aging, hot-water leaching, and increasing stress crack resistance (tested by ASTM D5397) to 1,500 hours.

"These updates reflect real-world exposure conditions and the need for robust resistance to oxidative degradation and surface crack formation over extended service life," said Xu. "Syensqo's latest geomembrane stabilisation development is designed to better preserve oxidative stability under these harsher conditions, supporting longer liner lifetimes, improved reliability, and fewer repairs or replacements."

In automotive exteriors and interiors, translucent PP is being increasingly chosen for design components, said Raymond Wang, Polymer Additives New Business Development Manager Asia at Syensqo. Exterior applications include bumpers and tail-lights, and interior parts include light guide bars, ambient light effects in door trim, and halo light effects in console trim. A challenge is that translucent PP can be vulnerable to both UV exposure and elevated temperatures, which may lead to yellowing, haze increase, gloss loss, blooming, and



property deterioration over time, said Wang.

New from Syensqo are two UV stabilisers designed to address these needs. Cyasorb Cyxtra V9800 is tailored for exterior translucent PP applications exposed to weathering that require enhanced UV stabilisation. Cyasorb Cyxtra V9100 is designed for interior translucent PP parts, where enhanced thermal stabilisation is critical because components may be exposed to long-term heat load or higher processing or usage temperatures.

"Both solutions are engineered to support long-term visual and functional quality, helping reduce yellowing, maintain light transmittance with low haze, preserve gloss, and minimise blooming - so customers can achieve attractive translucent effects without sacrificing durability," Wang said.

Enhanced protection

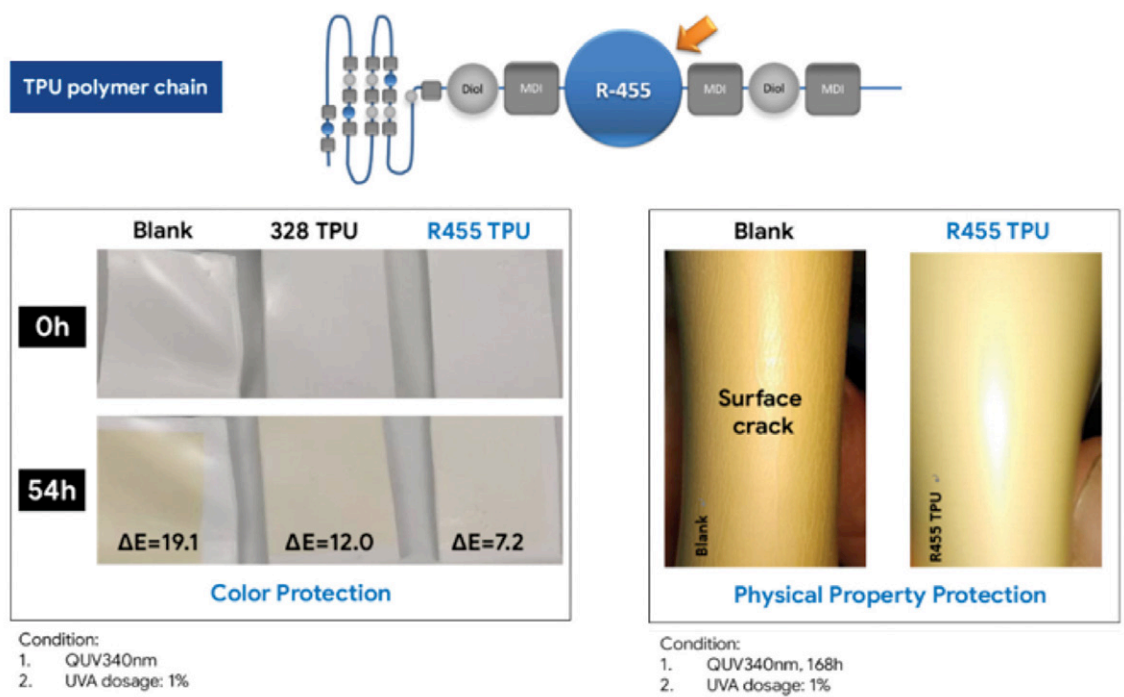
"Consumer expectations and sustainability initiatives are driving a rapid shift toward transparent plastic packaging and optical materials," said James Gacek, Executive Vice President & Managing Director for the Americas at **Chitec Technology**. For example, in the beverage industry, there is a move away from amber and tinted containers towards clear PET, which is easier to recycle.

"Removing bottle colour also removes an important source of UV protection," said Gacek. Chiguard GA403 was developed by Chitec to meet these evolving demands. "Derived from renewable bio-based vanillin, GA403 is a next-generation UV filtering technology that provides exceptional UV-A absorption while maintaining outstanding visible light transmission," Gacek said. The product has non-detectable migration in food simulants including 10% ethanol, 3% acetic acid, and vegetable oil, and is suitable for food-contact PET packaging.

GA403 filters UV wavelengths to approximately

Chiguard R455 is chemically incorporated into the TPU polymer chain, providing permanent UV protection that reduces colour change, protects UV-sensitive pigments, and helps preserve surface integrity during accelerated weathering

Source: Chitec Technology



405 nm to help extend the shelf life of light-sensitive beverages, nutraceuticals, pharmaceuticals, and food products. Gacek added that this benefit is particularly valuable for smaller PET bottles, which often have thinner walls and greater UV exposure per unit of product. The additive can also be used in PET films for packaging, window films, industrial laminates, and electronic display applications. Its thermal stability supports processing temperatures exceeding 300° C.

For polycarbonate optical lenses and optical sheet, GA403 offers photo-permanence, maintaining long-term UV filtering performance under prolonged exposure, said Gacek. UV coverage of this additive extends to approximately 412 nm at the edge of the visible spectrum, providing additional protection into the violet/blue-light region.

TPU protection

Another growing area needing UV stabilisers is in thermoplastic polyurethanes (TPU) in outdoor applications, including paint protection films, automotive wrap films, textile fibres, transparent films, footwear, and consumer products, said Gacek.

Chitec's patented solution for TPU is Chiguard R455, a copolymerisable benzotriazole UV absorber containing reactive diol functionality that becomes chemically incorporated into the polymer backbone during TPU synthesis. As a result, it provides permanent UV protection throughout the service life of the material and minimises additive migration.

The copolymerisable UV absorber significantly

improves weatherability in aromatic TPUs, compared to conventional UV absorbers. "Accelerated weathering studies demonstrate that R455 substantially reduces yellowing, enabling aromatic TPU formulations to achieve weatherability approaching that of aliphatic TPU while retaining the mechanical properties, processing advantages, and cost-effectiveness that make aromatic systems attractive for many applications," reported Gacek.

He added that the permanent nature of a copolymerised stabiliser also benefits aliphatic TPU, where it protects both the TPU matrix and UV-sensitive pigments to provide long-term appearance, transparency, and colour retention. "This enables formulators to use pigments with poor colourfastness - including fluorescent and neon colours that would otherwise fade rapidly under outdoor exposure - while maintaining colour vibrancy and extending product service life," explained Gacek.

A new multifunctional processing stabiliser from Chitec, Revonox 501, is based on a redesigned benzofuranone molecular architecture that has higher thermal stability than earlier benzofuranone technologies, said Gacek. "During extrusion, Revonox 501 rapidly scavenges carbon-centered radicals before significant degradation occurs, helping preserve polymer molecular weight and maintain consistent processing performance," he said.

The stabilizer can be used to replace a small portion of traditional primary and secondary antioxidants. In addition, because less oxidative

degradation occurs during processing, light stabilisers are more effective and long-term weatherability in the finished part is improved, Gacek said.

Italian chemical company **Sabo** announced in June that Omya would become the authorised distributor of Sabo's polymer additives in Brazil, Argentina and Colombia, in addition to the existing collaboration in Mexico. The portfolio includes UV protection, anti-fogging, and anti-static additives.

"Latin America is a strategic region for Sabo, and we see significant potential for future growth across the market," said Alberto Vischetti, Chief Operating Officer of Sabo International Americas, in the press release.

Cable compounds

Stabilisation is even more important today due to a growing emphasis on lower defects in various applications, said Shawn Cook, Sales Manager for Plastic Additives at **Dover Chemical**, in a presentation at AMI's Polymers in Cables event in Cleveland, US, in June. Thermal stability and long-term durability are increasingly important in cable systems, he added.

Doverphos LGP-12, a polymeric phosphite stabiliser for LLDPE, HDPE, PP and other thermoplastics, was originally targeted for film applications and is also available for use in wire and cable. It protects against oxidative and thermal degradation during processing and use and helps maintain melt flow stability. It reduces gels and provides processing aid-like benefits, without PFAS, through improved melt flow behaviour and cleaner extrusion performance, said Cook. LGP-12 is available in

masterbatch formulations through Benvic.

OKA-Tec has introduced novel heat stabilisers for crosslinked-PE halogen-free flame retardant (XL-HFFR) cable compounds. In a high-temperature thermal ageing study of XL-HFFR compounds used in photovoltaic cable jacketing, Okabest PAT 615 demonstrated higher elongation at break retention at higher temperatures (above 165° C) compared to a standard stabilisation package, reported Peter Jan Peters, Managing Director for OKA-Tec, in a presentation at AMI's Polymers in Cables event.

Another new product, Okabest SQ, provides anti-scorching and processing stability for XL-HFFR cable compounds, he said in the presentation. The additive can be used at low dosage because it is highly efficient. It protects against gel formation during silane grafting and provides a broader processing window.

Brüggemann has expanded beyond additives for polyamides and into heat stabilisers for cross-linked PE compounds. Bruggolen TP-H2431 is a long-term heat stabiliser for applications in T3 and T4 cables, supplied in pellet form. It is suitable for E-beam and Sioplas applications, the company said.

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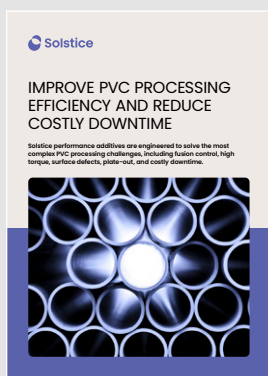
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Compounding World August 2026

Keeping compounds on-spec can now be done using inline technology during processing, as detailed in the August edition of Compounding World. Other articles cover PVC plasticisers and high-temperature compounds.

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Compounding World July 2026

Polymer compounds are increasingly required to show antimicrobial properties, as discussed in the main feature of Compounding World's July issue. Plus the latest on colour management, materials handling and odour reduction.

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Injection World July/August 2026

The ability of thermoplastics to break new ground in medical moulding is explored in the main feature of this edition of Injection World. Other articles cover recent developments in 3D printing and bio-based materials.

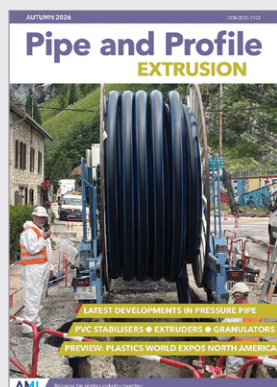
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Plastics Recycling World July/August 2026

In its cover feature, Plastics Recycling World's July-August edition looks at technology for the critical role of washing in a recycling line. The other features in this edition explore polyurethane and chemical recycling.

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Pipe and Profile Autumn 2026

The cover feature of Pipe and Profile Extrusion's Autumn edition looks at pressure pipe companies winning praise for their work. The issue also contains features on the latest in extruder and recycling technologies, plus PVC stabilisers.

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Film and Sheet July/August 2026

Film & Sheet Extrusion's July-August edition has a cover feature on the latest developments in pouches while other articles cover the varied source materials for new bio-based plastics, plus new downstream processing equipment.

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GLOBAL EXHIBITION GUIDE

2026	15-19 September	TaipeiPlas, Taipei, Taiwan	www.taipeiplas.com.tw
	16-17 September	Kunststoffenbeurs, 'S-Hertogenbosch, Netherlands	https://kunststoffenbeurs.nl
	23-24 September	Compounding & Recycling Expo, Frankfurt, Germany	https://eu.compoundingworldexpo.com
	12-16 October	Fakuma, Friedrichshafen, Germany	www.fakuma-messe.de
	3-5 November	PU China, Shanghai, China	www.puchina.eu
	3-6 November	Ecomondo, Rimini, Italy	www.ecomondo.com
	10-13 November	Plastimagen, Mexico	www.plastimagen.com
	11-12 November	Compounding World Expo, Cleveland, US	https://na.compoundingworldexpo.com
2027	1-5 December	IPF Japan, Chiba	www.ipfjapan.jp
	2-5 December	Plasteurasia, Istanbul, Turkey	https://plasteurasia.com
	14-16 December	RACE, Mumbai, India	www.raceexpos.com
	2-4 March	JEC World, Paris, France	www.jec-world.events
	7-8 April	Textiles Recycling Expo, Charlotte, NC, USA	www.textilesrecyclingexpo.com/usa
	13-16 April	Chinaplas, Shenzhen, China	www.chinaplasonline.com
	20-22 April	UTech Europe, Maastricht, Netherlands	www.utecheurope.eu
	27-29 April	Plast-Alger, Algiers, Algeria	www.plastalger.com
	3-7 May	NPE 2027	www.npe.org
	11-12 May	Moulding Expo, Stuttgart, Germany	www.moulding-expo.de

AMI CONFERENCES

15-17 September 2026	Single-Serve Capsules, Malaga, Spain
3-4 November 2026	Fire Resistance in Plastics, Düsseldorf, Germany
24-25 November 2026	Flexible Packaging Innovation & Recycling, Vienna, Austria
1-2 December 2026	Polymer Engineering for Energy, London, UK
8-9 December 2026	Stretch and Shrink Film, Savannah, Georgia, USA
8-10 December 2026	Wind Turbine Blades, Düsseldorf, Germany

For information on all these events and other conferences on film, sheet, pipe and packaging applications, see www.amiplastics.com

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