SNAPSHOT OF IDEAS

The coatings industry meets at the ECS 2025



The long-awaited European Coatings Show 2025 opened its doors yesterday.

his year, a record-breaking number of over 1,200 exhibitors from all over the world came to Nuremberg. As you entered the halls of the European Coatings Show, the excitement was unmistakable. Everywhere, people made the most of the largest event for the global coatings industry, connecting, networking and exploring the latest innovations. "The European Coatings Show 2025 is

in full swing!" said Matthias Janz, Director Trade Shows Coatings at Vincentz Network. "The halls are alive with innovation, expert insights, and industry-leading solutions – a dynamic start to an event shaping the future of coatings technology."

Alexander Mattausch, Executive Director Exhibitions at NürnbergMesse agreed: "ECS 2025 has started very strong, with visitors engaging in conversations at the booths from the first minute of the show. And this year with a new record in exhibitor numbers, there is more than

ever to discover!" A great focus lies once again on sustainabilty, reflecting its key importance for the paints and coatings industry. The Product Presentations, which highlighted new developments, and the Start-up Area, a shared stand for young and innovative companies, also attracted plenty of attention.

SECOND CONFERENCE DAY

After the ECS Conference kicked off on Monday, the second day was also well-attended. A full day of conference sessions was

offered, which drew many participants.

A highlight was also the presentation of the ECS Award winning paper. In the session on digitalisation, Gaouyan Zhang of the Niederrhein University of Applied Sciences presented on "Predicting colour changes in coatings drying process: An innovative approach using machine learning technology".

Today, there are six more conference sessions. This marks the last day of the conference, while the ECS will continue to run one more day until tomorrow.



CONTENTS

www.niemann.de

SHOW

ECS in pictures
World Paint and Coatings Week
Exhibitors' voices

CONFERENCE

Conference sessions – overview Conference voices

INTERVIEWS

"The coatings industry needs to become more connected" "Maximising safety and performance" Replacing PFAS – What's next for coatings?

Silanil® range of silanes
Siloen® range of coating additives, resins and water repellents

Visit us at Hall 3C, Stand 3C-425

19



"FORMULATORS ARE NOT YET USING MANY **BIO-BASED PRODUCTS**"

Greater transparency for wider market acceptance



Markus Dimmers Alberdingk Boley Stand 1-548

Markus Dimmers, Senior Vice President Technical Marketing at Alberdingk Boley, looks at challenges in the polyurethane sector and suggests a way of reducing product carbon footprint.

What factors are driving raw material development for polyurethane coatings? We are developing more and more bio-based polyurethane dispersions with the focus on them performing as well as the petrochemical alternative. In many cases, however, the performance of such bio-based PUDs can even exceed those of existing products. For example, our new flexible, bio-based PUD is more elastic and wash-resistant than conventional ones.

To what extent can formulators increase the sustainability of these coatings and reduce their carbon footprint? Formulators are not yet using many bio-based products. If significant market players would set more specific and ambitious targets, this could promote the use

of such new products, helping to reduce the carbon footprint of coating formulations.

What do you consider to be the main challenges in this field? One of the challenges for wider acceptance in the market is certainly the absence of a clear regulatory/sustainability product framework such as a 'Green Angel' or a special Ecolabel. This would allow more comparative offers for consumers and lead to better visibility and transparency.



WHAT'S NEW IN NUREMBERG?

Plenty of novelties to be launched at the ECS

ABRASION-RESISTANT HYBRID CLEAR COATS FOR **POLYMERIC SUBSTRATES**

Clear coatings for plastics are designed to improve abrasion and wear resistance on polymeric substrates while maintaining their aesthetic appearance and functionality. Inorganic coatings provide superior hardness and abrasion resistance compared to organic ones, offering enhanced durability, chemical and thermal

stability as well as resistance to UV degradation. However, they can present less adhesion to polymeric substrates. Tekniker has developed a transparent and highly abrasion-resistant coating based on a combination of inorganic network with an organic phase ensuring strong adhesion to the plastic and a long service life even un-

der extreme conditions. These formulations are widely used in automotive applications, electronic devices, optical lenses, and furniture, where durability and transparency are essential.

TEKNIKER Stand 3A-534 www.tekniker.es/en

AT A GLANCE: WHAT, WHEN, WHERE

Today's show and conference highlights

European Coalings Show

Opening hours 09:00 - 18:00 h

Product presentations

Hall 3, Stand 3-742, 9:50 -17:10 h 9:50 -17:10 h Hall 5, Stand 5-243,



European Coatings Show Conference

Conference Centre NCC Ost

Morning sessions 9:00-12;30 h

Bio-based coatings II · Testing & measurement · Architectural coatings II · Industrial coatings II · Adhesives & sealants · Grinding & dispersing

ATTAPULGITE THICKENER TO ENHANCE PERFORMANCE

Active Minerals International, with the RBH Group and Faber & VanderEnde, presents Min-U-Gel 500+ high performance thixotropic thickener. This newly engineered attapulgite product has a controlled fine particle size and is specially processed to enhance performance. The 500+ grade features easy dispersion, high viscosity, and excellent syneresis control, and is effective in both water and solvent-based coating systems. The company will also present other products within the range and offers support with other key coatings raw materials including talc, barium sulphate, kaolin, polymer emulsions, UV curables and flame retardants.

RBH GROUP

Stand 3-339 UK - Manchester www.rbhltd.com

REFLECTIVE PIGMENTS FOR LOWER ENERGY USE

The Shepherd Color Company will share its complex inorganic colour pigments (CICPs) at the European Coatings Show 2025. These pigments provide heat stability, weatherability, opacity, and regulatory requirements as needed for high-performance coatings for the coil-extrusion, high-heat,

automotive, and powder coatings markets. Arctic infrared reflective pigments help keep building exteriors cooler for lower energy usage, while the NTP Yellow and RTZ Orange pigments push the edge of the durable colour envelope in the critical yellow-orange colour space. The cobalt-based

Blue 20G599 offers excellent chromaticity in the blue colour space.

THE SHEPHERD **COLOR COMPANY**

Stand 1-550 US - Cincinnati www.shepherdcolor.com

SUSTAINABLE HYDROPHOBIC AGENTS WITH **HIGH PERFORMANCE**

Baerlocher produces hydrophobic agents for different kinds of application. They are used to improve the durability of building materials which are exposed to the weather. In the building industry, hydrophobic agents are mainly used in cementitious systems. These include, for example, dry plasters/mortars, pasty plasters/ paints, or paving stones. All hydrophobic agents are suitable DE - Unterschleissheim for building materials based on www.baerlocher.com

lime, cement, gypsum, or wood

BAERLOCHER

Stand 1-612

SUPER-DURABLE TITANIUM DIOXIDE PIGMENT

LB Group has made improvements to a titanium dioxide (TiO₂) pigment to produce Billions BLR-896+, a super-durable TiO₂ pigment designed for high-quality industrial coatings. The product is manufactured using the chloride process and has excellent optical properties. Its dense silica and alumina coating provides superior weather resistance for longlasting protection. The new pigment offers improved weatherability, opacity, tint strength, and gloss compared with the previous version. It delivers enhanced bright, blue-toned colour for better visual appearance and formulation efficiency

and is a highly competitive TiO₂ pigment option for manufacturers of high-quality industrial

LB GROUP

Stand 5-465 UK – Stockton-On-Tees www.lomonbillions.alobal

ON DISPLAY

Plenty of novelties to be launched at the ECS

DURABLE POLYURETHANE FOR HIGH GLOSS, HIGH WEAR COATINGS

PUD 303 is a water-borne polyurethane dispersion for wood, glass, metal, and ceramics. It provides:

- > Durability and high gloss: Achieve a premium, highgloss finish with robust wear resistance.
- > Chemical resistance: Endures exposure to household chemicals for lasting protection.
- > Water resistance: Maintains integrity even after 16 hours of water exposure.
- > Stain resistance: Shields surfaces from coffee, ethanol, and paraffin stains.
- Safer composition:
 Free from NMP and NEP
- > Versatility: Compatible with acrylic-based filler primers for diverse coat-
- > Easy maintenance: Provides a simple-to-clean surface ideal for daily use.
- Scratch and impact resistance: Creates a durable surface ready for everyday challenges.

This dispersion offers exceptional adhesion, high gloss, and long-lasting performance.

DENGE KIMYA VE TEKSTIL SANAYI TICARET

Stand 5-449 TR – Tekirdag www.dengekimya.com

TAILORED PACKAGING SOLUTIONS

Schütz presents packaging solutions in the form of IBCs, plastic and steel drums and jerrycans that are specially tailored to the requirements of the paints and coatings industry.

- > Ecobulk SX-D-OV has a double-wall construction that guarantees the highest safety, prevents leakage and is suitable for highly flammable liquids.
- > Ecobulk HX-EX CLEANCERT with its new impeller makes it possible to empty the container of virtually all residues of highly viscous product with its safe stirring processes all carried out without the need to open the container.
- The SC1 jerrycan with FSSC certification has the latest 3-layer technology to provide the high-



est level of product safety.

> The Combi steel drum com-

bines the stability of steel with the chemical resistance of plastic. Stand 4-356

Stand 4-356 DE – Selters www.schuetz.net

WATER-BORNE BINDERS FOR SUPERIOR PROTECTION

Acro-Pol offers water-borne binders for superior protection and reduced environmental impact and has a new highlight for 2025: Unipol A 7365 is a pure acrylic emulsion, developed for wood coatings of unparalleled in-

can clarity, glossiness and chemical resistance for easy-to-clean, stain-resistant surfaces. The company's full product portfolio of binders deliver exceptional durability and performance, using environmentally conscious

processes to meet the highest sustainability standards.

ACRO-POL EMULSIONS

Stand 1–358 GR – Kifisia www.acro–pol.com

SMART PAINT TINTING FOR SELF-SERVICE OPERATION

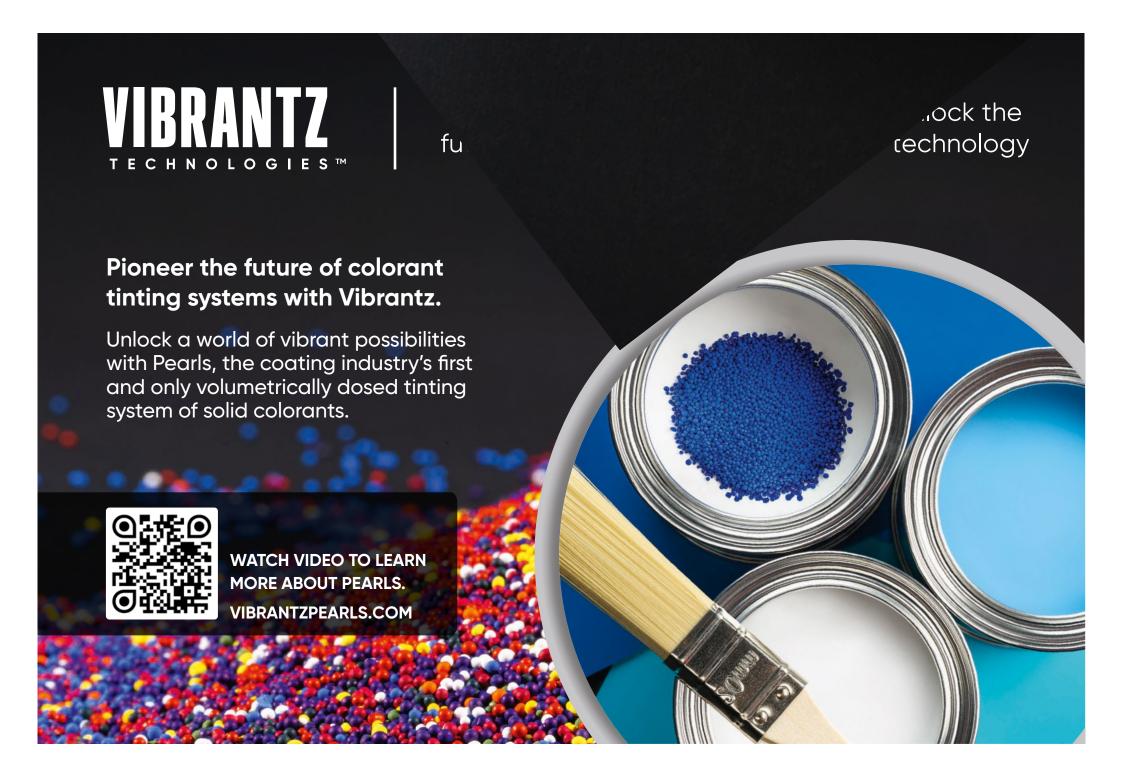
RoboTint will present its enhanced cloud-based tinting platform at the European Coatings Show 2025. The new version helps paint retailers boost online sales by making colour selection simple and accurate

for shoppers. The platform turns complex tinting into a smooth digital experience and means that paint manufacturers and retailers can offer true self-service tinting. This meets the growing demand for online

paint shopping while increasing the market reach.

ROBOTINT.NET

Stand 2-523 IL – Tel Aviv www.robotint.net



IN FULL SWING

Images from the European Coatings Show and Conference















While the conference was already in full swing, the show was opened yesterday, and immediately visitors kept pouring in, looking for novel developments and exchange of ideas.

WHY WE'RE HERE - EXHIBITORS AT THE SHOW



"As a leading global supplier of additives, we have a lot of expertise in the industry. Obviously, that's why we're at the ECS. We have a complete portfolio for the coatings industry, and we've always focused on water-based. That's where the industry started to change decades ago, with the Nordic region taking up the challenge. What you see here is a true pool of sustainable, bio-based materials. The sustainability angle becomes more important. Everyone at the show is talking about it.

That's the trend."



"We use the ECS to showcase what we can do. IMCD startet here in 2001 with a 25 square metre booth. Nobody knew us then. Every two years we have grown further. And all of a sudden we branded our company, and this is the place to do it. 24 years later we have established ourselves in the market. This show was one of the major drivers to do this. Trends of the industry? Everyone will say the same: sustainability and digitalisation. But there's more than that, including the



"There have been dramatic changes for Sun Chemical over the last three years. I have been with the Italian company Sapici before, which was acquired by Sun Chemical, bringing all the knowledge of isocyanates to the company. Thanks to that and the merger with DPI we now have a huge portfolio, including binders and isocyanates. That's the reason why we're here. The ECS is the best location to promote ourselves. If you're not here, it's like you don't exist."

Marco Meloni, Sun Chemical

EXPERT INFORMATION AT ITS BEST

Latest R&D findings attract international coatings community to Nuremberg







The first two days of the **European Coatings Show** Conference were very well attended and full of the latest coatings knowledge.

The topics of the sessions were already very diverse on these first two days: from functional coatings, waterbased coatings and polyurethane coatings to printing inks, construction chemicals, biobased coatings and PFAS alternatives.

Unlike previous years, the ECS conference started on Monday afternoon with six parallel afternoon sessions. Participants showed great interest and all sessions were well attended.

HIGHLY INTERESTING PROGRAMME

Yesterday, the conference continued with another 12 highly interesting sessions. The first talk of the digitalisation session was given by this year's ECS Conference Award winner, Gaoyuan Zhang from Niederrhein University of Applied Sciences. The topic of his talk was "Predicting colour changes in coating drying process: An innovative approach using machine learning techniques".As

on Monday, the individual sessions were very popular. The conference continues today, with six more packed parallel sessions awaiting you. Topics include bio-based coatings, testing and measuring and adhesives and sealants.

HIGHLIGHT: ECS STUDENTS AWARD

A special highlight was the ECS Students Award during the Poster Session on Monday, which was very well received and attracted a lot of interest.

For the first time in the history of the ECS Conference, it took place from 17:30 to 18:30 h, immediately after the afternoon sessions. Nearly 20 posters were submitted, and 10 speakers were invited to give a 2-minute presentation. The best poster was chosen by an online vote of the attendees. Luis Heller from the Technical University of Denmark received the award for the best poster. He presented results of his doctoral thesis on the subject of self-stratifying coatings. which could make an important

The sessions of the first two ECS Conference days were very well attended. Luis Heller (middle, right in

the picture) was given the ECS Students Award during the Poster Session on Monday.

contribution to the sustainability of coatings.

UNWAVERING FOCUS ON SUSTAINABILITY

Sustainability remains a very important topic. Not surprisingly, it was the focus of many sessions. The two keynote speakers, Prof. Katja Loos and Dr Frank Brouwer, in Monday's plenary session also emphasised the importance of this topic. Another important topic was digitalisation.

AN IDEAL SETTING



"I altended the award-winning talk about Al-aided colour prediction and it was very interesting. I am keen to see how this technology can be developed further. Now, I am looking forward to joining the session on bio-based materials."

Grégory Brochard, Allios



"The new connections I make here are invaluable. In a technical conference, you can learn about the specific needs of the end-users in a comprehensive way. The coffee breaks provide ideal networking opportunities for me."

Victoria Callejo, Dura Europe



"The conference is an ideal setting to find out more about topics which need a deeper explanation. As a technical marketing specialist, this is where I can liaise with prospective customers on the required level."

Dr Volodymyr Kuznetsov, Daikin Chemical Europe



"It was thought-provoking to hear results about some bio-based alternatives having a greater impact on global warming than conventional materials. Not every alternative is better in comparison and we have to be mindful of that."

Julian Rixrath, Evonik

6

"THE COATINGS INDUSTRY NEEDS TO BECOME MORE CONNECTED"

The status quo in digitalisation



Bojan Buinac Bens Consulting Stand 1–342

Bojan Buinac, Director and CEO of Bens Consulting, gives insight into current situation regarding digitalisation and AI in the paints and coatings industry.

How far do you think the coatings industry has come in terms of digitalisation? It varies across different areas. In highend fields like high-throughput screening, progress has been notable. However, other crucial areas, particularly those that impact every organisation in the industry and downstream, have been largely overlooked. Interestingly, these neglected areas often have the potential for immediate, significant improvements without requiring substantial up-front investments. Instead of addressing these challenges holistically, many companies chase the "next big thing," further fragmenting their systems. This creates confusion, inefficiencies, and increased costs. As a result, budgets are stretched thin, and organisations end up using a patchwork of disconnected digital tools—moving further away from comprehensive solutions rather than closer.



Where do you see room for improvement? The coatings industry needs to become more connected. Whether it's R&D, regulatory compliance, health and safety, environmental initiatives, or even sales and marketing—these functions all rely on the same foundation: accurate, actionable product data. This isn't just relevant for the coat-

ings industry but extends to downstream industries as well. It starts with raw material data, which flows into R&D processes, and ends with delivering clear, compliant information to customers. The key is ensuring this data remains relevant, accurate, and accessible throughout the value chain. As I often say, a supplier's output data—product information—is the vital input data for the next company. This foundation is an absolute must before we can even start talking

about Al. No Al can solve a lack of data—it needs high-quality data to learn from and deliver meaningful results. After all, the chemical industry isn't about generating creative content—it's about precision, accuracy, and compliance.

Which solutions can already improve day-to-day work in the laboratory and make production processes more efficient? Today, people want simple, intuitive solutions that are

easy to learn and use. They also need tools that allow them to accomplish more in less time. In my experience, every R&D expert in the coatings industry wants access to a raw materials database that can be directly used—without the need for manual transcription—to draft formulations. Once development is complete, they should be able to generate a Safety Data Sheet, create a compliant label, and prepare a sample for shipping to the customer with just a few clicks. After customer approval, the process should be just as seamless: creating a Technical Data Sheet, publishing the product on the website, and updating ERP and other data systems simultaneously. This isn't some distant future—it's already possible. With our digital platforms, Chemius and Allchemist, we've demonstrated that connecting value chains can reduce manual work by up to 70% and shorten the entire coatings development throughput time by 48 %. These solutions save not only time and effort but also significantly reduce costs.

International Exhibition & Conference Paintindia 2026

Serious business for your industry

India's proud global event for the paints, coatings. inks, construction chemicals and adhesives-sealants industries



WHAT'S NEW IN NUREMBERG?

Plenty of novelties to be launched at the ECS

AUTOMATIC CLOSING SYSTEM FOR INDUSTRIAL PACKAGING

Massilly (General Line Division) is a specialist in metal packaging. Companies in the chemical, paint, lacquer, coatings and lubricants industries throughout Europe rely on our expertise for the packaging of various commodities.

Industrial packaging adapted to any market and any usage: > round, square, drums, pails.

- round, square, drums, pails, hobbocks
- > filling volumes from 125 ml to 40 l
- > four plants in Portugal, France, Switzerland and Italy, with backup capabilities
- > UN-approved packaging range for dangerous goods

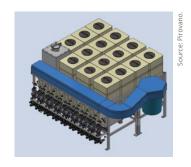
TopLock is an automatic closing system for ring and latch lid pails, the most common closing system in approved packaging for the transport of dangerous goods in industrial products.

STEBLER PACKAGING / MASSILLY

Stand 4–103 CH – Nunningen www.steblerpackaging.ch www.massilly.com

PRECISION DOSING FOR CONSISTENT QUALITY

P-24 is the latest dosing system to dispense raw material additives at high accuracy. It is particularly designed for components that must be mixed in precise quantities to maintain the desired product quality and performance for the decorative and industrial paint manufacturing, and is adaptable to a variety of production environments. The versatile, extremely compact solution will dispense



all materials (water-borne or solvent) in various container

sizes for in-can and/or in-batch production. The new system will meet the dosing requirements of any small or medium-sized company with specific production needs in the paints, coatings and ink industries.

PIROVANO

Stand 4–140 IT – Cerro Maggiore www.pirovano.com

"MOTIVATED STAFF WITH INTEREST FOR LABORATORY **AUTOMATION IS NEEDED"**

Potential of high-throughput experimentation



Dellef Gysau Perfeco Consulting

Detlef Gysau, owner of Perfeco Consulting, expands on the current status quo in highthroughput experimentation.

For which companies does HTE offer the most potential? High-throughput experimentation (HTE) offers the greatest potential for (large) companies in which rapid innovation, efficient process development and data-supported decision-making

are crucial. A few criteria need to be taken into account when making a selection. The decisive factors are the required sample throughput, permanently recurring routine work and widely applicable workflows for different systems. Surprisingly, the lack of available, qualified personnel is also a criterion for ensuring the R&D capacity and thus the innovative strength of a company in the long term.

What roles may need to be created and what roles can be eliminated by implementing HTE? Above all, a motivated staff with interest and passion for laboratory automation is needed to operate an HTE. Depending on the size of the plant, there are different roles, which are performed by two people for reasons of redundancy in smaller systems. For larger plants, employees are divided into more specialised roles such as HTE specialists/engineers,

data scientist/data analyst, automation scientist, AI/ML scientist and digital integration specialist. Several roles can be performed by the same person.

Where can you learn how to use HTE or is more a case of learning by doing? Learning how to use a HTE involves a combination of formal training, self-guided study, and hands-on experience. Universities and research institutions offer courses or modules on automation, robotics, and advanced experimentation techniques. In addition, specialised HTE training courses are provided by the suppliers of HTE. Industry conferences and workshops are also contributing to gain knowledge and share experiences among the participants. However, the best training is during the commissioning and testing of the purchased automation system before the installation on-site.



WE GO BEYOND TO FORMULATE THE FUTURE

Evonik Coating Additives at the ECS 2025

We push the boundaries of performance and eco-compatibility for coatings and inks. Meet us in Hall 3C, booth 426, and learn how "WE GO BEYOND TO FORMULATE THE FUTURE" - for example with our unique biosurfactants, additives that provide thermal insulation for industrial uses and EV battery housings or co-binders that enhance the circularity of plastic packaging.



Curious about our product innovations?







8 SHOW

A GLOBAL FIRST FOR THE INDUSTRY

From 24 to 28 March 2025, the World Coatings Council will launch the first-ever World Paint and Coatings Week



The first–ever World Paint and Coatings Week 2025 will unite the global industry to showcase innovation and sustainability.

For the first time in history, the global coatings industry will unite for the World Paint and Coatings Week to showcase innovation, sustainability, and industry progress.

he World Paint ans Coatings Week is an initiative led by the World Coatings Council. Taking place from 24 to 28 March 2025, this event coincides with the European Coatings Show and the European Coatings Show Conference in Nuremberg, creating a unique opportunity for industry professionals to engage in discussions on the latest developments, innovations, and regulatory trends. By bringing together industry leaders, researchers, and policymakers, the week-long event will serve as a platform to address key challenges such as climate impact, resource efficiency, and the transition to bio-based materials.

A mix of virtual and in-person events will provide opportunities for knowledge exchange, featuring expert panels, keynote speeches, and technical workshops. Key topics will include advancements in low-VOC and bio-based coatings, the role of artificial intelligence in formulation and production, and emerging regulations shaping the future of the industry.

RAISING AWARENESS

The World Paint and Coatings Week is not only designed for industry professionals but also aims to raise public awareness about the essential role coatings play in everyday life, from infrastructure protection and sustainable building materials to advanced applications in au-

tomotive and aerospace sectors. With this first-of-its-kind global initiative, the World Coatings Council seeks to foster collaboration across the entire coatings value chain, supporting a shared vision for a more sustainable and technologically advanced future. Industry professionals, academia, and policymakers are encouraged to participate and contribute to shaping the future of coatings. Further details and registration information will be made available in the coming months. For more information, please scan the QR code below and have a look at the World Paint and Coatings Week.



WHY WE'RE HERE

Show visitors' motivations and impressions



"I work for a food packaging company and I'm most interested in scouting innovations.

Of course PFAS replacements are amongst the most important topics, but new trends in raw materials and additives in particular are what I'm here for."

Dr Robert Kunzmann, Südpack Verpackungen



"I visited two years ago and this time I'm amazed by the number of people here.

It's a great atmosphere. As I'm in charge of purchasing silicones in multiple regions, it is ideal that I can find all the leading suppliers at this show and look at them in detail."

Susanne Johanna Iten–Röllin, Würth International



"As a distributor, I'm looking for innovative products and new suppliers. We specialise in all types of epoxy resins and additives, so complementary materials to go along with our existing range are my main focus."

Jalin Bhana, Awishkar Associates



"We work in the nail polishing sector, which is part of the beauty industry and a centre piece of the cosmetics market. We came here to see how coating materials can help us here."

Larissa Moura da Silva, Mundial Impala

ALL THE LATEST INNOVATIONS

The Product Presentations were a great success yesterday



Many visitors took the opportunity to find out about new products.

Looking to get a quick overview of the latest products? If so, the Product Presentations are a perfect opportunity.

hese presentations are designed to provide the audience with a brief and clear overview of the key features of new products. Each speaker has just 20 minutes to cover the product's development, performance, and underlying technology.

Yesterday, around 40 Product Presentations took place simultaneously across two different stands, attracting a lot of interest and quickly filling up the available seating. The presentations are free to attend and you can join at any time. Another 40 new products will be showcased today.

The presentations will be held across two different stands in various halls, so there's an opportunity for everyone to attend. The first will be at stand 3-742 in hall 3 and the second at stand 5-243 in hall 5. These sessions will take place both this morning and afternoon, and again tomorrow. A detailed schedule for today can be found on page 22.

WHAT'S NEW IN NUREMBERG?

Plenty of novelties to be launched at the ECS

HIGH-PERFORMANCE FILLERS FOR INDUSTRIAL COATINGS

HPF offers solutions with which new types of industrial coatings can be formulated to be environmentally compatible. In corrosion protection formulations, zinc phosphate has been replaced by surface-treated fillers from the Tremin product series based on wollastonite or Trefil based on phlogopite.

By using a filler combination of a wollastonite-based product and kaolin, the formulation can be made more environmentally friendly and cost-effective.

Rotor blades for offshore wind turbines are exposed to extreme and contrasting weather conditions. By using the surface-treated wollastonite fillers and Silbond quartz powder, the company presents the basis for a coating resistant to rain erosion.

QUARZWERKE/HPF THE MINERAL ENGINEERS

Stand 3C-439 DE – Frechen www.hpfminerals.com

COMPACT EXTRUDER FOR LABORATORY TESTING

Entex 30 is a compact extruder for that allows series of tests for formulation and product development to be performed on a laboratory scale. Thanks to its ease of use and the flexibility that results from its modular design and the enormous tempering spectrum, the extruder can be quickly configured for individual applications.

Complete extrusion lines can be set up with peripheral devices such as dosing units, side feeders, degassing systems, pel-



letisers, etc. Integrated sensors measure energy inputs, pressure and temperature to help analyse the process and monitor the product quality. The various process zones are individually temperature-controlled using liquid-based tempering - from -40 °C to +160 °C in the food and pharmaceutical version and from -40 °C to +300 °C in the plastic, elastomer and chemical version.

ENTEX RUST & MITSCHKE

Stand 4-227 DE – Bochum www.entex.de

SUSTAINABLE RESINS FOR ROAD MARKING APPLICATIONS

Road markings based on 2K cold plastic resins are known for having the highest endurance amongst road marking materials. As solvent- and VOC-free products, they provide one of the most environmentally friendly road marking solutions, according to life-cycle assessment. Helios Resins R&D

laboratories developed a new line of 2K cold plastics based on bio-renewable materials which additionally lower the carbon footprint and align with the current environmental trends. In addition to the existing portfolio of methacrylate resins, two resins have been given a green upgrade. Domacryl 915 and

Domacryl 916 which contain 10% bio-based Carbon-14 according to ASTM 6866 and enable a wide area of methacrylate road marking applications.

KANSAI HELIOS SLOVENIJA

Stand 3–750 SI – Domzale www.resinshelios.com

HIGHLY RESISTANT, SUSTAINABLE COATINGS WITH NEW MONOMER

Isoprenyl methacrylate (IPEMA) is a low-viscosity UV-curable monomer for durable hard coatings. It enables the production of resistant and particularly sustainable coatings thanks to stepwise crosslinking, which leads to a relaxation of the applied coating. IPEMA also enables faster curing and thus

reduces energy consumption. The reaction in which IPEMA is used does not require any solvents. The company will demonstrate the product with two car models: One is conventionally coated using HDDA (hexanediol diacrylate), while the coating on the other uses the new IPEMA. The model coatings

highlight additional advantages of IPEMA: It is characterised by both high scratch resistance and greater flexibility.

KURARAY EUROPE

Stand 1–366 JP – Tokyo www.kuraray.com

SAFE AND EFFICIENT HOSE CLEANING

GemiClean HW is the ultimate solution for safe and efficient hose cleaning. Operating within a closed liquid circuit, the system prevents hazardous emissions and uses low pressure for enhanced safety.

With its linear brush movement and 90° rotation, hoses are cleaned thoroughly. The

adjustable cleaning time and efficient extraction process ensure ease of use. Additionally, the sedimentation tank recycles detergent, reducing costs and environmental impact.

The system is ATEX-approved for solvents, ergonomically designed, and easy to install with a plug-and-play setup. Overall,

a safe, sustainable, and reliable custom solution that optimises production processes.

GEMINI TECHNIEK

Stand 4–607 NL – Haaksbergen www.gemini-techniek.com

DUAL MIXER FOR MEDIUM TO HIGH VISCOSITY PRODUCTS

Oliver + Batlle's VFD mixer range is intended for medium to high viscosity products across all application sectors. At this year's European Coatings Show, the company will present the pilot version, which is used to validate the manufacturing process. This 60-litre capacity pilot

version complements the laboratory version and reliably validates the manufacturing time for industrial batches of up to 2000 l. The machine has all the necessary functionalities, such as vacuum or pressure generation, cooling, continuous process control with associated

instrumentation, and different types of mixing tools.

OLIVER Y BATLLE

Stand 4–156 ES – Barcelona www.oliverbatlle.com

VERSATILE MEASUREMENT SYSTEMS FOR DIVERSE SUBSTRATES

In-line coating measurement systems that can be integrated to your production lines offer immediate



quality control and process control benefits. All systems use the company's technologies that record non-contact, non-destructive & real-time thickness measurement data during the coating process over a diverse range of substrates. Designed to work alongside production lines, there are a variety of system configurations to meet specific requirements and provide precise and insightful data, no matter the

substrate. All measurements are captured in real-time and displayed on the touch screen interface, allowing operators and process teams to immediately improve coating control and make quality adjustments.

INDUSTRIAL PHYSICS

Stand 4-162

NL – Capelle aan den ljssel www.industrialphysics.com



EVERYTHING IMPORTANT AT A GLANCE

The EC Tech Reports provide detailed information on a wide range of coating topics.

EC TECH REPORT ALTERNATIVE TO BIOCIDES



Unlock the secrets behind alternatives to biocides with our multimedia PDF report!

The EC Tech Report Alternatives to Biocides provides deep insights into the latest technological findings, such as: solutions for changing biocide labelling issues, current developments in additive, binder, and filler technologies enabling biocides-free formulation of high-performance coatings or novel antimicrobial technologies to enhance surface durability and longevity and modern microbial detection systems. In addition, gain access to our detailed market analysis showcasing the challenges faced by biocide manufacturers in todav's stringent regulatory landscape

and explore detailed product overviews on acting film and incan preservatives and their usability in different applications. An impressive selection of digital add-ons such as downloads and video recordings and important basic knowledge about in-can and dry-film preservation round off this EC Tech Report.



EC TECH REPORT AUTOMATION & DIGITALISATION



Discover the future of coatings development with the EC Tech Report on automation and digitalisation!

How are the megatrends automation and digitalisation changing the coatings industry and in which areas are new technologies already being implemented? Curated specifically for coatings professionals, this multimedia EC Tech Report provides an indepth exploration of how cutting-edge technologies are currently transforming the industry. Access this exclusive selection of highly topical technical articles, market reports, conference recordings, and book excerpts and learn more about:

- combinatorial and highthrough-put technologies revolutionising research processes
- automated quality control and process monitoring
- > automation in coatings pro-

duction, for example through modular production systems or processes enabling variable recipes and batch sizes

In addition, you gain an understanding of why automation and digitalisation must go hand in hand and how joint forces can drive the industry towards a more sustainable future.

Unlock the potential of automation and digitalisation and learn how to optimise your own development projects, enhance production efficiency, and streamline non-value-added activities.



EC TECH REPORT OUTDOOR WOOD COATINGS



Get up to speed with the latest developments in outdoor wood coatings!

Enter the subject of outdoor wood coatings formulation like never before, with technical articles, market insights, and essential fundamentals distilled from renowned book excerpts. Discover the future of wood coatings with a focus on water-borne and bio-based raw materials, paving the way for sustainable, environmentally friendly solutions. Learn to better analyze and optimize coatings performance and gain the knowledge you need to develop wood coatings with unparalleled efficiency and a smaller environmental footprint.

Gain instant access to exclusive videos on the topic from the EC Show Conferences and stay ahead of the curve without the hassle of extensive research. The EC Tech Report delivers the latest findings directly to you.



EC TECH REPORT WATER-BORNE EPOXY COATINGS



Your guide to high-performance, eco-friendly epoxy coatings!

Uncover cutting-edge developments in water-borne epoxy resin technology and their use in various coatings application fields with the EC Tech Report Water-borne Epoxy Coatings. Designed for both newcomers and industry experts, this multimedia PDF report offers a comprehensive blend of technical articles, market insights, and exclusive video presentations. Explore key topics like sustainable bio-based materials, PFASfree additives, and low-temperature curing technologies. Learn how anti-corrosive pigments, matting agents, and anti-sag solutions can transform your

formulations. The report also provides a detailed introduction to epoxy chemistry, making it perfect for those looking to strengthen their expertise.

Save time on research and gain actionable insights for your coatings development projects. Enhance your formulations and make sure to stay ahead in this dynamic sector!



EC TECH REPORT MARINE COATINGS



Stay updated on the latest developments in marine coatings!

Explore the latest developments in marine coatings with the new multi-media EC Tech Report – including technical articles, market reports, key fundamentals from book excerpts, and access to highly topical conference videos and papers.

Gain insights into anti-fouling formulations designed to protect against corrosion while adhering to legislative requirements. Discover the latest developments in marine coating formulations featuring sustainable epoxy binders and learn how to maximise the benefits of

graphene.

Additionally, this report provides an outlook on global sales markets for marine coatings, offering valuable insights for industry professionals. Stay ahead of the curve without the hassle of extensive research: this EC Tech Report delivers the latest findings directly to you.



EC TECH REPORT TITANIUM DIOXIDE



Explore the new multimedia bundle, providing deep insights into Titanium Dioxide!

Particular attention will be paid to the following aspects: cost consumption, improving TiO, properties, improving coating properties and legislation. Learn more about the latest developments in coatings formulation with a view to lowering the content of TiO, in paint, for example, by exploiting synergies with functional or synthetic fillers. Find out how the pigment is being optimised to customer wishes to make it easier to handle and, at the same time, less expensive. Read the latest papers about titanium dioxide based nanotechnology for smart and

functional coatings and understand methods of optimising titanium dioxide performance. Get an overview of the current situation regarding labelling rules as well as an outlook on the future.

Exclusive market insights, important fundamentals, and an impressive package of digital bonus material round off this EC Tech Report!



"ADVANCEMENTS HELP TO SAVE ENERGY"

Adhesives: Ways to reduce carbon footprint





Martin Moore Holland Colours Stand 3C-106

Martin Moore, EMEIA Sales Manager at Holland Colours, stresses out the importance of innovations in adhesive formulations to reduce CO₂ emissions. Developing recyclable adhesives could make the recycling process of plastics more effective and efficient.

How are innovations in adhesive formulations helping to reduce energy consumption and environmental impact in the production of paints and coatings? Innovations in adhesive formulations are making a significant difference in reducing energy use and environmental impact in the paints and coatings industry. The move toward bio-based and water-based adhesives is particularly important, as these replace traditional solvent-based adhesives, which are energy-hungry and harmful to the environment. Water-based adhesives, for example, require lower curing temperatures, which means less energy is needed during production. Additionally, the use of sustainable raw materials helps reduce dependence on petrochemicals, ultimately lowering carbon emissions. These advancements not only help to save energy but also support the industry's efforts to create coatings with a smaller environmental footprint.

What innovations in adhesives improve coating adhesion to difficult substrates such as plastics or metals? Recent developments in adhesive formulations have made it much easier to achieve strong adhesion to tough surfaces like plastics and metals. Surface

treatments like plasma and co-

rona help prepare the substrate,

improving the bonding surface so that coatings can stick more effectively. Additionally, adhesion promoters and coupling agents have been developed to improve bonding by creating chemical interactions between the substrate and the coating. These innovations help coatings endure more challenging conditions, boosting durability and prolonging the life of the coated materials. As a result, these advancements open up new possibilities for using coatings in industries like automotive, electronics, and manufacturing.

When it comes to recycling plastics, how problematic are adhesive residues on packag-

ing? Adhesive residues on plastic packaging create a real challenge for recycling. They make it harder to separate materials during sorting, often contaminating the recycling stream and lowering the quality of the recycled plastic. When plastics are melted or reprocessed, adhesives can interfere with the process, weakening the material and potentially causing defects in the final product. This issue is especially problematic with food packaging and consumer goods, where removing adhesives efficiently is crucial. To address this, developing recyclable adhesives and improving sorting technologies are key to making the recycling process more effective and efficient.

>>> FASTEN YOUR SEAT BELT!

The EC Tech Reports bring you up to speed on the latest technical developments in key coatings topics!



Each multimedia bundle contains:

- » in-depth technical articles from the EC Journal
- » milestone recordings from the EC/EC SHOW Conferences
- » must-read book chapters from the EC Library

Check out the latest reports:



AUTOMATION
AND DIGITALISATION



MARINE COATINGS



WATER-BORNE EPOXY COATINGS





www.european-coatings.com/tech-reports



Take a plunge into the EC Library and explore the vast collection of expert knowledge on coatings technology!



latest additions to the EC Library:



LAB AUTOMATION AND DIGITALIZATION **IN COATINGS**



EUROPEAN OATINGS libraru



www.european-coatings.com/library

MAXIMISING SAFETY AND PERFORMANCE Pigment development while creating vibrant solutions and

meeting strict regulations





Vibrantz Color Solutions Europe Stand: 3C-140

Alex Capuz, Director of Global Product Management at Vibrantz Color Solutions, talks about developmental solutions in pigments and meeting sustainability specifications.

What are the current trends in pigment and colorant innovation for paints and coatings?

A key trend in colorant innovation is the development of our tinting technology - the first and only volumetrically dosed tinting system of solid colorants designed for use in water-borne architectural and industrial applications. Additionally, infrared (IR)-reflecting functional pigments are transforming energy management by reducing heat absorption in buildings, mitigating the urban heat island effect, and extending the durability of outdoor coatings. They also enhance IR sensor performance in vehicles, improving detection and functionality across various conditions.

How do R&D efforts address the environmental impact of pigments in coatings production? R&D is driving innovation

in pigment production to reduce environmental impact by enhancing closed-loop processes for maximum material recovery and waste reduction. Advanced, energy-efficient equipment - such as next-generation kilns - lowers energy consumption and emissions. These efforts are transforming production efficiency and sustainability, significantly cutting the industry's carbon footprint.

What are the main challenges in creating pigments that are both vibrant and long-lasting in coatings? A primary challenge in pigment development is creating stable, vibrant molecules with unique chromophores while using sustainable, non-volatile raw materials to avoid supply chain risks. At the same time, pigments must meet strict regulations, ensuring safety without compromising performance.

ON DISPLAY

Plenty of novelties to be launched at the ECS

DURABLE WATERPROOFING WITH NEW BINDER

Synthomer will launch a new features quick-drying properbrane (LAM) at the European Coatings Show 2025. Lipaton SB 65B20 is ideally suited to indoor waterproofing applications, such as bathrooms. Ready-to-use and easy to incorporate into formulations, the LAM is ideal for non-permanent water contact areas and

grade of liquid-applied mem- ties. Its excellent balance between elongation and tensile strength ensures superior flexibility and crack-bridging ability, providing durable and reliable performance in various settings. Using advanced X-SBR technology, this low Tg polymer (-11 °C) is resistant to alkali and silage acids. It is

non-toxic, non-hazardous, and solvent and plasticiser-free. Its low VOC content offers a safe and environmentally friendly solution for various waterproofing needs.

SYNTHOMER

Stand 2-222 DE - Marl www.synthomer.com

SPECIALITY ADDITIVES FOR FORMULATORS

Ashland features innovative additives for sustainable, differentiated formulations, creating value-adding solutions for customers in the coatings and specialist application mar-

kets. The company offers a range of rheology modifiers, substrate wetting agents and surfactant-based pigment codispersants, defoamers, and pH neutralisers.

ASHLAND Stand 3-462 CH – Schaffhausen www.ashland.com

A LOOK AT EUROPE

Europe is an important market for the global paints and coatings industry.







The three biggest producers (as of 2023) ranked according to their paints and coatings sales are Akzo Nobel (The **Netherlands), BASF Coatings (Germany)** and Jotun (Norway).



EUR 40.6 billion

The European paint and coatings market is estimated to be worth EUR 40.6 billion.



EUR 21.8 billion

As in all regions of the world, decorative coatings is the largest segment at EUR 21.8 billion. Other significant segments include general industrial, automotive refinish, industrial wood and powder.



3.4 % value 1.5 % volume

The market is projected to grow by 1.5 % in volume and 3.4% in value CAGR through 2028.



= Nearly 50 % of the **European market**

The largest paints and coatings markets in Europe correspond to the largest economies. Germany, France, the **United Kingdom, and Italy** represent nearly 50 % of the European market.

WHAT'S NEW IN NUREMBERG?

Plenty of novelties to be launched at the ECS

EMULSIFIERS FOR STABLE WATER-BORNE ALKYD RESINS

Entirely water-borne alkydbased coatings are achievable through the careful selection of emulsifiers and by using the correct emulsification technique. The surfactant selection is critical as it will impact the ease of the process and the end properties of the coating. The Maxemul 7000 series from Croda is a combination of advanced versatile emulsifiers suitable for all alkyd resin types (short to long oil) to generate stable water-borne coatings with uncompromised dry film properties. This series of emulsifiers has become a standard for water-borne alkyd resins and are evolving with new ad-

vancements in the technology. The company will present these evolutions at the European Coatings Show 2025.

CRODA

Stand 5-167 UK – Goole www.crodaindustrialspecialties.

COLOUR-SHIFTING EFFECTS WITH NEW ORGANIC PIGMENTS

Grolman Group will showcase Amberomer, a range of structural pigments developed by Phomera, at the European Coatings Show 2025. The pigments are based on transparent organic polymers with a photonic crystal structure, enabling colour-shifting effects without the use of traditional colourants. This breakthrough

technology offers new possibilities for coatings, combining dynamic optical effects, high transparency, and a refined texture.

Key features:

BIO-BASED GUM ROSIN ESTERS TO RIVAL

- > Colour-shifting properties that vary with the viewing angle.
- > High chroma and transparency for vibrant, clear finishes.

> Consistent, elegant textures suitable for premium applications. The new pigments help create distinctive and sustainable coatings, paving the way for new applications in the industry.

GROLMAN

Stand 3A-333 DE - Neuss

www.grolman-group.com

REDUCE WAREHOUSE SPACE WITH A DIGITAL **FILES ARCHIVE**

Direct digital printing is a flexible process that reduces physical space in the warehouse in favour of digital storage space for graphic files. Labelling independence reduces redundancies and obsolete products, allowing you to meet requests for spot batches, profitably manage production queues and promotional batches and enhance the private label service. It takes just a few seconds to send the graphic artwork from the computer to the digital printer and transfer it onto anonymous containers without manipulation. Direct digital decoration allows for excellent decoration, glossy or matt, for

both virgin and recycled plastic buckets as well as blown bottles, sealant cartridges, obtaining recyclable products for a totally green process.

GMC DIG. MACCAFERRI

Stand 4-201 IT - Modena

www.gmcprinting.com

PinoPine-Produtos Químicos, part of GrupoRB, is a gum rosin

CONVENTIONAL MATERIALS

derivatives producer. PinoPine presents its new

100 % bio-based line, BioEco-Tack. This line includes glycerol and pentaerythritol gum rosin esters with standard specifications, offering identical performance to conventional

products while using 100% bio-based raw materials. This enhancement can elevate the bio-content of end users' products, distinguishing them from current market standard rosin ester formulations.

The company is systematically expanding its approach to other product families, aiming to

increase the 100 % bio-based

PINOPINE, PRODUTOS QUÍMICOS

Stand 1-368 PT - Aveiro www.pinopine.com

PIGMENT PASTES WITHOUT BIOCIDES

Architectural coatings: biocide-free soon to be standard?



Guido Strauch Dörken Stand 3c-126

Guido Strauch, Sales Director Colorants and Components at Dörken, assumes that biocide-free products will soon be the standard.

What challenges and trends do you face in the development of new pigment pastes? Our industry has been facing constantly changing market re-

quirements for years, primarily due to increasing regulation of chemicals, such as the Green Deal and national laws. As a result, biocides used for preservation in coating products

and tinting pastes are being increasingly restricted or banned. At the same time, end customers are becoming increasingly aware of 'green' or 'healthy living' solutions. Paints, varnishes and plasters should be biocidefree without losing their properties. In particular, they should not mould, neither in the container nor after application.

This requirement affects us as a paste manufacturer as well as our direct customers who use liquid pastes in mixing systems. Despite being biocide-free, tinting pastes must retain their complex properties such as colour accuracy and compatibility and must not be contaminated or mouldy. Certificates such as the Blue Angel or Ecolabel underpin these trends, which are becoming increasingly prevalent in the DIY sector and also in the professional sector, particularly in public tenders. We expect the absence of biocides to soon become standard.

What influence do increasing our industry, there are various approaches for alternative tinting concepts that offer pot and film preservation, e.g. by increasing the pH of the tinting pastes, spraying or UV irradiation, or physical concepts such as dry tinting without water. These approaches require high investments and involve compromises, as they are often only applicable to aqueous products. We continue to focus on

How do trends in architecture and interior design affect the choice of colours for your pigment pastes? The switch to biocide-free products has only a minor impact on the colour selection of our established and new pastes. However, the trend offers us additional opportunities. In collaboration with a pilot customer, we have established a biocide-free, liquid, aqueous paste system on over 500 mixing systems. We will make all common liquid paste technologies available biocide-free. We also market the technology as semi-finished products, supported by services such as microbiology as a service, formulation assistance and colourimetric expertise. Our customised solutions offer customers a technological edge. Through patents and continuous development, we are expanding our business model into a system and technology offering that provides competitive advantages and cost savings. At the ECS 2025, we will be appearing under 'Colorants & Components' to present our combina-

tion of research and application.

regulations have on this? In

biocide-free, liquid pastes.

ON DISPLAY

Plenty of novelties to be launched at the ECS

HIGH-PERFORMANCE RUTILE AND ANATASE TIO,

G&J Resources will showcase a wide range of high-performance rutile and anatase grades at the European Coatings Show. Manufactured through a lowcarbon-emission process, the TiO₂ products offer exceptional quality, consistency, and reliability. Backed by over a decade of expertise, the company delivers products at unmatched value that help customers achieve outstanding performance while reducing their carbon footprint.

G&J RESOURCES

Stand 5-467 CA - Markham www.gandjresources.com

FUMED SILICA FOR WOOD AND LEATHER

Cabot launches Cab-o-Sil MT-6460, a new dry fumed silica matting agent for wood and leather coating applications. This highly efficient additive offers good matting performance, smooth surface appearance and superior clarity at lower loadings. The solution is suitable for water-based acrylic and polyurethanes and epoxy resins. It is also suitable for applications such as printing inks and packaging, and in other processes including some ultraviolet and non-polar systems. This new product fulfils an important need in the coatings market as formulators increasingly transition to water-based systems.

CABOT

Stand 1-531 US – Boston

www.cabotcorp.com/coatings



MEASURING SUSTAINABLE IMPACT IN COIL COATINGS

Different tools help to estimate environmental impact



Dr Susana Hult Turron Beckers Group

Dr Susana Hult Torron, Global Product Sustainability and R&D Capabilities Director at Beckers Group, stresses out the importance of different tools to measure the sustainable impact of every product and the collaboration with partners.

o deliver product sustainability, we must be able to quantify and put a number on what we are doing, where we fall short and how far we have come. By measuring sustainability performance, we not only track our own progress and the progress of our partners but enable targeted improvements. So how do we ensure that the data we rely on gives us the level of detail and transparency we require?

We have established and begun to integrate in our workflows powerful ways to measure sustainability impact.

Many of the tools we use are also recognised and widely adopted by peers in the science community and regulatory bodies around the world. At the same time, we continue to refine and strengthen our systems, both internally and in collaboration with our partners across the value chain.

Measurability and transparency are central, not just for R&D but for our value proposition to our customers. This is how we demonstrate pioneering performance for positive impact.

"IF WE CAN MEASURE IT, WE CAN IMPROVE IT"

The Beckers Sustainability Index (BSI) is firmly embedded in our business and our 2030 targets. A holistic tool that quantifies sustainability and puts every product into its relevant 'class', BSI is our main KPI and has been internationally validated by external assessors.

BSI is complemented by a suite of other tools that measure specific aspects of the overall sustainability impact of our activities and those of our customers and suppliers.

A Life-Cycle Assessment (LCA) assesses the environmental impacts associated with all the stages of the life cycle of a product, process or service, from raw material extraction and processing to manufacture, distribution and use, to the recycling or final disposal of materials. We follow the general LCA standards (ISO 14040/14044) and the specific standard for the construction industry (EN 15804+A2). This guarantees that everyone across the value chain measures sustainability in the same way.

LCA also form part of the Environmental Product Declarations (EPD) of our customers, which in turn help their customers obtain green building certification points such as BREEAM or LEED.

IMPLEMENTATION OF LOCAL LCA CALCULATOR SOFTWARE

In recent years we have steadily increased in-house LCA capabilities. Indeed, the ability of our Product Sustainability team to deploy different models and system boundaries has been a key factor in our sustainability journey. In 2025 we will expand our in-house capabilities further with the implementation of the LCA Calculator software in all countries, which will allow local teams to generate LCA on their product portfolio.



One crucial parameter measured in an LCA is the Global Warming Potential or Carbon Footprint of the product (GWP/PCF). This indicates the total greenhouse gas (GHG) emissions associated with the lifecycle of that product, measured as Kg CO₂ equivalents. It also can be used to help understand the impact on other environmental aspects, such as land use, water use, minerals use or ozone depletion potential.

TOOLS FOR ACCURATE MEAS-URING AND DATA SHARING

Since committing to The Science Based Targets initiative (SBTi), Beckers has launched two additional tools to support accurate measurement and data sharing. A tool used for R&D, measuring the carbon footprint of a formulation using raw materials codes and quantities. From this, simulations are created showing the carbon footprint of the formulation when certain raw materials or other input parameters such as coverage, dry film thickness or weight solids are altered.

Another tool calculates the carbon footprint of a specific product portfolio. This allows for "hot-spot analysis" of the portfolio, i. e. emissions by product, site, colour or customer.

COLLABORATION ALONG THE VALUE CHAIN

Improving product sustainability (or reducing Scope 3 emissions) is a cross-disciplinary challenge and needs partnering along the value chain with suppliers as well as customers. Real data and quantifiable sustainability effects help make the progress real. By requesting that our suppliers provide high quality data to evaluate their raw materials, we are inviting them to participate in the transformation of the industry to one in which sustainability is built in at every point and protected with every link.

Sharing high quality data with customers creates conditions to work together to improve each other's sustainability performance, whether through carbon footprint reduction, improved BSI scores, or any number of measures already in operation or still in development. It is the lever that raises our collective ability to innovate and hold one another to account.

WHAT'S NEW IN NUREMBERG?

Plenty of novelties to be launched at the ECS

NEW MEASUREMENT COULD REPLACE OTHER SURFACE TESTS

Krüss will be show-casing the Stood-up Drop, a novel method for capturing the dewetting of water on pretreated, coated, or cleansed surfaces. The recorded receding angle, which is otherwise hard to measure, can then be used for quality tests. The measuring procedure is repeatable and re-

sults are digitally documented. As no harmful substances are involved, it is also safer than using test inks with overlap-



ping applications. Measuring the receding angle has the potential to supplement or even replace other test methods for surfaces. The measurement correlates well with many pretreatment parameters, such as for corona, plasma, and flame treatment, but also with the results of common test methods such as moisture vapour transmission rate (MVTR) to quantify moisture protection and breathability.

KRÜSS

Stand 4–326 DE – Hamburg www.kruss–scientific.com

SPECIALITY CARBON BLACKS TO BOOST COLOUR PERFORMANCE

PCBL Chemical will showcase its latest carbon black grades at the European Coatings Show 2025. New products include:

- NuTone 21U & 29: low-structure, high-gloss pigments for UV inks with easy dispersion and balanced rheological properties.
- > NuTone 41: high-structure

grade offering superior jetness and stability for inks and coatings.

> NuTone 46: finest particle size black for exceptional colour performance in solvent-based coatings.

With new warehouse operations in Europe and the USA, along with continuous R&D invest-

ments and capacity additions, the company is committed to becoming a key player in the global specialty carbon black market.

PHILLIPS CARBON BLACK BELGIUM

Stand 3A–107 BE – Ghislenghien www.pcblltd.com

BIO-BASED PRODUCT FOR INTUMESCENT PAINT APPLICATION

Glycerol carbonate (GC) is a biobased hydroxyl cyclic carbonate for intumescent paint application. Daxsol glycerol carbonate offers a great alternative to replace or partially substitute some of the main components in intumescent paints/coatings (e.g. melamine or pentaerythritol) by playing a key role in the expansion of the paint layer, with the remaining molecule integrated in the formation of the char. Regular expansion of the coating foam and good adherence in the surface, during and after heat exposure, preventing detachment, are the main technical criteria that GC can help improve. Use this new

bio-based product to formulate high-performing intumescent paints that face new challenges in extremely hot conditions.

UBE CORPORATION EUROPE

Stand 1–124 ES – Grao de Castellón www.ube.es/products/finechemicals/

"WEATHER FACTORS ARE BECOMING MORE EXTREME"

Balancing global applications and specific challenges in weathering test innovation



Dr Florian Feil Ametek Atlas Material Testing

Dr Florian Feil, Global Manager Client Education at Ametek Atlas Material Testing Technology, expands on current challenges and developments in weathering testing.

What are the current challenges in the development of new test procedures for weathering tests? One of the biggest challenges is globalisation. Products and materials are now used in regions with different climatic conditions. Each of these regions presents unique environmental factors, so creating a standardised test that accounts for all of them is quite difficult. A single product has to withstand a range of conditions, from tropical heat and humidity to arid desert sun exposure.

Another challenge lies in the combination of stress factors in weathering. Typically, it involves solar radiation, heat, and moisture, but we are increasingly seeing materials used in new applications, like offshore energy production. Here, materials face additional stress factors such as sea salt and high humidity. Simulating these complex and combined conditions in accelerated tests while ensuring they accurately reflect real-world behaviour is no small task.

In which areas of application is the demand for new test procedures currently particularly high and why? There are a few key areas where we're seeing significant demand. One is elec-



tronic and autonomous vehicles. While the automotive industry already has well-established test methods for materials like plastics and coatings, there's now growing interest in testing electronic components and displays. These require entirely different test setups to account for their unique vulnerabilities and performance needs.

Another area is offshore energy production, which includes oil, gas, and renewables. Materials used in these environments are exposed to saltwater, which in-

troduces a whole new set of challenges. Salt isn't typically part of classical weathering tests, so new protocols are needed to account for it as an additional stress factor. These advancements are essential to ensure materials can withstand such harsh conditions.

What influence does climate change and its consequences have on the utilisation and improvement of weathering tests? We have observed two trends in data from our outdoor exposure sites. First, weather fac-

tors are becoming more extreme, and these extremes are happening more frequently. Second, for certain sites, like Phoenix, Arizona, we are seeing increasing year-to-year variability.

Many standard weathering tests already operate at maximum natural stress levels, so there's often limited need to change the methods themselves. However, what we might need is to extend the duration of testing to ensure results are more reliable and account for these changing conditions. The increased variability

makes it also more challenging to predict service life using accelerated testing.

In durable protective coatings, PFAS are often used, but are to be banned in 2026. What influence does this have on ensuring weather-stable coatings and what measures must be taken in the corresponding weathering tests? Durable protective coatings are engineered for longevity, which presents unique challenges in accelerated testing. These tests aim to simulate significant aging or even coating failure within a compressed timeframe. While alternatives to PFAS-containing coatings may exist, validating their durability through testing requires extended durations, delaying their implementation. This creates a demand for test methods with higher acceleration potential compared to conventional approaches. However, increased acceleration typically introduces a greater risk of poor correlation between accelerated test results and natural aging. For such applications, it is crucial to account for the specific degradation mechanisms of the coatings and the test parameters must be adjusted to ensure accurate and reliable predictions.

THE BRAZILIAN PAINT MARKET 2024

Total volume:



1.983 billion litres



Industrial coatings volume:



382 million litres

Total growth rate:



6 %

Automotive refinish coatings:



75 million litres

Decorative paints volume:



1.490 billion litres

WHAT EXPERTS RELY ON

The EC library offers a variety of works for you to choose from. Feel free to stop by our booth at stand 454 in hall 3!



BASF HANDBOOK

Hans-Joachim Streitberger, Artur Goldschmidt 3rd Edition

The industry's most comprehensive handbook – now available in its 3rd edition: the BASF Handbook covers the entire spectrum from coatings formulation and relevant production processes through to practical application aspects. It takes a journey through the industry's various

sectors, placing special emphasis on automotive coating and industrial coating in general. The new edition has been completely updated, featuring several new sections on nanoproducts, low-emissions, biobased materials, wind turbine coating, and smart coatings.

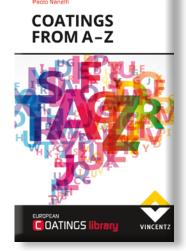


THE RHEOLOGY HANDBOOK

Thomas Mezger 5th Edition

Already in its 5th edition, this standard work describes the principles of rheology clearly, vividly and in practical terms. The book includes the rheology of additives in water-borne dispersions and surfactant systems. As well as being a great reference book, it can also be used as a textbook to study the theory behind the methods. The practical use of rheol-

ogy is presented in the areas quality control, production and application, chemical and mechanical engineering, materials science and industrial research and development. After reading this book, the reader should be able to perform tests with rotational and oscillatory rheometers and interpret the results correctly.



COATINGS FROM A-Z

Paolo Nanetti 2nd Edition

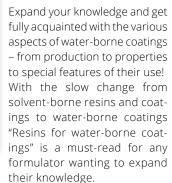
Need to look up special terms and keywords in the field of coatings technology? Now in its 2nd edition, "Coatings from A–Z" is your clear, compact, and easy-to-use technical lexicon, providing a comprehensive

selection of coatings-related keywords. Enriched with many practical examples, it serves as an efficient aid to both newcomers to the industry and readers with a technical background



RESINS FOR WATER-BORNE COATINGS

Jaap Michiel Akkerman, Dirk Mestach et al. 1st Edition



The authors discuss important aspects of the "solvent-to-water-transition" of the past 40 to 50 years, take a deep dive into the key aspects and theories behind the production, properties and applications of these resins as well as providing an overview of how they are currently used in water-borne coatings.



OATINGS librar



COATINGS FORMULATION

Markus Schackmann, Bodo Müller 4th Edition

Coatings formulation explained step by step: already in its 4th edition, this textbook describes the formulation of the most important types of coatings in unmatched detail. Starting by examining the chemical composition and in particular the binders of the coatings presented, the authors then dive

into formulation advice and an analysis of existing recipes. On top, you will acquire a sound knowledge of raw materials and their interactions. "Coatings Formulation" is your mustread if you are familiar with the basics of chemistry and wish to fully dive into the field of paints and coatings formulation!





ADDITIVES FOR WATER-BORNE COATINGS

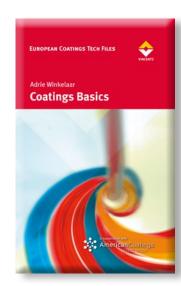
Wernfried Heilen 2nd Edition

Water-borne systems are the coatings of the future. The market is developing an insatiable appetite for ecologically sound coatings based on renewable raw materials. The demands on coating performance are at least as high as those on environmental compatibility.

Additives help to protect the environment by effectively reducing the use of organic solvents. Many of today's water-borne coatings could not be formu-

lated without them. When incorporated into water-borne paints, coatings and printing inks, they enhance both the production process and the performance of the applied inks and coating materials.

Additives for water-borne coatings is a must read for formulators wishing to brush up on water-borne coating systems, as well as experts seeking to have detailed knowledge at their finger tips.

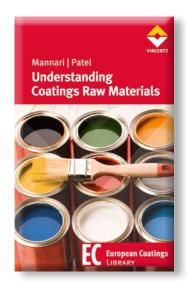


COATINGS BASICS

Adrie Winkelaar 1st Edition

A summary of detailed information concerning ingredients, formulations, manufacturing, application as well as useful explanations and guidelines coming first handed from the author's experience and expert knowledge. Separated in ten chapters Adrie Winkelaar

summarises the phenomena of paint and coatings with few references so that newcomers are able to read this book through freely and easily. A solid grounding in coatings technology – richly illustrated with numerous photographs.



UNDERSTANDING COATINGS RAW MATERIALS

Vijay Mannari, Chintankumar J. Patel 1st Edition

What are paints and coatings composed of? This efficient reference book offers an optimum overview of the different constituents of the different types of coatings, explaining the chemistry, system and impacts of coating raw materials. That

way, newcomers to the field of coatings gain a quick basic knowledge whereas chemists and laboratory assistants will find valuable insights on future trends and developments in the field of raw materials.

DEVELOPMENTS FOR A SUSTAINABLE CONSTRUCTION INDUSTRY

Renewable chemicals and sustainable materials to help reduce the carbon footprint



Rafael Pellicciotta Braskem

Rafael Pellicciotta, Strategy, Business Development and Product Development Leader at Braskem Specialty Chemicals & Renewables, comments on the role of sustainable materials for the construction industry.

What developments in the construction industry are driving R&D in construction chemicals? The construction industry can have a main role to answer society demand for a more sustainable way of life. Braskem has recently invested in a new Renewable Innovation Center located in Lexington, Massachusetts, USA, to accelerate innovation in renewable chemicals and sustainable materials. Capabilities at the new center will expand our competencies in biotechnology, catalysis, process engineering, and open innovation. This will enhance our resources focused on the discovery of technologies that will drive new growth-oriented offerings centered around carbon

What products are you working on to help reduce the carbon footprint? Sustainable development has been part of our operating principles since our company's creation in 2002 and is one of our pillars value creation. In 2007 we launched biobased ethylene and polyethylene products, in 2010 there was the inauguration of a renewable ethylene plant (260 kty), in 2018 biobased EVA was launched, in 2021 bio-based PE wax was launched, in 2022 Braskem announced the creation of Sustainea, a Joint Venture between Braskem and Sojitz for bio-MEG (mono ethylene glycol). Sustainability is driving innovation, a particular focus will be given to the conversion of biomass-based feedstocks, including sugars, cellulose, plant oils, and lignin, to sustainable chemicals and materials.

Where do you see further potential for sustainable construction materials? We develop solutions for various market segments, such as healthcare, mobility, packaging and consumer goods, infrastructure, housing, water supply and sanitation, agriculture, food, and many more. These products embody our purpose, which is to improve people's lives by creating sustainable solutions in plastics and chemicals. In developing new technologies, products, applications, and business models, we seek solutions that consider the entire value chain, whether by encouraging the use of circular design, supported by the Design for Environment methodology, or through Life Cycle Assessment (LCA) or compliance certifications with international standards. **3**







List of all exhibitors and products

Badge scanner for all attendees

Mark your personal favourites

→ Full conference programme and product presentations

Schedule appointments with exhibitors and peers

NEW IN NUREMBERG

Plenty of novelties to be launched at the ECS

A BRIGHTER FUTURE FOR PIGMENTS

Pili is transforming the pigment industry with high-performance, sustainable alternatives to leading pigment references. With 50-80 % bio-based content, these pigments combine environmental responsibility with uncompromised quality and

performance. The bio-based product range includes Pili blue, red and yellow with kilogramscale samples available for early qualification in 2025. They will empower customers to integrate sustainable solutions into their production pipelines.

PILI Stand 2-523 FR – Toulouse oid.iliq.www

ONLINE VISCOSITY CONTROL IN ONE CENTRALISED SYSTEM

UVC is a new generation of viscosity controllers with up to 3 integrated control channels. This means that viscosity and optional temperature can be measured and controlled by one system. Furthermore, up to 12 units can be connected to a network and linked to a PC, with oc-4000 software that centralises the handling. The DE-BadSalzdetfurth

connected OB2 rotational sensors enable measurments for liquids up to about 1,000 mPas, with sensor types VisS up to 10,000 mPas. Other ranges are available on request.

OPTI-COLOR MESS- UND REGELANLAGEN

Stand 4-155



opti-

color.

net

PRESSURELESS MILL DESIGN FOR POWDER COATINGS

The classifier mills of the ACM series offer reliable ultra-fine grinding with integrated classifying of powder coatings. The new ACM NEX offers numerous advantages of a simplified design – and is ATEX-compliant and tested for explosion protection. To grind powder coating chips, the grinding system must be pressure-shock re-

VINCENTZ

sistant. The maintenance of technical explosion protection measures must be regularly planned and implemented with additional costs as appropriate. However, the special innovation of the new mill concept is that the system can be built in a pressureless design by avoiding effective ignition sources. This eliminates maintenance

and inspections for pressureshock-resistant system components and makes accessibility for cleaning even easier.

HOSOKAWA ALPINE

Stand 4-420 DE - Augsburg www.hosokawa-alpine.com

INTERVIEW 19

REPLACING PFAS – WHAT'S NEXT FOR COATINGS?

Why understanding risks and alternatives is key to navigating regulatory challenges





Richard Czarnecki Micro Powders Stand 5–440

As the push to eliminate PFAS intensifies, the coatings industry faces mounting challenges - but also exciting opportunities for innovation, as Richard Czarnecki, Vice President at Micro Powders, explains.

How do the upcoming changes in regulation and the unpredictability affect your work? As

we monitor the progress of PFAS regulatory activity by both ECHA and EPA, our primary mission to promote and expand our PTFE replacement portfolio remains unchanged. We are launching our ninth PTFE replacement product at ECS, a value-engineered composite of EBS and ceramic. Our recent announcement that we will discontinue all PTFE based products by the end of 2025 drives us to help customers reformulate and qualify alternative additives for their coatings. It is also worth mentioning that a separate driver will force customers to move away from PFAS and PTFE: insurance. The insurance industry is viewing PFAS as a potential asbestos or talc level issue and many carriers are already exempting coverage for PFAS related claims.

entiate between the various PFAS and classify them differently in terms of risk? It makes massive sense to have distinctly separate conversations about small molecule PFAS substances (with clearly documented health and safety issues) vs polymeric PFAS substances (well established for a long history of safe use). We strongly support the efforts of the Performance Fluoropolymer Partnership, where industry members are working to educate regulators about the low risk profile of polymeric PFAS substances. Unfortunately, as the expression goes, "the horse has left the barn" and many customers are unwilling to wait to see how the regulatory dust settles and have directed their technical and procurement teams to remove PFAS from products and inventories. Since we can offer alternative products that are effec-

Would it make sense to differ-

tive and often lower in price, there is no reason not to commit to PTFE removal.

What are the next steps needed in the industry regarding the replacement of PFAS? If we are discussing PTFE, there are indeed performance-identical alternatives for many end-uses. Our nanocomposite wax powders can surpass the scratch and abrasion resistance of classic PTFE based waxes and we are having great success replacing PTFE based waxes with these newer products. The largest gap is the use of PTFE in high-temperature applications, where conventional wax technology does not have the high melting point required. This is an area that provides opportunities for new and innovative technologies. The other technology gap is the use of PTFE for powder coating texturing. Several products can provide excellent surface texturing and gloss reduction, but when compared to the classical PTFE texturing approach, much larger dosages are required to get similar haptics and mattifying.

In your opinion, is it possible to replace PFAS completely? While I can't speak for all uses of PFAS, we are confident that we can of*fer customers alternative products* that can improve surface durability without the use of PTFE. Other markets like textile coatings are much more challenged since these technologies frequently used small molecule PFAS materials. Right now, most alternative approaches under development for textiles involve the use of silicone-modified polymers and other chemistries. Many fluorinated chemistries had the unique ability to repel both oil and water, and this has proven extremely difficult to replicate with fluorine-free chemistry.

>>> BIO-BASED COATINGS

6 – 7 May 2025 Cologne, Germany



The EC Conference Bio-based Coatings provides a platform to learn about the latest advancements, breakthroughs, and trends and offers the opportunity to hear from experts, researchers, and industry leaders who will share their insights and knowledge.

- Discover the latest innovations in bio-based raw materials, and scalable solutions for sustainable coatings
- Meet international coatings experts of the industry and interact with your peers during interactive discussion groups
- Hand-picked programme compiled by the people behind the European Coatings Show Conference



"WE CLEARLY SEE A COMPETITIVE ADVANTAGE OF POWDER COATING"

Megatrend sustainability drives the powder coatings industry



Robertino Chinellato Allnex Stand 1–339

Robertino Chinellato, R&D Director Crosslinkers/Powder Resins at Allnex, sees many advantages in using powder coatings over other technologies.

Is the "sustainability" megatrend fueling the powder coatings industry or is it rather slowing it down? The sustainability concept applied in the powder coatings industry is a megatrend, which can be considered as a great opportunity. Several options can be highlighted here: on one side is the possibility of directly using alternative, nonfossil based raw materials, taking advantage of biomass balance available raw materials, and even recycling chemical building blocks coming from other polymer applications. On the other side there is the trend to reduce the carbon footprint by minimising the energy consumed for curing of powder coating systems. The concept of reducing energy consumption during the curing stage of powder coating can extend to UV radiation curable systems as an alternative to thermosetting systems. Comparing the main coating technologies, we clearly see a

competitive advantage of powder coating considering this is an almost zero VOC technology with minimal waste generation, which can in addition have a highly positive impact on key sustainability pillars like "energy saving", "circular economy" and "carbon footprint reduction".

Has powder coating achieved a breakthrough in wood and plastic coating? Powder coating on MDF is clearly a good example of penetration in a segment where powder technology is not massively present. Plastic and solid wood are for sure other valid examples of applications, where powder coatings could reasonably target in the future. To achieve this successfully, it's of course required to further reduce the curing temperature of thermosetting powder systems or alternatively to use UV curable powder technology. Regarding UV powder resins, we have for



many years been an important player with the most complete range of UV curable products possible to find in the market. In addition to that we are advanced

with a novel ultra-low bake developmental technology, which will allow the successful application of powder coatings onto such thermosensitive substrates. pect further advances for powder coatings and why? The journey of powder coating technology to further penetrate metal applications as an alternative to liquid technologies will continue to be driven by low bake systems, which will permit important energy savings. Looking at metal applications (core segments for the powder coating technology) like architectural extrusion, automotive trim parts, white goods, and furniture, here powder coating is already the dominant coating technology. In other metal segments like heavy equipment, containers, or coil, the gap to bridge versus other coating technologies is currently bigger, which means an important opportunity for the future with reasonably high probability of success. The parallel journey with thermosensitive substrates, as above mentioned, is of course the alternative and

exciting challenge.

In which sectors do you ex-

The Leading Coalings Shows & Conferences



EUROPEAN
COATINGS SHOW

0.40555555 SELANTS CORRECTION CHARACALS

Nuremberg, Germany
March 25 – 27, 2025
www.european-coatings-show.com



São Paulo, Brazil September 23 – 25, 2025 www.abrafatishow.com.br



Sharjah, United Arab Emirates October 20 – 22, 2025 www.gulf-coatings-show.com



October 29–31, 2025 www.pacific-coatings-show.com

Jakarta, Indonesia



Mumbai, India February 19 – 21, 2026 www.paintindia.in



Indianapolis, USA
May 5 - 7, 2026
www.american-coatings-show.com



Online
Juni 16 – 17, 2026
www.european-coatings-show.com

Masthead

Editorial team

Damir Gagro (Responsible) +49 511 9910-209

Kirsten Wrede +49 511 9910-212

Vanessa Bauersachs +49 511 9910-217

Silke Karl +49 511 9910-218

Kerstin Houba (Assistant) +49 511 9910-225 Fax +49 511 9910-299 E-mail: editors@europeancoatings.com

Layout and production

Nathalie Heuer (Responsible) +49 511 9910-267

Claire May +49 511 9910-265

Alica Meyer +49 511 9910-032

Sales

Anette Pennartz (Director) +49 511 9910-240

Vice President Coatings Division

Dr Sonja Schulte +49 511 9910 220

Printer

WKS Solutions GmbH Westendstraße 1 45143 Essen

Legal

The magazine and all the articles and images contained within it are protected by copyright. Unless permitted by law, any use or exploitation without the express consent of the publisher is prohibited. This particularly applies to reproductions, translations, microfilming, and the storage and processing of content in electronic systems.

It is the responsibility of the sender to obtain the rights for the publication of any photos submitted to the publisher. Revisions and shortening of submitted articles are at the discretion of the editorial team. Correspondence sent to the editorial team may, unless explicitly excluded by the sender, be published as a letter to the editor. Articles signed with the full name or a pseudonym of the author represent the opinion of the author and not necessarily that of the editorial team.

The publisher, its staff, and the authors use Artificial Intelligence (AI) to support quality enhancement. Any content assisted by AI is reviewed by a human before publication.

The mention of trade names, trademarks, or other commercial names in this magazine does not imply that these names may be freely used by anyone. In many cases, these are protected, registered trademarks.

Place of jurisdiction

Hanover and Hamburg, Germany © Vincentz Network, Hanover 2025

"UV CURABLE PRINTING HAS BEEN A GAME-CHANGER IN THE INDUSTRY"

Advances and challenges in UV-curable printing inks



Durga Saggu Covestro Stand 4A-438

Durga Saggu, Technical Manager, Energy Curable Solutions EMEA, at Covestro, discusses innovations, sustainability, and regulations shaping the UV-curable ink industry.

What are the benefits and challenges of UV-curable inks? Ultraviolet (UV) curable printing has been a game-changer in the printing industry and continues to evolve with new innovations. These inks cure almost instantly and are more sustainable than alternatives because they require no additional solvents and so produce no (or very low) VOC emissions. Plus, printers can use UV-curable inks to apply high-quality designs to a broad variety of substrates, including ceramics, glass, metal, thermoplastics, flexible packaging, and more. To enjoy the benefits of these inks, some initial challenges must be overcome. Printers who want to use UV-curable inks need to invest in their printing lines, and highly pigmented white UV inks are particularly challenging to cure sufficiently. Potential migration of components from insufficiently cured inks is a concern in food packaging. Also, UV-curable inks are not always suitable for heatsensitive and non-flat surfaces.

Generally speaking, UV-curable inks are excellent solutions for improving environmental sustainability and boosting production efficiency. However, unlocking the full potential of UV printing inks requires specific know-how and training.

Which novel developments in this field do you see as particularly promising? When it comes to food packaging, researchers have found new ways to make UV-curable inks even safer for the consumer and more sustainable

for the planet. This is great news for food brands – today's consumers are increasingly climate- and waste-conscious, so companies with more sustainable, safe, and colourful packaging will stand a better chance of persuading con-

sumers to buy their products. Food packaging is not the only area of innovation. Researchers have also pioneered the use of these inks in new applications, especially when curing with lowenergy or UV light-emitting diode (LED) sources. As well as enabling energy savings compared to traditional mercury arc UV systems, UV LED printing can be used on a much greater variety of substrates. In practice, printers can now use UV LED-curable inks on almost everything from various heat sensitive plastics to metal

What's the status quo in terms of regulation? Regulation is fragmented, but standards are universally high. In the European Union (EU), UV-curable inks must comply with Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) regulations. *In the US, the Occupational Safety* and Health Administration (OSHA) provides guidance on handling potentially hazardous chemicals. When UV-curable inks are used in food packaging, strict standards are applied to prevent ink bleeding into food, and declarations of conformity are typically required in EU countries. Similarly, inks used in food-contact materials in the US must be approved by the



Food and Drug Administration (FDA) or comply with Food Contact Notification (FCN) procedures. Some European countries have additional food-specific regulations, too. The German Ink Ordinance (GIO) stipulates which inks can be used in food packaging, and Switzerland recently revised its regulations to align with the EU. Despite fragmentation, the general trend is toward global alignment.

WHAT'S NEW IN NUREMBERG?

Plenty of novelties to be launched at the ECS

GRAPHENE NANOTUBES FOR CONDUCTIVE FILM

Graphene nanotubes by Ocsial enable advanced protective, functional, and aesthetic films for consumer electronics. They combine permanent electrical resistivity of 10^4 – $10^9 \Omega$ /sq with up to 80 % transparency and a haze value of less than 6%. The addition of just 0.04 wt.% graphene nanotubes ensures anti-dust effects and touchscreen compatibility without changing standard processes or equipment. They work with various carriers like silicone, water, and organic solvents, and allow for primer-free film application, boosting efficiency and reducing costs. Beyond films, nanotubes enhance poly-



mer coatings like ESD flooring, conductive primers, anti-static powder coatings, tank lining coatings, gelcoats, and mould

OCSIAL EUROPE Stand 3C-427 LU – Leudelange www.tuball.com

FLUORINE-FREE STAIN REPELLENT FOR THE CONSTRUCTION INDUSTRY

Rudolf introduces its latest innovation, Rucotec B-NF Plus, a fluorine-free stain repellent

This product is designed for use on all absorbent natural or artificial stones, including marble, travertine, Solnhofen slabs, sandstone, concrete blocks, terrazzo, granite, and cotto coverings. Its benefits include:

- > water, oil and stain repellent
- > no colour enhancement,
- > good block resistance
- > consolidating properties
- > excellent adhesion on the surface

This versatile solution ensures long-lasting protection while maintaining the natural beauty of stone surfaces.

RUDOLF

Stand 1-356 DE – Geretsried www.rudolf.com

VERSATILE ANTIMICROBIAL CATALYST

Heraeus Precious Metals presents AGXX, an innovative antimicrobial technology that belongs to a new class of active substances: the in-situ generated free radicals. The new technology has demonstrated efficacy in preserving various materials, including pots and

films, as well as in the development of antimicrobial surfaces. This antimicrobial catalyst can be seamlessly integrated into production processes: It can be added directly as a powder during the dispersion stage or introduced later as a drop-in additive in the form of a sus-

pension. Its versatility makes it an ideal choice for many applications.

HERAEUS PRECIOUS METALS

Stand 3A–306 DE – Hanau

www.heraeus-precious-metals.

INNOVATIONS APLENTY

Today's Product Presentations

HALL 3, STAND 3-742

9:50 - 10:10

On the way to lower carbon emissions of the coil coating industry

Dr Helene Pernot, Arkema, FR

10:10 - 10:30

Strategies to reduce the carbon footprint of cementitious waterproofing membranes (joint presentation with Ecocem Materials)

Dr Malin Schulz, Synthomer, DE

10:30 - 10:50

Accelerating R&D through a data-first approach

Richard Garcia, Uncountable, DE

10:50 - 11:10

"Addibond 106" – ecolabel adhesion promoter for water-borne paints

Dr Veronique Divry, Syensqo, IT

11:10 - 11:30

Westlake 2K water-based epoxy sytems for versatile applications

Laura Dubrulle, Brenntag Holding, DE

11:30 - 11:50

Highly hydrophobic monomers for low surface tension, easy clean and anti-graffiti coatings

Nathalie Havaux, Hexion, NL

11:50 - 12:10

"Turboset 5000HS" a novel high solids polyurethane dispersion

Pablo Breva, Lubrizol Deutschland, DE

10:10 - 12:30

VOC-free and self-emulsifying silicone resins

Dr Nikolai Grebenovsky, Shin-Etsu Silicones Europe, DE

13:10 - 13:30

"NeoAdd PAX" - The world's first food contact approved polymeric aziridine crosslinker

Dr Paul Honen, Covestro Deutschland, DE

13:30 - 13:50

Agrana specialty starches in technical applications – renewable by nature

Dr Gottfried Krapfenbauer, Agrana Stärke, AT

13:50 - 14:10

Exploring potential PFAS alternatives

Dr Eric Moyer, Mitsubishi Chemical Europe, US

14:10 - 14:30

"Methocel": upgrade your coatings formulation toolbox with a versatile bio-based polymer

Dr Roland Bayer, IFF Industrial Solutions, US

14:30 - 14:50

Creating the best rheology with Ystral

Dr Hans-Joachim Jacob, Ystral, DE

14:50 - 15:10

More sustainable coating solutions: unlocking the potential of camelina oil-based resins

Lars Ossenschmidt, Worlée-Chemie, DE

15:10 - 15:30

Adding biobased to your formulation with verifiable renewable additives

Udo Schonhoff, Elementis Services, DE

15:30 - 15:50

Functional fillers for modern coatings

Susanne Reiter, Hoffmann Mineral, DE

15:50 - 16:10

"Alberdingk AC 3686 VP, a new hand fat resistant acrylic for trim paint pushing the boundaries

Markus Dimmers, Alberdingk Boley, DE

16:10 - 16:30

Shaping the future:

introducing our new innovative product extensions

Dr Kai Krauss, Orion Engineered Carbons, DE

16:30 - 16:50

"Ancamine 2849" and "Ancamine 2859" help save time and energy by providing excellent durability

Katharina Karns, Evonik Industries, DE

16:50 17:10

Advancing from conventional substrate wetting to super wetting performance with "easy-wet"

Hilbert Esselbrugge, Ashland Industries Europe, CH

HALL 5, STAND 5-243

9:50 - 10:10

Recycling of coated automotive parts

Dr Yvonne Reimann, Covestro Deutschland, DE

10:10 - 10:30

The use of "MS Polymer" based adhesives for the modular building concept

Dr Luc Peeters, Kaneka Belgium, BE

10:30 - 10:50

Accelerate your R&D and design better products with "Lissy" – smart and seamless data management and Al for formulation development, raw material management, LCA and deep insights

Mike Bach, Prisma Innovative Software, DE

10:50 - 11:10

New Alberdingk product portfolio for construction

Dirk Imhof, Alberdingk Boley, DE

David Engberg, Perstorp, SE

11:10 - 11:30

Perstorp's newly expanded alkoxylate platform for versatile additive building blocks and TMPTA alternatives

11:30 - 11:50

"Nichigo G-Polymer": next-generation BVOH-based barrier coating with superior gas barrier performance in high-humidity conditions

Uchita Tomoki, Mitsubishi Chemical Europe, US

11:50 - 12:10

TiO₂ and TMP:

understanding the need for change in organic treatments

Alexander Krause, Kronos International, DE

12:10 - 12:30

"LitexA 1717" - water-based SBR pressure-sensitive adhesive for versatile formulator's toolkit

Dr Kristin Schöne, Synthomer Deutschland, DE

13:10 - 13:30

Low temperature cure PU powder coatings

Dr Sebastian Clermont, Evonik Industries, DE

13:30 - 13:50

Aliphatic monomers for fluorine-free superdurable 1K and 2 K protective coatings

Denis Heymans, Hexion VAD, NL

13:50 - 14:10

Novel water-borne epoxy systems: boosting your coating performance

Dominique Vandenberghe, Westlake Epoxy, NL

14:10 - 14:30

"Tego Foamex" - defoamer range for architectural coatings

Jonas Berg, Evonik Industries, DE

14:30 - 14:50

The next generation binder for primers – "Elan-tech EP 500"

Davide Malinverno, Elantas Europe, IT

14:50 - 15:10

New active substance for plant disinfection

Monika Lamoratta, Lanxess Deutschland, DE

15:10 - 15:30

ERP System reimagined – digitalisation in the paint and coatings industry with "cargoconnect"

Sven Vogel, Develogment, DE

15:30 - 15:50

Transforming coatings innovation through ecodesign

Lucile Bonhoure, Arkema France, FR

15:50 - 16:10

Wanhua new development for printing ink

Daniel Hao, Wanhua Chemical Group, CN

16:10 - 16:30

Moving away from tin catalysts without loss of performance with innovative Borchers' products

Sebastian Dziki, Borchers, DE

16:30 - 16:50

"Rhodoline HBR": New fluorosurfactant alternative for early hot block resistance in water-borne architectural and industrial paints

Sinthuya Mylvaganam, Syensqo, IT

16:50 - 17:10

Reduce CO₂ emissions of coatings and inks via the mass balance approach

Tim-Frederic Sloot, Evonik Industries, DE



You can also view the programme of the Product Presentations on the ECS website:

www.european-coatings-show.com/ product-presentations/



SIGHTSEEING IN NUREMBERG

museum and grounds offer

impact on Germany and the

A charming medieval artisan

village with traditional crafts.

Here, you can explore local

craftsmanship, from wood-

work to handmade jewelry.

The largest museum of cul-

tural history in the German-

world.

> Handwerkerhof

> Germanisches

Nationalmuseum

an in-depth look into the era's

A quick guide to must-see attractions in the Bavarian city

Nuremberg (Germany) is a city rich in history and culture, blending medieval charm with modern vibrancy. Whether you are interested in history, architecture, or local traditions, there is something for everyone. Here are some must-see sights to explore:

> Nuremberg Castle

A medieval fortress offering stunning views of the old town. This iconic structure has stood for centuries and played a key role in German history

> Albrecht Dürer's House

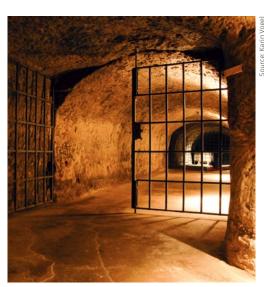
The former home of the renowned Renaissance artist. This museum provides a glimpse into the life and works of one of Germany's greatest painters.

> St. Lorenz Church

A breathtaking Gothic church with stunning stained-glass windows. The church's intricate design and artwork make it a highlight of the city.

> Nazi Party Rally Grounds and Documentation Center

A historical site providing insights into World War II. The







speaking world, featuring artifacts from prehistoric times to modern-day.

> Schöner Brunnen (Beautiful Fountain)

A landmark in the Hauptmarkt square with intricate golden figures and a lucky ring said to grant wishes.

> Weißgerbergasse

A picturesque street lined with half-timbered houses, offering a glimpse into Nuremberg's medieval past. Explore these iconic sites to experience the rich history, stunning architecture, and vibrant culture of Nuremberg!

DINING IN NUREMBERG: WHERE HISTORY MEETS FLAVOUR

Plenty of culinary delights

Nuremberg is not just a city of history and culture - it's a place where dining becomes an experience. Whether you are looking for a cosy, centuries-old tavern, a sleek modern eatery, or a lively food market, the city offers a diverse range of restaurants that combine tradition with contemporary flair.

or those who want to immerse themselves in the city's medieval atmosphere, "Bratwursthäusle" and "Bratwurströslein" are mustvisit spots. These traditional bratwurst kitchens have been serving their famous sausages for generations, offering an authentic taste of Franconian hospitality. Meanwhile, "Albrecht-Dürer-Stube", tucked away in a charming half-timbered house, invites guests to enjoy classic dishes in a setting that feels like stepping back in time.

If you are looking for an elegant evening, Nuremberg has plenty to offer. "Essigbrätlein", with its two Michelin stars, is perfect for those who appreciate exquisite flavours and artistic presentation. "Imperial by Alexander Herrmann" brings a sophisticated yet approachable fine dining



experience, while "Sebald" and "ZweiSinn" combine high-quality ingredients with creative culinary craftsmanship.

TRENDY AND CASUAL HOTSPOTS

Nuremberg's food scene is not only about tradition—it is also a playground for modern and experimental cuisine. Burger lovers will find a selection of high-quality burger joints, while coffee enthu-

pendent roasters. The food truck culture, which started in Nuremberg, has revolutionised street food, making it possible to enjoy gourmet bites on the go at regular markets and pop-up events. "Einzimmer Küche Bar", with its open kitchen concept, offers an interactive dining experience, while "Koch & Kellner" is a favourite for those who enjoy modern interpretations of classic flavours.





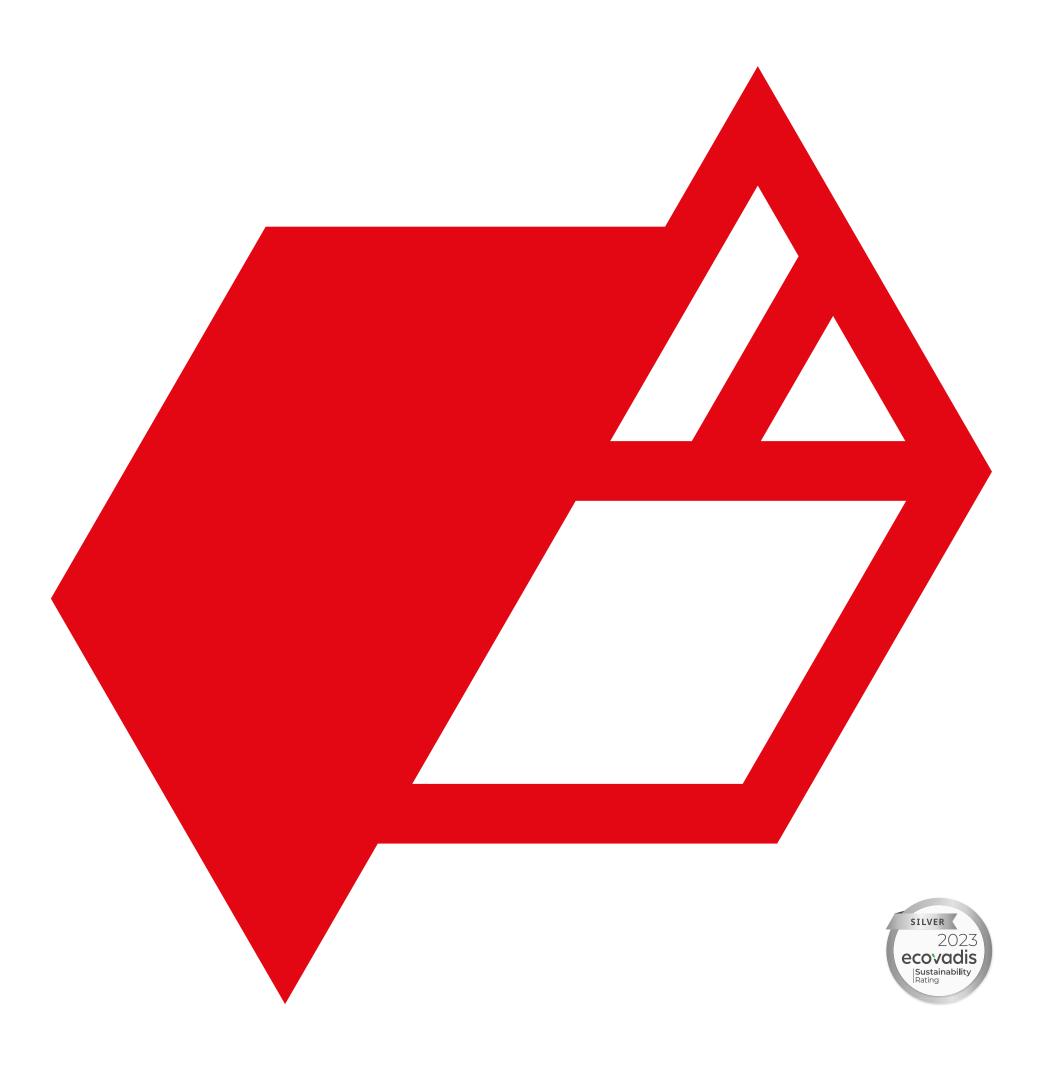
No culinary journey in Nuremberg is complete without indulging in something sweet. "Konditorei Neef" and "Cafe Beer" are famous for their delicate pastries, cakes, and seasonal treats. Meanwhile, "Il Massimo" offers

handmade pralines, including a unique blend of whisky-infused truffles, making it a hidden gem for chocolate lovers.

A CITY FOR EVERY TASTE

Whether you are dining in a centuries-old restaurant or enjoying a modern culinary concept, Nuremberg's food scene offers a unique blend of history, innovation, and passion. With every bite, you are not just tasting food—you are experiencing the city's rich culture and vibrant atmosphere.





Everyone talks about the weather - we focus on corrosion protection.



Z 86





Z 89



PF 777



MAM



Aktisil AM

Our filler Aktisil AM increases corrosion protection in paints and coatings. As a result, metal rusts less quickly and does not need to be replaced as often. This not only benefits the environment, but also your wallet. For a more sustainable path to the future.

Get to know our **Sillitin** products, which are ideal for corrosion protection. For a world that lasts longer. Made in Germany.

More information at hoffmann-mineral.com



