



EUROPEAN

# COATINGS SHOW 2025

preview

The Show and Conference preview— [www.european-coatings-show.com](http://www.european-coatings-show.com) – December 2024

## EXPLORE, CONNECT, INNOVATE: THE ECS 2025

The coatings industry unites in Nuremberg to discuss solutions for today's challenges

Source: Heiko Stahl



In just a few weeks, the European Coatings Show will open its doors to the global coatings family. The leading platform for innovations and trends in the coatings industry takes place from 25 to 27 March 2025 in Nuremberg, Germany.

With the industry facing massive challenges, visitors and exhibitors alike will be able to meet innovation leaders and discuss the latest developments in pigments, additives, adhesives and raw materials, intermediates for construction chemicals as well as laboratory and production equipment, testing and measuring equipment, application and environmental protection and safety work. Organisers Vincentz Network and NürnbergMesse are already

looking forward to the show and the conference. "We are happy to see that despite the challenging market conditions and global uncertainties, the European Coatings Show 2025 is in excellent shape," says Alexander Mattausch, Executive Director of Exhibitions at NürnbergMesse. The event is expected to match the level of the European Coatings Show 2019, the record year before the pandemic. Matthias Janz, Director Trade Shows at Vincentz Network, is

enthusiastic, too: "This year we are celebrating innovation, sustainability and collaboration. Your presence here reflects a shared commitment to driving the industry forward, meeting new challenges and seizing opportunities for growth." A new feature on the ECS website and app is the "My ECS" area. After registering, you can plan your individual visit to the show and conference, set your favourites, arrange meetings with other attendees, and much more.

For more information, visit:  
[www.european-coatings-show.com](http://www.european-coatings-show.com)  
[www.european-coatings-show.com/conference](http://www.european-coatings-show.com/conference)

The ECS Conference from 24 to 26 March, which runs alongside the show, will once again offer the latest research from top coatings experts and a lot of networking opportunities. In total, 144 papers will be presented in 24 themed sessions. At the ECS 2023, 24,605 coatings professionals learned about the latest trends in paint and coatings from 1,017 exhibitors from 42 countries. The ECS conference was exceptionally well attended.



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## WHAT'S UP!

### EUROPEAN COATINGS SHOW

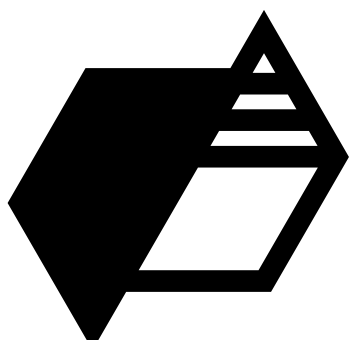
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# GREAT ANTICIPATION FOR REUNION IN NUREMBERG

Only a few months to go until the European Coatings Show

Vincentz Network and NürnbergMesse, organisers of the ECS 2025, look forward to welcoming the coatings industry to Nuremberg in March. The European Coatings Show and Conference 2023 was already a great success after the enforced break in 2021.



“Welcome to the European Coatings Show, the world’s leading event for the coatings industry! This year we are celebrating innovation, sustainability and collaboration. Your presence here reflects a shared commitment to driving the industry forward, meeting new challenges and seizing opportunities for growth. Together, we are shaping the future of coatings. Thank you for bringing your expertise and enthusiasm to Nuremberg. Let’s make it a truly inspiring and successful show!”

Matthias Janz, Vincentz Network



“We are happy to see that despite the challenging market conditions and global uncertainties, the European Coatings Show 2025 is in excellent shape. The event is expected to match the level of the European Coatings Show 2019, the record year before the pandemic. We are pleased that the European Coatings Show 2025 once again serves as a leading platform for innovations and trends in the coatings industry. The Nürnberg Exhibition Centre offers a unique opportunity to learn about the latest developments and technologies, establish valuable business contacts, and actively shape the future of the industry. We are confident that this year’s show will once again be a great success and provide important impulses for the entire industry.”

Alexander Matlausch, NürnbergMesse

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## “GROWING DEMAND FOR SUSTAINABLE PRODUCTS”

Product carbon footprint reduction as a key focus



**Dr Mark Stoll, Global Head of Marketing Strategy at Eckart, emphasises the importance of decarbonising production processes.**

**What are the main driving factors for growth in the pigments market?** Due to the current weak global economy a market growth is not expected in the immediate or near future. However, there are at least two strong long-term growth drivers over a period of five years. These are the recovery

in automobile production in terms of volume, which will lead to increased demand, and the trend towards more effect colours.

**Which region do you see the greatest consumption of pigments and fillers?** We see a growing market in the USA and Asia. The latter is already the biggest consumer for effect pigments and is showing a steadily increasing demand. It's especially for these markets that we aim to further regionalise our business processes. With the acquisition of Silberline, we have taken a major step toward this target.

**Where do you see the opportunities and challenges in the market and when it comes to developing new pigment products?** The market is constantly looking for new colour effects. There is also a constantly growing demand for sustainable products.

This is accompanied by increasing regulatory requirements, leading to product adaptations. While this can be seen as a challenge, it also presents us with new opportunities.

**As companies are seeking to reduce their carbon footprint, how can pigment manufacturers help?** We have successfully achieved a notable reduction in the Product Carbon Footprint (PCF) of our pigments. This achievement begins with the meticulous selection of raw materials, incorporating recycled materials such as secondary aluminum. Moreover, we have made significant investments to decarbonise our production processes, primarily through electrification - transitioning from fossil energy to renewable electrical energy. Additionally, we have invested in generating our own solar energy to further support these efforts.



# “IT IS IMPORTANT TO ACTIVELY USE DATA TO DRIVE DECISION-MAKING”

Data quality is essential for building effective models



**Prof Christian Schmitz, Institute for Coatings and Surface Chemistry, Niederrhein University of Applied Sciences, speaks about digitalisation.**

**What is the current state of digitalisation and where do you see the next steps?** My main interest lies in data modelling, which is becoming increasingly critical as digitalisation advances. To build effective models,

data quality is essential, as poor data leads to unreliable outcomes. As far as I know, many companies are striving to create data management platforms. However, it is also important to actively use this data to drive decision-making. In the future, data modelling will play an even more significant role in data analysis, helping organisations optimise operations or benefit from A.I. predictions.

**What could help accelerate progress?** To accelerate progress, starting with small project groups that combine IT experts and coating chemistry specialists is key. By focusing on quick and achievable projects, we can learn about both the benefits and limitations, which helps promote larger-scale implementations and gain wider support from all the involved parties. Another important aspect is data quality, i.e. the reproducibility of

the measurement and data management standards in particular must be taken into account. At the Niederrhein University, for example, we also work with the automation of a high-throughput system for the production of paint samples, which eliminates the susceptibility to errors in repetitive tasks.


**Where do you view the limitations to digitalisation now and in the near future?** The cross-linking between departments and users for data management, especially regarding the product portfolio and R&D lab results, is highly complex. The processes themselves are also multi-layered and complicated. While there are solutions available, they often exist as isolated data silos. It is crucial to establish common standards. I often refer to the example of glass transition temperature:

the chosen measurement methods are critical to the recorded value and must always be passed along. This highlights the challenge and the significant work involved in digitalisation, as many details must be considered during data processing. Handling the information correctly also requires domain-specific expertise.

**Are you able to share any recent examples of projects and how digitalisation has improved product development or efficiency?** As a research institution, we are leveraging the new possibilities of machine learning to analyse lab data. At our university, we have already adapted several methods for applications such as statistical experimental design, spectral data processing, and image analysis. The most widely tested and consistently used tool in our practice is an al-



gorithm that efficiently suggests new test samples for optimising product properties with minimal experiments. This intelligent experimental design significantly reduces development time for complex R&D tasks. Another application is colour prediction, where the colour tone is generated by a formulation of pigment pastes. We can predict the colour coordinates or even the emission spectrum. It is also interest-

ing to use liquid colorimetry, where the colour of the cured paint can be predicted by a transfer model. Our current activities are aimed at incorporating chemical information from the raw materials into the modelling. One relevant possibility is to work with polarity parameters, e.g. Hansen solubility parameters or other scales that can be determined by simple UV/Vis measurements. 

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# “THE BEST PLACE TO BE!”

Exhibitors and visitors voice their endorsement of the ECS



“Committed to developing sustainable solutions, Arkema sees the European Coatings Show as an opportunity to share thought leadership and provide concrete demonstration cases to support decarbonisation in multiple markets with its partners across the value chain. At the 2025 show, we will join other leaders who share our goals to enable industry transformation towards better living comfort, building efficiency or e-mobility. We look forward to seeing everyone there.”

Julie Haevermans,  
Chief Marketing Officer,  
Arkema Coatings



“Teknos will be present at the ECS with several functions. Our procurement and R&D see it as the best place to be to meet raw material as well as equipment suppliers, institutes, and other friends of the coatings industry world-wide. It is a key show for us to get the latest updates on the developments in the whole chain. We focus a lot on the latest trends in sustainable development to help us effectively push sustainable solutions forward into the marketplace – and help our customers achieve their sustainability goals. This only works hand in hand along the whole supply chain if we want to make our world last longer.”

Thomas Palm,  
Chief Portfolio Development Officer,  
Teknos Group



“The European Coating Show is an exceptional event, showcasing the latest innovations and trends in the coatings industry. This year, I’m particularly excited to connect with potential partners and uncover any new advancements that may have been overlooked.”

Oscar Törnåsen,  
European Technical Coordinator - Research & Innovation,  
Industrial Wood,  
Sherwin Williams



“We will be at the ECS 2025 because it’s a great opportunity to meet customers and partners and to discuss the latest industry trends. We will concentrate on showcasing solutions that enable manufacturers in the construction, adhesives and coatings industries to offer new, sustainable products and solutions to the end consumer. For example, our additive compounds make construction materials more efficient so that less material is needed and periods between renovations are prolonged.”

Peter Summo,  
President Wacker Polymers,  
Wacker Chemie



**European Coatings Show**  
25 - 27 March 2025  
Hall 4 - Booth 640

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# “WE NEED TO BUILD CONFIDENCE IN THE DURABILITY AND PERFORMANCE OF WATER-BASED SYSTEMS”

Significant growth for the water-based coatings sector



**Dr Patrick Dodds, Hexigone Inhibitors, shares insights in the water-based coatings sector and recent developments.**

**How would you describe the market for water-based coatings at the moment?** The market for water-based coatings is steadily evolving, with successful applications in specific areas such as food packaging, where solvent-based products would not be suitable. While there are clear

opportunities for transitioning to water-based systems, the industry's conservative nature means these systems are often perceived as new and unproven. To encourage wider adoption, the performance of water-based alternative coatings needs to be proved. Water-based coatings are widely regarded as the future of the industry, with substantial research focused on replacing current solvent based systems. However, certain barriers still prevent full market conversion. Despite this, it remains a significant growth area with numerous opportunities for expansion.

**Are there any barriers that need to be resolved to accelerate progress in switching from solvent-based products?** Several barriers hinder the shift from solvent-based to water-based coating systems, particu-

larly in a conservative industry stuck in its ways. Overcoming these challenges requires building confidence in the durability and performance of water-based systems. These products must prove their reliability through rigorous, accelerated testing to ensure real-world performance matches that of their solvent-based counterparts. As with any new technology in the coatings industry, extensive data and durability testing are essential to demonstrate that water-based systems can meet the same standards. Much of the current focus is on improving water-based systems for more widely used applications, rather than niche markets, to achieve a broader impact. Although some companies are exclusively working with water-based solutions, the most significant transformation will come when larger multinational corporations make the switch.


**What opportunities do you see for this market sector?** I see significant growth for the water-based coatings sector with continuous innovations in additives aimed at improving durability. There are also new bio-based additives being introduced to enhance the performance of these coatings, water-based systems are already widely used in sectors such as decorative coatings, where there are not subjected to harsh environmental conditions. The key opportunities lie in the development and expansion of water-borne systems for external coatings, which require high durability to drive market growth. For additive companies, there is substantial potential in the market, if they develop products that are compatible with water-based systems and provide higher durability or offer a sustainable alternative to current technolo-

gies. By focusing on these areas, companies can play a crucial role in advancing the market and addressing the evolving needs of the industry.

**Could you share any recent developments?** We had remarkable success working with a company specialising in water-based polymers. They developed a water-based acrylic primer system incorporating a smart anti-corrosion additive. This outperformed Tier 1 solvent-based 2K epoxy systems in real-world testing during live sea trials over a nine-month period, battling an extremely aggressive environment in the Celtic Sea during winter. The new water-borne primer system emerged as one of the highest-performing coatings, surpassing several solvent-based alternatives used in marine and oil and gas sectors. This project effectively demonstrated the du-



Source: magnum - stock.adobe.com

rability and high performance of water-based coating systems for demanding applications, proving their potential as a viable and sustainable solution in industries that have traditionally relied on solvent-based products. 

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 March 25 – 27, Hall 3A, Booth 124

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## SPOTLIGHT ON INNOVATION

Plenty in store at the European Coatings Show Conference

The European Coatings Show Conference is set to open once again, bringing together the brightest minds in the coatings industry.

Source: Thomas Geiger



Starting on Monday, 24 March 2025, this premier event will feature six simultaneous sessions throughout each day, offering a wide array of options tailored to attendees' interests. Over three action-packed days, participants can immerse themselves in cutting-edge lectures and reconnect with colleagues during the conference's networking breaks. This time, there were more than 300 abstracts submitted – a clear record.

A carefully selected and remarkable lineup of more than 140 coatings experts will present the latest scientific advancements and innovative solutions across twenty-four specialised sessions. These include sessions on key industry areas such

as wood coatings, functional coatings, architectural coatings, industrial coatings, water-borne systems, polyurethanes and more.

Moreover, trending topics like bio-based coatings, digitalisa-

tion, research insights and PFAS alternatives also have dedicated sessions. Furthermore, there will be sessions on adhesives and sealants, printing inks, construction chemicals, testing and measuring, as well as grinding and dispersion.

### PLENARY SESSION AND OTHER HIGHLIGHTS

Moreover, ten pre-conference tutorials will help attendees get up to speed in the basics of several topics. Following the tutorials, the ECS Conference will open with a plenary session, including a keynote and the presentation of the prestigious European Coatings Show Conference Award, which recognises the author of the most innovative paper of the year.

All information on the ECS Conference can be found at [www.european-coatings-show.com/conference/](http://www.european-coatings-show.com/conference/).

Conference programme

### SUNDAY, 23 MARCH 2025

18.30 h Welcome Get-Together - City Centre

### MONDAY, 24 MARCH 2025

9.00 - 11.00 h Pre-conference tutorials

11.30 - 12.45 h Plenary Session: Welcome address  
Conference introduction  
European Coatings Show Award  
Keynote presentation

12.45 - 13.30 h Light Lunch

13.30 - 17.00 h Session 1: Research Insights  
Session 2: Functional Coatings I  
Session 3: Radiation Curing  
Session 4: Water-based Coatings I  
Session 5: Automotive Coatings  
Session 6: Polyurethane Coatings

17.00 - 18.30 h Poster Session & Networking Reception

### TUESDAY, 25 MARCH 2025

9.00 - 12.30 h Session 7: Digitalisation  
Session 8: Functional Coatings II  
Session 9: Wood Coatings  
Session 10: Water-based Coatings II  
Session 11: Printing Inks  
Session 12: Construction Chemicals I

12.30 - 13.30 h Lunch Break

13.30 - 17.00 h Session 13: Bio-based Coatings I  
Session 14: Protective Coatings  
Session 15: Architectural Coatings I  
Session 16: Industrial Coatings I  
Session 17: PFAS Alternatives  
Session 18: Construction Chemicals II

### WEDNESDAY, 26 MARCH 2025

9.00 - 12.30 h Session 19: Bio-based Coatings II  
Session 20: Testing and Measurement  
Session 21: Architectural Coatings II  
Session 22: Industrial Coatings II  
Session 23: Adhesives and Sealants  
Session 24: Grinding and Dispersion

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# WHO WILL PRESENT THE BEST PAPER?

ECS Award for the most outstanding conference paper



Dr Hong Xu, Cardolite, received the ECS award in 2023.

Each ECS Conference begins with a plenary session, where the prestigious European Coatings Show Award is being granted, recognising the most

innovative paper. To find out who will be announced as the winner, be sure to attend the plenary session on Monday, 24 March.

The ECS Award 2025 offers not only recognition but also a prize of EUR 2,000, plus a commemorative trophy sponsored by the European Coatings Journal. Both will be presented during the

opening plenary session on the morning of 24 March. The winning paper will then be presented in full as part of the conference program. The winner is chosen by a panel of coatings experts, who evalu-

ate submissions based on relevance, scientific merit, and level of innovation. Hong Xu et al., Cardolite, won the European Coatings Show Award 2023. They presented a new developed multi-functional epoxy

diluent which based on natural and non-food chain cashew nutshell liquid. It should help formulators in creating high performance protecting coatings with a lower carbon footprint.

## GET THE FUNDAMENTALS

Pre-conference tutorials will offer an in-depth introduction to key coatings topics



Source: Helko Stahl

Whether you're new to the coatings industry or considering a career change, the ten pre-conference tutorials ahead of the European Coatings Show Conference provide a unique opportunity to grasp essential concepts across a range of subjects.

These tutorials, a long-standing and valued tradition, will once again be held this year. Scheduled for Monday, 24 March, the sessions will cover the topics bio-based coatings, wood coatings, functional coatings, intro to coating formulation (Coatings 101), formulating adhesives and sealants, dispersing pigments and fillers - from theory to practice, digitalisation, funda-

mentals of water-borne coatings, understanding biocides and the latest regulations, and an introduction to polyurethane coatings. The goal is to deliver a comprehensive overview of these topics in only 90 minutes. Each session will be led by renowned experts with extensive experience in their respective fields. As spaces are limited, be sure to register online in advance.



# What's next?



## Find out what's next at ECS 2025

Meet your inventive partner for hands-on coatings & adhesives solutions. Join us at ECS 2025 and discover what Status Next means for you.



Discover more



# COLLABORATION IS THE KEY TO FUTURE MARKET TRANSITION

Guest editorial on the current status quo of the European coatings industry

Coatings are a valuable and consistent component of the modern industrial consumer economy. At Akzo Nobel, we sit at the junction between the upstream chemical and resource industries, and the downstream industrial and consumer markets.

As an internationally active coatings company, we manufacture and sell to a broad and diverse set of industries in many legal jurisdictions. Our key focus areas currently include the removal of materials of concern and helping to reduce carbon

intensity in the value chain – this is how we plan to keep up in R&D. The role of R&D is to innovate to meet customer needs, while constantly adapting to market conditions. With various markets in fundamental transition, we've identified three strategic areas

that inform the work we do. This involves looking up and down the supply chain from several angles. Assuming that essentials such as staffing and equipment are of the highest standard, we focus on the following (which are worked on in parallel):

## WHAT TECHNOLOGY IS RELEVANT AND AVAILABLE?

This is a multi-factor challenge. It requires estimating what the future needs of the markets we support will be, and what capabilities we'll need to meet them. Like most established players, we're engaged in market-back trend analysis, customer analysis and modern IT-enabled idea generation and sharing. Common sense rules – and bold ideas are good – but we've found the greatest value comes from scenario planning. The key question, therefore, is this: What are the most likely outcomes, given the trends we recognise? We could pick many examples, but the most significant for R&D in coatings is certainly the removal of materials of concern, and the move to decarbonise the supply chain. We've developed a number of business-specific scenarios focused on these goals. This, in turn, leads to an assessment of the capabilities required to follow the relevant scenario, which includes a direct link to the second strategic area – partnerships.

## PARTNERSHIPS

One of the biggest differences we see today compared with past ways of working is the strengthening of relationships between partners in our supply chain. We firmly believe that single players in the supply chain can't act alone, especially when you consider that the right choices are critical. The decision tree starts with a strategic reflection on one's own strengths and weaknesses. Where can we/do we want to add value in the chain? For example, most players traditionally consider an industrial component to be essential – and that's still largely true, if you conveniently ignore the fact that all industries are subservient to IT. The second step is to have a robust process to understand the technology gaps and operate with managerial duality, focusing on the core yet evaluating needs and capabilities outside your scope. That's not always an easy call, so we dedicate time and resources to understanding potential providers. What technology do they bring? How collaborative are they? What's the potential business model? What's the win-win that can make the relationship a partnership? We've used various techniques to attract providers from outside the normal coatings supply chain – most recognisably our Paint the Future start-up challenges. These bring in great ideas, but also potentially unfamiliar and complex business models, which need dedication and commitment from the team. However, most of our partner-



Roger Jakeman, Chief Technology Officer, Akzo Nobel

ships are within our established circle of suppliers, service providers and customers.

At any one time, we're engaged in many collaborations of the traditional one-on-one type. But we're increasingly looking to create symbiotic "communities" in recognition of the fact that innovation requires a diverse set of capabilities. Project management skills are paramount. A good example is a three-way collaboration we're involved in with two distinctly different raw material suppliers. Our goal is to map the potential for carbon reduction in a decorative wall paint. While sustainability is the driver and answering the question: How low can we go? is the goal, this is also very much about the benefits of multi-partner collaborations.

## INNOVATION ROADMAPS FOR EACH MARKET SERVED

The assessment of markets and technologies leads directly to the action plans for developing the technology for the products (and services) that are required. This is the famous link (or is it a gap?) between markets and technologies – which needs to be crossed in each direction. Whatever format is chosen for visualising the strategic plan, the choice of scope and the axis used are critical. Generally, we find that plans per common market or segment are best. Using this approach, our technology roadmap for decorative wall paint has global scope and requires us to formulate using new low-carbon materials, with a roadmap per category. Whereas for other markets there'll be, for example, much more emphasis on customer application and efficiencies. On completion of the technology development plan, we transfer the technology to the product development team, where it finds its market application. We often let staff move across with this step – it facilitates the technology transfer and brings important practical learnings for the technology team. Is this enough to keep up? Yes, and not only that, our ambition is to move ahead based on this informed, yet pragmatic, approach.

## »» HIGH-END ANTI-CORROSION COATINGS

25 – 26 February 2025  
Dusseldorf, Germany

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[www.european-coatings.com/conference/high-end-anti-corrosion-coatings](http://www.european-coatings.com/conference/high-end-anti-corrosion-coatings)





# MAXIMISE YOUR ECS EXPERIENCE

Essential tools and resources to plan your visit and connect with industry professionals

**Plan to attend the European Coatings Show as a visitor? The official website provides a wealth of information, including key facts and figures about the exhibition and the conference.**

Alongside an exhibitor directory, it offers the full conference programme and many other useful features. You will also find all the details about tickets, as well as tips on accommodation and travel. Exhibitors, too, will find everything they need to know in advance of the event.

**NEW FEATURE: "MY ECS"**

A new feature on the website is the "My ECS" area. After registering, you can plan your individual visit to the show and conference, set your favourites, arrange meetings with other attendees, and more. Another valuable resource is the official European Coatings

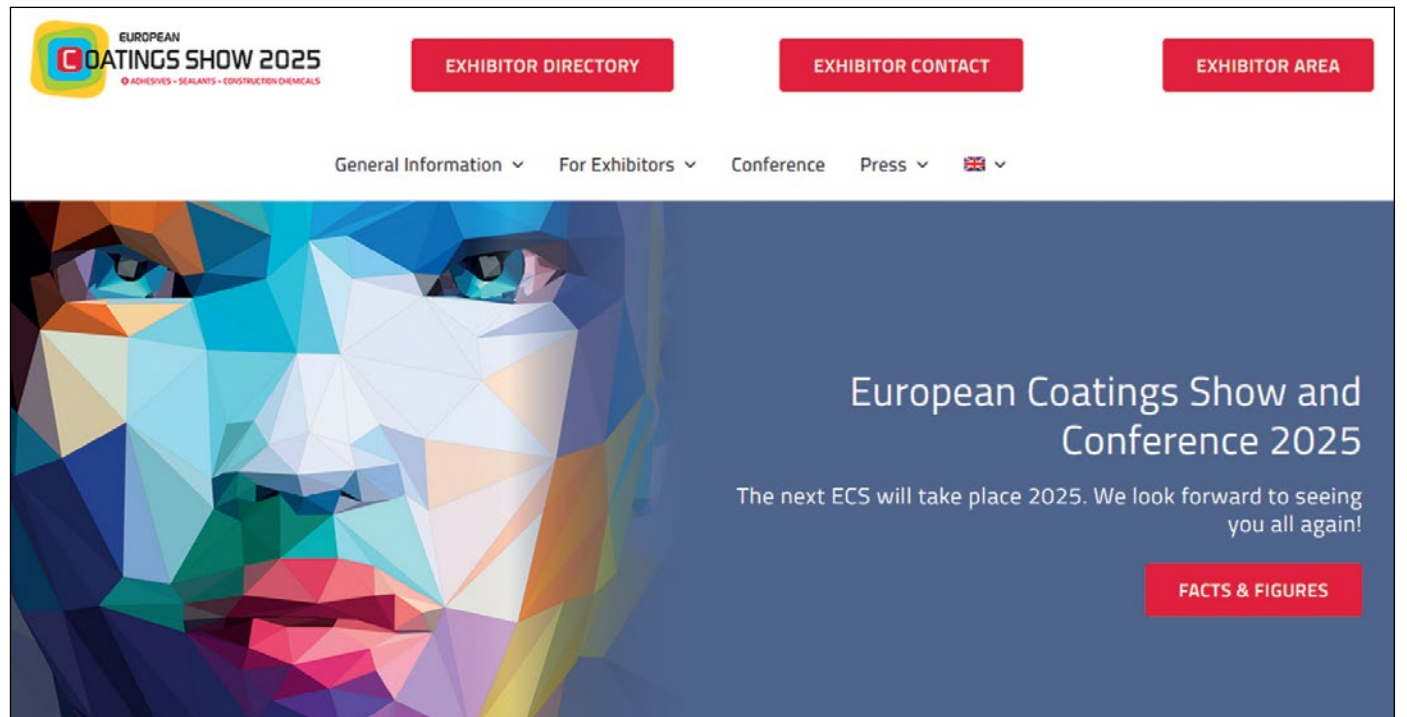
Show app. This free app includes a full list of exhibitors and a digital map of the exhibition stands.

**DIGITAL CONFERENCE TIMETABLE**

The app's advanced search function allows you to browse by exhibitor and product, and filter results not only alphabetically but also by country, category, and hall. If you're attending the European Coatings Show Conference, the app will be equally useful, as it contains a digital timetable and allows you to browse abstracts and create your own personal conference agenda.

The app is free of charge and available for download on iPhones, iPads, and Android devices.

Like the website, it also features the "My ECS" area. Plus, with the app's name tag scanning function, you can collect con-



tact details digitally, eliminating the need for printed business cards. Additionally, we have set up an ECS page on LinkedIn,

which serves as both an information hub and networking platform before, during, and after the event.

For further details, visit: [www.european-coatings-show.com](http://www.european-coatings-show.com)

And follow the ECS on LinkedIn:

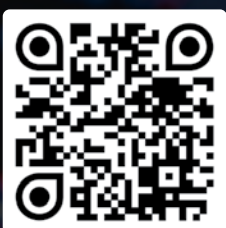


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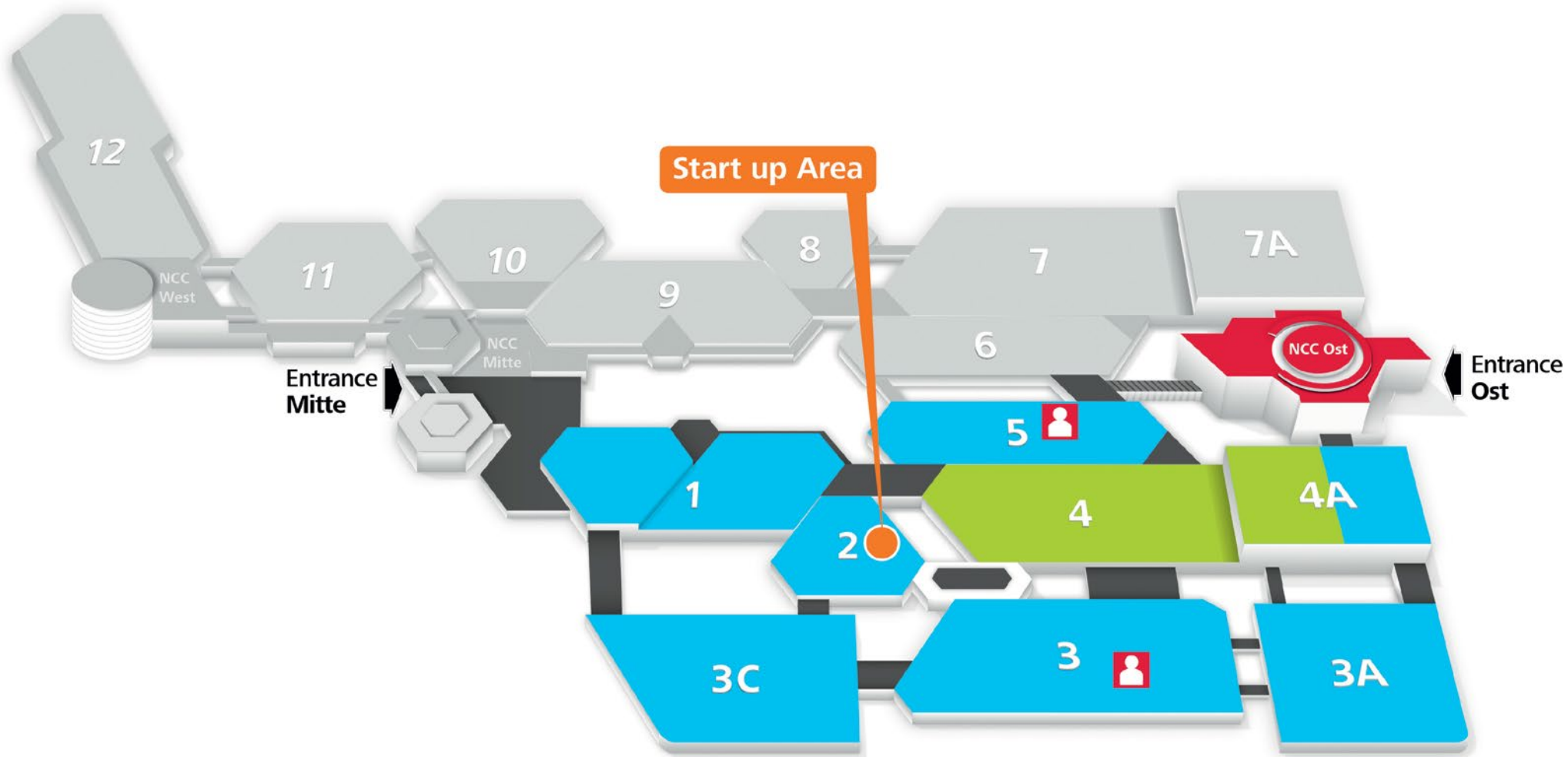
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# NAVIGATING THE SHOW

So much to explore in Nuremberg - how to find your way around



**NCC OST**

■ European Coatings Show Conference

**HALLS 1 / 2 / 3 / 3A / 3C / 5**

- Coating raw materials
- Adhesive raw materials
- Intermediates for construction chemicals
- Printing ink raw materials
- Services

**HALL 4**

- Laboratory and production equipment
- Testing and measuring equipment
- Application
- Environmental protection and safety at work
- Services

**PRODUCT PRESENTATIONS**

- Hall 5
- Hall 3

Source: Thomas Geiger



## INNOVATIONS IN A FLASH

At the European Coatings Show, visitors will have the chance to explore the latest market innovations

One popular feature are the **Product Presentations, held across all three days, will showcase a variety of exhibitors unveiling their newest products.**

introducing new products, they will also share insights into industry trends. After the presentations, attendees can engage in brief discussions with the speakers.

**T**hese sessions are designed to spark interest by giving an overview of the latest coating solutions. Exhibitors will deliver concise, 15-minute presentations highlighting the development, performance, and technology of their offerings. In addition to

**FREE ACCESS - NO REGISTRATION REQUIRED**  
The Product Presentations are open to all ECS attendees, free of charge, with no need for registration. A detailed overview of the presentations will be available on the ECS website shortly.



# GREEN DEAL – QUO VADIS PAINT INDUSTRY?

Taking a look at general trends in paints and coatings industry



Dr Mirko Montigny,  
Head of R&D Paints & Plasters  
Meffert

**The world of paints, varnishes, plasters and lacquers in which Meffert Farbwerte operates is currently under pressure of deep diving changes in law from both national and EU regulations popping up numerous demands on updates of articles or even recipes to stay compliant in the market.**

**O**n the first look innovations suffer while workload on existing teams in product management, marketing or even R&D satisfying regulatory challenges dramatically increases. By adjustments in the mode of R&D action the regulative needs can be transformed into innovation drivers and even promotes innovations that have been out of focus for decades.

Corona and supply chain problems predominantly have been withstood over the last months but global challenges such as

wars or bad market signals are still present. Within this economic environment new national and international challenges are already knocking on company's doors to attract attention.

## NEW REGULATIONS APPROACHING

Supply Chain Due Diligence Act, Green Deal, Blue Angel, EU taxonomy updates are challenging companies' compliance and sustainability in an often very technical manner. Multiple regulatory changes increase the demand for flexible and agile project approaches and much faster recipe development than ever before. Nonetheless the clear target definition is of higher importance and must be done with apparent wide view on consequences of changes in law and market. Currently for example the increase of silicate dispersion paints in the German market is mostly triggered by the regulations for building compliance to DGNB or QNG regulations both are a result of the EU Green Deal. Our future expectation is Blue Angel or environmentally certified products will become more relevant for professional applicators as well due to architectural and urban planning requirements. These construction funding criteria often challenge preservation of products, raw material supply chains, carbon footprints or chemical purity of raw materials

resulting in new demands for raw material suppliers popping up apparently non-innovative projects triggered by paint industry such as extended by product measurements and declarations as well as alternative preservation methods. This results in high workload for existing teams additional to technical development or even company driven research on both sides of the relationship. Thus, university and institute cooperation work will extend even more with focus on shared IP and industry close developments to force commercial win-win situations.

## CHALLENGES FOR COMPANIES

Small and mid sized companies currently still within the transformation steps from industry 2.0 to 3.0 or even to 4.0 are struggling with the speed of changes and must rethink strategic steps even faster than ever before. This results in agile and fast projects using technical and software tools to increasing extent and equity requirements. Although paint and plaster as well as lacquer and varnish recipes are multi parameter formulations within an overwhelming degree of statistical freedom the target once it is identified properly can be reached with less and less workforce in projects compared to former times. This is nowadays especially supported by statistical math-based



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software tools based on Design of experiments (DOE) or even further developed machine learning algorithms and artificial intelligence (AI) algorithms support, simplify and fasten relevant recipe alignments and give freedom to promote innovations in parallel.


## DO INNOVATIONS SUFFER?

Hands can only be booked once. It's the most challenging fact of the increasing workload caused by the described regulations. For us paint companies it's not only the number of innovations that suffer its even their depth. This is basically a challenge caused by the availability, costs and openness of external partners to start innovations in parallel to the "daily business" what's often the connotation of regulatory topics. Nevertheless this new "daily business" is even more than this, it turns to a general trend in our industry

both indoors and outdoors for updating existing products and selling them with additional services focusing on compliance concerning human and environmental health and welfare. For example, the indoor air quality or the environmental exposure of biocides from outdoor paints get new focus triggered by Blue Angel and sustainability building regulations in Germany.

## TARGETING HUMAN AND ENVIRONMENTAL HEALTH

Triggered by new regulations in the EU and their own consciousness from the Covid-19 pandemic customers focus more on their health and welfare even for products not direct in touch with them than ever before. Almost every product must be either advantageous for the people's health and welfare or at least have certified exclusion of negative effects, e.g. requirements on VOC, SVOC, EU

taxonomy relevance for indoor products. Thus, the time for selling just a simple paint or varnish product will count to zero. Either functionalities or environmentally friendly raw materials are en vogue and will become new standard in the market. In this field of tension the paint industry often struggles either with technical performance of required raw materials or the pricing of the "green" alternative raw materials. Hereby a lot of "homework" needs to be done hand in hand from suppliers as well as the paint industry to address market needs properly to find best fitting answers. The unclear economic situation pops up a field of tension for the accepted price for innovative products taking the EU deals into account and the return on investing for developed innovations dealing with this topic. Tough times are showing up to stay competitive in the contested market. 

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## EUROPEAN COATINGS SHOW: 25-27 MARCH 2025

**Location:** Halls 1, 2, 3, 3A, 3C, 4, 4A, 5

**Opening hours:**  
Tuesday and Wednesday 9:00 – 18:00 h  
Thursday 9:00 – 17:00 h

**ECS entrance tickets\***

1-Day ticket	50.42 EUR
3-Day ticket	71.43 EUR



Visitor tickets obtained in advance are automatically allocated a free VGN (Greater Nuremberg Area Transport Authority) combined ticket that enables the bearer to use all public transport in the Nuremberg/Fürth/Stein area free of charge. Free admission for trainees and students from the coatings industry on presentation of suitable proof. Visitor registration should be made in advance if possible. However, tickets may also be purchased on-site. Guest tickets and vouchers can only be redeemed online.

\* All the prices indicated are subject to VAT at the prevailing rate.

**Online ticket shop:** (available from 3rd December 2024)  
Entrance tickets can be ordered online at: [www.european-coatings-show.com/tickets](http://www.european-coatings-show.com/tickets)

**Visitor information:** NürnbergMesse GmbH  
T +49 911 8606-4900, Fax +49 911 8606-4901  
[visitorservice@nuernbergmesse.de](mailto:visitorservice@nuernbergmesse.de)

## EUROPEAN COATINGS SHOW CONFERENCE: 24-26 MARCH 2025

**Location:** Nuremberg Convention Center East (NCC Ost)

**Opening hours:**  
Sunday Welcome get together 18:30 – 22:00 h (Downtown Nuremberg)  
Monday 11:30 – 18:30 h  
Tuesday 9:00 – 17:00 h  
Wednesday 9:00 – 12:30 h

Registration fees (early bird available until 20 January 2025)

<b>Conference*:</b>	Full Conference fee	1,950.00 EUR
	Early bird standard fee	1,755.00 EUR
	Two days Conference fee	1,700.00 EUR
	One day Conference fee	starting from 725 EUR

Streaming tickets will be available.

Conference speaker	510 EUR
University speaker	0 EUR
Student*	0 EUR

\*Full-time students only; students who fail to participate without notifying the organizer beforehand will be liable to pay a penalty of 200 EUR.

**Pre-conference tutorials:** (10 topics, limited availability)  
24 March 2025 09:30-11:00 h/350 EUR

Online registration started on 3<sup>rd</sup> December 2024 at [www.european-coatings-show.com/tickets](http://www.european-coatings-show.com/tickets)

**Discounts:** Companies exhibiting at the European Coatings Show 2025 or members of EuPIA and PRA will be given a 10 % discount off the standard fee. Exhibitors will receive a 10% discount, while academic institutions will benefit from a 50% discount.

**Fees cover the following services:**

- Admittance on the conference day(s) booked
- Conference proceedings
- List of attendees available digitally through My ECS: <https://digital.european-coatings-show.com/business>
- Lunch & coffee breaks
- Permanent exhibition ticket
- After-work reception
- Welcome get-together

\* All the prices indicated are subject to VAT at the prevailing rate.

### Masthead

#### European Coatings Show Preview

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# “IT IS LIKELY THAT LOCAL RATHER THAN GLOBAL LEGISLATION WILL DRIVE THE INNOVATION OR EVOLUTION”

Trends and challenges in titanium dioxide



**Andy White, Business Unit Director Paints and Plastics at FP-Pigments, gives an insight into titanium dioxide regulations and the impact on the coatings industry.**

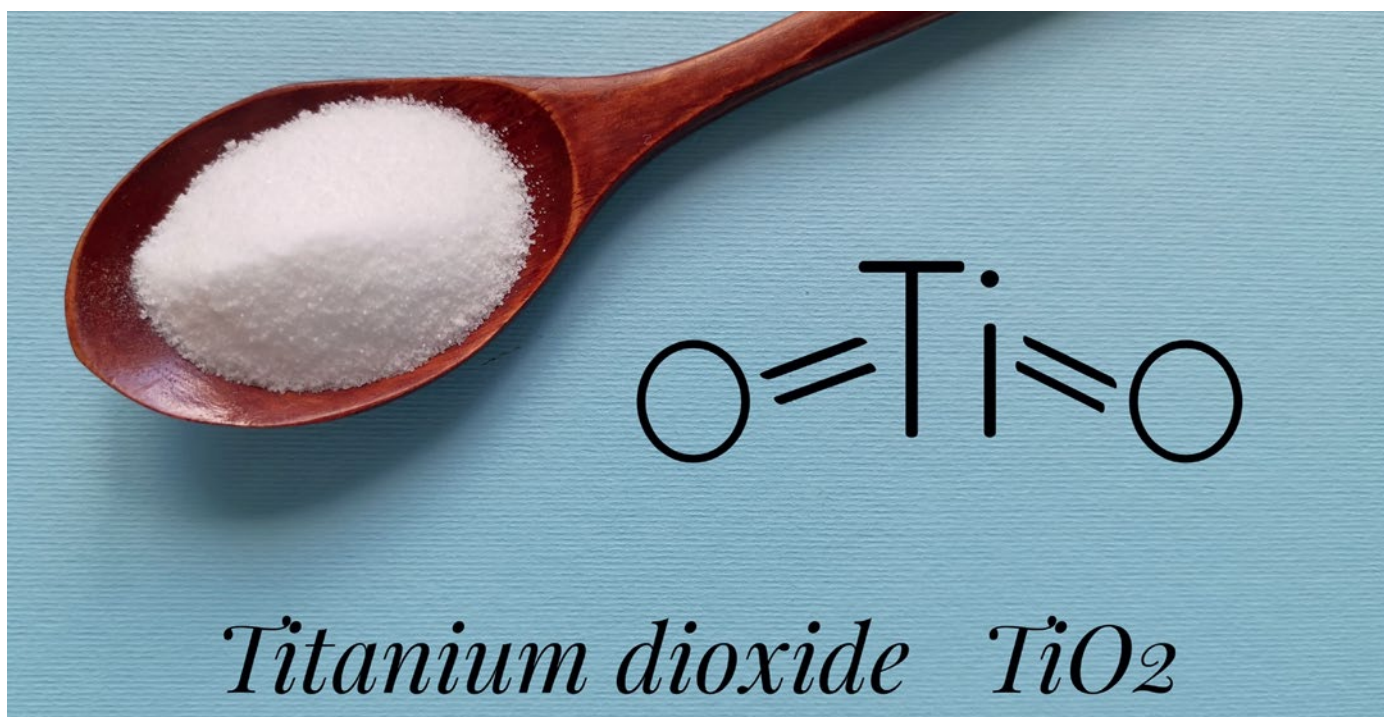
## How are recent regulations on TiO<sub>2</sub> affecting its usage in the paints and coatings industry?

There are potentially two issues here, both of which will affect TiO<sub>2</sub> usage over the longer term. The first of which is being addressed by the Titanium Dioxide Manufacturers Association (TDMA), that being the European Commission's attempt to classify certain powder forms of titanium dioxide as a category 2 suspected carcinogen by inhalation. The second is the pending self-classification of 1,1,1-trimethylolpropane (TMP) as a “suspected reproductive toxicant” (Rep. Tox. Cat. 2) by the EU TMD REACH consortium. The story and status of the Cat. 2 classification of TiO<sub>2</sub> can be found in detail on the TDMA website (<https://www.tdma.info/safety/classification-and-titanium-dioxide/>). In short the classification, whilst in force is under review but the consequence of this is only a minor labelling change to the majority of TiO<sub>2</sub> grades used. The result is that whilst the legal battles continue, the overall use of TiO<sub>2</sub> also continues by and large without effect. From 2020-2022 there was much uncertainty as to the outcome of the European Commission's final intentions and there was a lot of work focussed on TiO<sub>2</sub> alternatives or dust-free options like slurries. This time now seems to have passed and whilst certain niche markets continue to look to develop TiO<sub>2</sub>-free options, the bulk areas such as paint and plastics – where there is really no alternative to TiO<sub>2</sub> – continue largely as before with perhaps more of a focus now on sustainability than on toxicity. The second issue relating to TMP is newer and will become more apparent to formulators during 2025 and beyond. Work done within the scope of REACH has identified risks associated with TMP, which has resulted in a voluntary decision by producers to categorise the product. TMP has been used by almost all TiO<sub>2</sub> producers for many years as a process additive which also adds some improved dispersion perfor-

mance to the product. The level at which it is used is so low (0.3-0.5 % is below regulatory thresholds) that initially, the categorisation of TiO<sub>2</sub> products is unlikely to change in the short term but it is anticipated that regulations will tighten over time. TiO<sub>2</sub> producers have already started to explore replacements for this minor additive product, with one major player leading the way publicly with the launch of TMP-free products at the beginning of 2025. Others will no doubt follow suit, either highlighting the few products that contain no TMP at all or developing their own internal replacement. The effect on paint formulators will most likely be the simple need to approve the grades of TiO<sub>2</sub> from their suppliers who use the chosen TMP replacement. There is a small potential for this to differentiate previously commoditised products should different suppliers choose a different TMP replacement and the customer wishes to use multiple interchangeable grades. In time, however, we would expect the market to harmonise and use one simple material solution.


## What are the most promising ways to make TiO<sub>2</sub> production more sustainable?

There is really no alternative to TiO<sub>2</sub> and what it provides to the paint and plastics industries. The production of the required quality of rutile crystals and their subsequent surface treatment is technology that is well understood. Whilst one might argue for a more sustainable and efficient use of TiO<sub>2</sub>, the sustainability of production must be measured by considering the environmental effects of the inputs; that being energy (lots of it) ore (which has a large energy input in many cases) and the base chemicals used in purification (chlorine, sulphuric acid, coke and iron), each of which require energy to produce. The chemistry of TiO<sub>2</sub> production is such that of all the major raw materials, the contribution of energy to each will determine the improvements that can be made to sustainability. On top of this, manufacturers must also consider the waste material produced during production, which varies quite significantly from plant to plant. The fact that more than ~60 % of global TiO<sub>2</sub> is now made by China who rely on mainly fossil energy (>85 % in 2022 according to the IEA) means that for those markets dominated by Chinese material, the environmental compliance of the Chinese energy base will have a significant effect. For this reason it is likely that western TiO<sub>2</sub> producers, who almost all rely on a mix of more sustainable energy sources, will wish to communicate their own TiO<sub>2</sub> carbon footprint data



to their customers directly, rather than Chinese producers claiming the TDMA number published previously. The waste produced by both TiO<sub>2</sub> production plants and the supply chain providing the ore containing titanium vary considerably by process. Some in Europe are particularly well orientated. The legislation for controlling waste varies massively from country to country (something that has benefited both the US and the Chinese over the years) but which is expected to change in due course as the world becomes more cognisant of the environmental issues. It is likely that local rather than global legislation will drive the innovation or evolution that will improve the sustainability of TiO<sub>2</sub> production by reducing the waste produced at all stages of the supply chain.

## Are there innovations to recycle or re-use TiO<sub>2</sub> in paints to support circular economy goals?

The nature of paint is such that once applied, the TiO<sub>2</sub> inside a given coating is captive and unable to be reclaimed, often being overcoated until ultimate destruction. TiO<sub>2</sub> reclamation has therefore focused on paint that has not been used. As such a valuable commodity that is difficult to make, several groups of researchers are looking to extract TiO<sub>2</sub> from unused paint. However, whilst some of these projects are reporting success, the costs, chemicals and wastes involved mean that a dominant technology has yet to emerge. In theory, TiO<sub>2</sub> reclaimed chemically will either have had its surface treatment removed during the reclamation process or will be a mixture of various TiO<sub>2</sub> grades. In this case, either the reclaimed TiO<sub>2</sub> would need to be retreated for use in normal coatings systems or else it would likely only be used in composites or plastics. 

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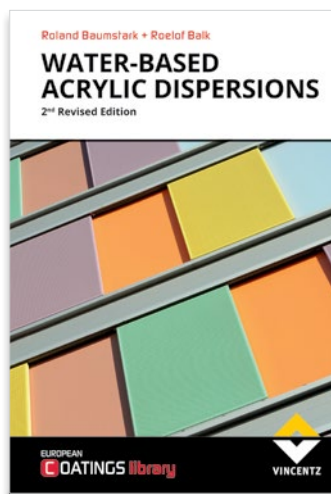
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# BECOMING AN EXPERT

New literature to deepen your coatings knowledge

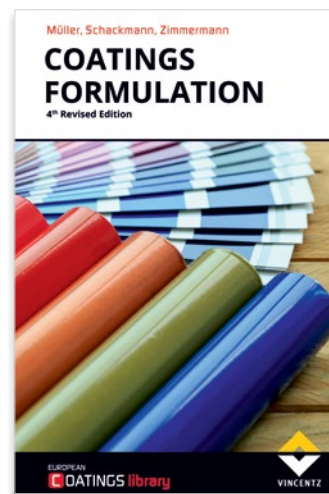
Literature is an excellent resource for expanding your knowledge. Whether you're just starting out in the industry or have years of experience, the European Coatings Library has something for you. We provide a wide variety of titles on various subjects related to the paints and coatings sector. Below is a small sample of what we offer. You can also explore more books and e-books at stand 454 in Hall 3 or visit our online store at [www.european-coatings.com/shop](http://www.european-coatings.com/shop).



## WATER-BASED ACRYLIC DISPERSIONS

By Roland Baumstark, Roelof Balk  
2<sup>nd</sup> Edition

Water-based polyacrylates, as emulsion binders, dispersing resins or thickening polymers, are nowadays impossible to do without as raw materials in the paint and coatings industry. In its second, updated edition this standard work offers a clear and comprehensive overview of everything one needs to know about the various types of binders, systems and test methods associated with the application of water-based acrylic dispersions in architectural coating systems. Essential for novices to the technology or those switching specialisms, along with students and experts who wish to expand and deepen their knowledge about the formulation and testing of water-based acrylic dispersions.



## COATINGS FORMULATION

By Markus Schackmann, Bodo Müller  
4<sup>th</sup> Edition

Coatings formulation explained step by step: already in its 4<sup>th</sup> 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 must-read if you are familiar with the basics of chemistry and wish to fully dive into the field of paints and coatings formulation!



## EC TECH REPORT OUTDOOR WOOD COATINGS

This multi-media EC Tech Report get you up to speed with the latest developments in outdoor wood coatings.

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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.

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## SILICON AND NANOTECHNOLOGY FOR COATINGS

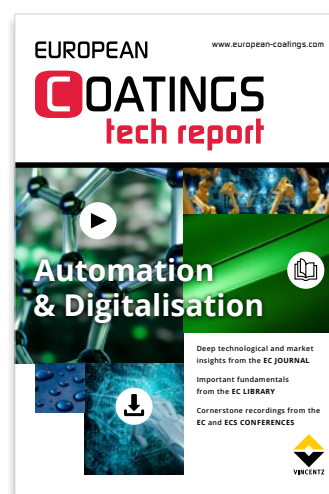
By Stefan Sepsur, Gerald Frenzer, Frank Groß  
2<sup>nd</sup> Edition

New global challenges in terms of energy, economy, and the need for alternative sources of raw materials are raising various future issues for the field of coatings formulation. This is where silicone chemistry comes into play, offering exciting possibilities and novel properties for coatings systems. Join the authors on their journey into a world of new raw materials that are sure to be adopted in the next generation of coatings: different types of silicon-based binders are clearly classified along with practical examples and real-life products. Their composition and chemical structures as well as their production and examples of their applications are explained in detail.

Step by step, the authors dive into the various areas of chemistry that make up silicon technology, such as glass, ceramics, nanotechnology, and sol-gel-technology.

Building on their first edition "Nanotechnology", the authors pay particular attention to the field of nanoparticles, offering powerful opportunities to integrate new functions into innovative high-tech coatings.

Delve into this fusion of silicon chemistry and nanotechnology, unlocking innovative, high-tech coatings formulations that are poised to conquer entirely new application markets in the future.



## EC TECH REPORT AUTOMATION & 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 in-depth 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 high-through-put technologies revolutionising research processes
- > automated quality control and process monitoring
- > automation in coatings production, 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.



# “PROGRESS IN THE BIO-BASED COATINGS MARKET OFTEN COMES IN SMALL STEPS”

Public education and transparent communication are essential



**Karin van der Helm, Lead Applications Scientist at Cargill Bioindustrial, gives insights the bio-based coatings market.**

**How would you describe the current market for bio-based coatings?** The market for bio-based coatings varies significantly across different regions. Europe is currently leading the way in the bio-based industry. The European market benefits from a combination of regulatory support, consumer awareness, and a commitment to sustainability. With the growth of the electronics market, including electric cars, interest in bio-based coatings for high-performance applications is increasing and in the United States driven by advanced technological capabilities. At Cargill, with our global presence in the coatings market, we closely monitor the needs of customers in different regions. Therefore, we are developing a complete range of 100 % bio-based dimer-based polyester polyols.

**Do you envisage any barriers to progress in the bio-based coatings market?** Performance is always the top priority when developing new coatings, including solutions that use bio-based or recycled ingredients. However, price can be a significant barrier. The mineral oil industry has had decades to optimise and scale up its processes, making it difficult for

new bio-based raw material producers to compete. This creates a chicken-and-egg situation where companies may cease production before gaining a foothold in the market. The availability of bio-based raw materials can also be a barrier, especially if companies require a second supplier. Additionally, there is a misconception that bio-based raw materials for coatings compete with food resources, which can negatively influence public opinion. Public education and transparent communication about the sources and benefits of bio-based materials are essential to overcoming this barrier.

**What could help accelerate progress?** After the pandemic, consumers and companies have become more aware of the importance of products that are perceived as being safer and healthier. Numerous initiatives, such as industry agreements and the UN Sustainable Development Goals, are contributing to companies further enhancing their ESG (Environmental, Social, and Governance) strategies. However, it is the regulations that play a crucial role in accelerating the growth of the bio-based products industry. Regulations that are building this journey include REACH (EU), TSCA (USA), EPA (USA), Air Pollution Control Law in China, the Bureau of Indian Standards etc. However, research and development play a crucial role in unlocking the unique properties that bio-based products can offer, justifying a higher price through enhanced performance. Innovations in bio-based coatings can result in products with superior characteristics.

**Where do you see opportunities?** There are significant opportunities for bio-based products in markets that demand high performance and can tolerate higher prices. This includes coatings that are chemical-resistant, hard yet impact-resistant, UV-resistant, or suitable for extreme temperatures. Beyond this, how can we combine bio-based products with other solutions which can further contribute to sustainable targets? This is why one of our innovation projects focuses on combining recycled raw materials with bio-based ingredients to create a novel polyester polyol for use in CASE (coatings, adhesives, sealants and elastomers) applications.

**Is there anything else you'd like to share?** It's important to be cautious about greenwashing. Companies need to balance emotions and data when com-

municating with end users and be transparent about their goals and claims. Greenwashing can undermine consumer trust and damage

the credibility of genuinely sustainable products. Transparency and honesty are crucial in building and maintaining trust with consumers.

Progress in the bio-based coatings market often comes in small steps, but these incremental advancements are crucial for long-term

success. By focusing on continuous improvement and transparent communication, the industry can build a sustainable future. 🌱

## »» DIVE DEEPER!

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

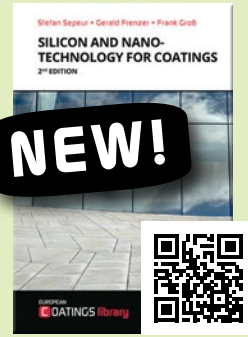
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COATINGS FORMULATION



WATER-BASED ACRYLIC DISPERSIONS



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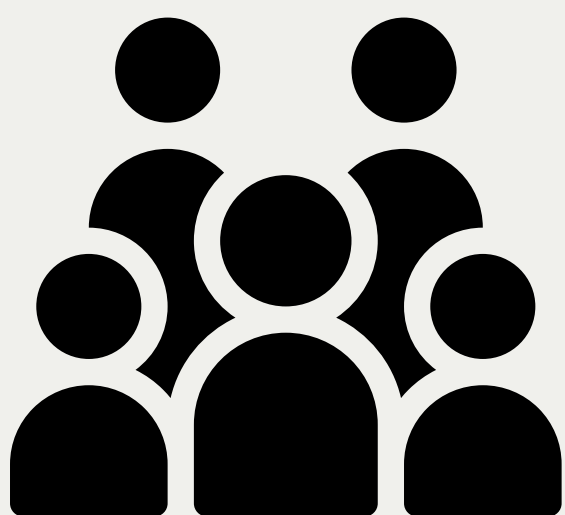


# WHAT A SHOW!

## Exhibition and conference in numbers

Since its debut in 1991, the European Coatings Show has evolved into the world's largest and most important event for the coatings industry.

### Number of exhibitors

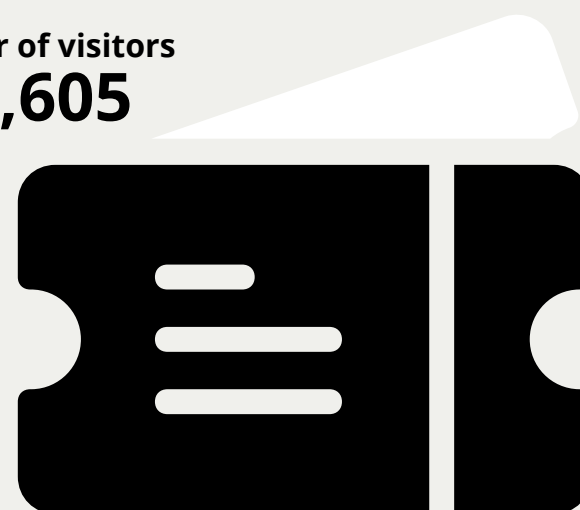


**1,017 exhibitors**

from 42 countries almost  
40,000 m<sup>2</sup> of net floor space

### Number of visitors

Number of visitors  
**24,605**

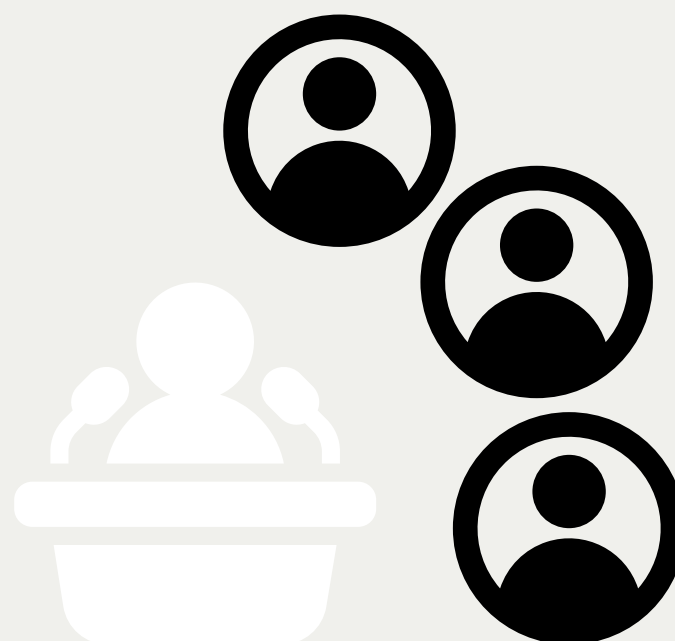


### Eco benefit

By waiving  
19,850 square  
metres of carpet  
at the  
ECS 2023,  
approximately

**282 tons  
of CO<sub>2</sub>**  
were saved

### Number of conference attendees



**731 participants**

from 50 countries



# “IT’S THE DAWN OF THE GOLDEN AGE OF INNOVATION”

What is new in biocides?



**Rick Strittmater, Chief Technology, Innovation and Sustainability Officer at Arxada, gives insights into the latest trends and challenges in biocides.**

**What are current trends in preservatives for paints and coatings?**

While the need for effective microbial control is clear and established, the landscape of available solutions is entering a period of rapid change which threatens the paint industry with increased supply chain costs due to premature wet-state spoilage, and thus rework, recalls, and waste. This situation is also creating challenges in maintaining long-term performance of the dry-state coating. And let's be clear, these changes are happening now; the industry is actively reformulating to protect against the financial hardships created by spoilage, rework, and recalls. Paint formulators are also implementing new solutions to maintain dry-film performance without using inferior approaches or jeopardizing the safety of the formulation. Industry observers typically point to regulatory pressures as the sources of change and drivers of innovation. Undeniably, regulatory pressures are real and ever tightening, resulting in fewer globally approved biocidal active substances, as well as reduced globally accepted use levels of the remaining actives. However, when these imminent regulatory changes are combined with consumer, societal, and environmental drivers, the need for new solutions for microbial control is greater than ever. Fortunately, the drivers of rapid change come at a time when scientific capabilities to develop new solutions are thriving. In fact, we see a scientific revolution in microbial control emerging, with advancements in biological science, toxicology, environmental science, and advanced chemical delivery systems leading to unprecedented innovation of safer and more effective solutions. Today, P&C is on the verge of benefiting from insights from advanced biological toolsets that lead to development of revolutionary approaches to wet-state preservation. At the same time,



Source: cassis - stock.adobe.com

P&C is already benefiting from accelerated innovation in future-ready encapsulation technology, which is delivering high-performing active ingredients with reduced carbon footprint, favorable environmental profile, and flexibility for optimized performance. When combined with the few proven sustainable actives, such as IPBC and Isoproturon (IPU), these innovative delivery systems provide industry with advanced solutions that are being adapted rapidly. For example, “Polyphase 862CR”, one of Arxada’s innovative Time controlled release dry-film preservatives, represents a class of broad-spectrum, sustainable, and targeted products with enhanced efficacy, improved chemical stability, and leach-resistant properties, while meeting regulatory requirements. With IPBC and IPU composition, “Polyphase 862CR” is exhibiting excellent results across all categories of evaluation metrics. With a reduction in the number of active substances available to the formulator, the ability to tailor the amount of active delivered over time is even more important.

**What current regulatory challenges do you have to overcome, in general and in R&D work?** Regulatory impacts on the biocides industry come from the European BPR, US EPA, and Canadian PMRA. Customers’ desire for global products is becoming significantly more challenging as regulators restrict or ban existing active substances. Based on recent regulations around VOC, skin sensitisation labeling thresholds, ecotoxicity, and CMR opinions, only a handful of active substanc-

es remain available for global use. This makes harmonised protection of certain industrial formulations extremely challenging, and so we are seeing customers utilize our advanced technical services more frequently to help them meet these tough preservation challenges. We see three critical, imminent regulatory challenges that are driving the industry to make changes today. First are the classification and labeling changes for BIT, which are driving customers to adopt new wet-state solutions. This is occurring on an accelerated schedule. Second are the challenges due to pressure on sanitization biocides such as DB-NPA. This threatens the ability to maintain effective plant hygiene and therefore puts the smooth operation of paint production facilities at risk. The third critical, imminent challenge facing the industry is the need for effective antifungal protection in exterior coatings. Broad-spectrum protection (incorporating both fungal and algal control) is the true standard for optimum performance, providing defense against a wider array of potential threats. Crucial to this defense is the availability of a true antifungal active ingredient. In the EU, with recent legislation classifying Diuron as a CMR, coatings manufacturers are essentially left with only two available algacides: Terbutryn (TBT) and Isoproturon. IPU has a more favorable compliance position, with a milder classification, and hence a potentially lengthier regulatory horizon. Arxada fully supports IPU as a lead technical registrant, and is advocating for its future use in the EU and beyond. Only this way can we con-

tinue to ensure that the industry and end-consumers benefit from the seamless broad-spectrum protection that coatings require.

**What are the most promising biocidal alternatives?** We are seeing the emergence of true sustainable preservation in the market today, including the launch of leading-edge products and non-biocide ingredients that provide an array of unexpected benefits due to formulation synergies. These multifunctional additives offer a great deal of promise, and mastering this complex science is the key to leading the industry into the future. However, this is just the beginning. Collaboration across disciplines and across the industry will serve to accelerate solutions, especially with open innovation approaches where

customers, suppliers, authorities, and industry experts work seamlessly on the toughest preservation challenges. These are exciting times in the preservation space. Just over the horizon are some exciting future-ready innovations that will form the next generation of protection. With lower active levels and an array of new materials that augment performance in ways we hadn’t imagined not too many years ago, preservation is getting smarter. It’s what we at Arxada like to call Better Science to solve the world’s toughest preservation challenges. It’s truly the dawn of the golden age of innovation, and we’re thrilled to be leading the way along with our valued customer partners as we look toward embracing the most significant developments in preservation in decades.



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# “A DIRECT 1:1 REPLACEMENT IS OFTEN CHALLENGING”

Formulators are exploring safer and more sustainable options

Roger Reinartz, Head of Applied Research & Technology, Industrial & Transportation Coatings EMEA, Evonik Coating Industries speaks about the challenges for replacing PFAS in products.

**What is the current situation regarding PFAS in the coatings market?** The coatings industry is experiencing a major shift due to growing concerns about the environmental and health impacts of per- and polyfluoroalkyl substances (PFAS). These substances

have traditionally been valued for their excellent water and oil repellency, chemical resistance, and durability. However, with potential or increasing regulations, many formulators are actively searching for alternatives to fluoro-based additives. This change is encouraging formulators to explore safer and more sustainable options across various applications, including industrial and transportation coatings like cook and bakeware, plastic, protective, and powder coatings. As regulations become stricter, the industry is focusing on innovation to phase out PFAS while maintaining performance standards. Partnering with our customers to find innovative solutions to replace PFAS without compromising product performance is crucial.



Roger Reinartz, Evonik

effective defoaming and deaeration without PFAS.

**How can coating manufacturers successfully switch to PFAS-free products?** To successfully transition to PFAS-free products, coating manufacturers should start by assessing the roles PFAS play in their formulations and identifying alternatives that can deliver similar performance. Although a direct 1:1 replacement is often challenging, exploring different additive families and combinations can achieve the desired results. Our company offers a comprehensive range of solutions to facilitate this transition. For instance, a range of silicone hybrid resins that offer heat resistance and non-stick properties for cookware applications. In marine coatings, we offer defoamers designed to help formulate high-solids and ultra-high solids coatings without PFAS. By integrating these alternatives, manufacturers can maintain essential properties such as water and stain resistance, durability, and optical qualities while significantly reducing environmental risks. Our commitment is to partner with manufacturers to ensure a smooth and effective transition to sustainable solutions.

**What particular challenges do you see?** Replacing fluoro-based additives poses several challenges due to their unique properties. The hydrophobic and oleophobic nature of fluorocarbon chains makes them highly effective at lowering surface tension, improving substrate wetting, and eliminating film defects – key benefits in both water-based and solvent-based systems. Finding alternatives that replicate these performance characteristics without the associated environmental risks requires careful consideration of structural and behavioural effects. We are committed to supporting our customers through this transition with product ranges that offer innovative solutions tailored to meet specific needs. For example, a siloxane-based gemini surfactant that combines substrate wetting and anti-crater effects with defoaming properties or a deaerator concentrate that provides ef-

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www.european-coatings.com/conference/biobased-waterbased-coatings



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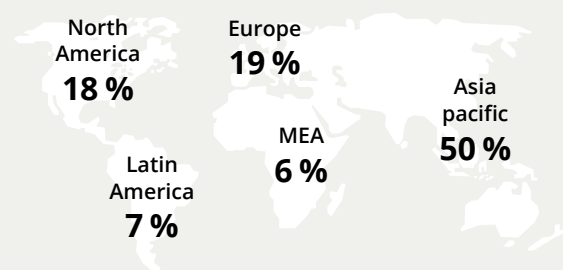


# THE GLOBAL COATINGS MARKET

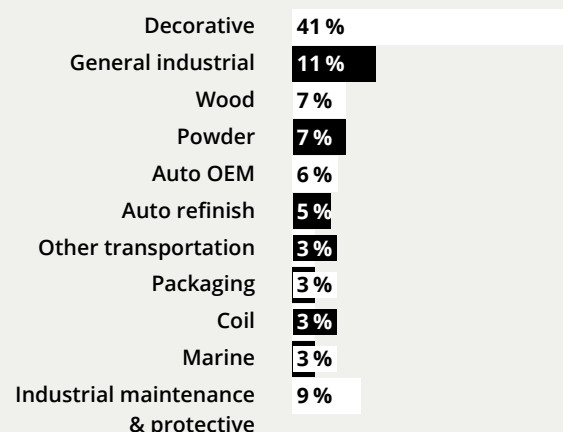
## Facts and figures

What share do the most important paint and coatings segments have, what's the regional breakdown, and which technology is dominating? Get a quick overview from the figures below (Source: ChemQuest).

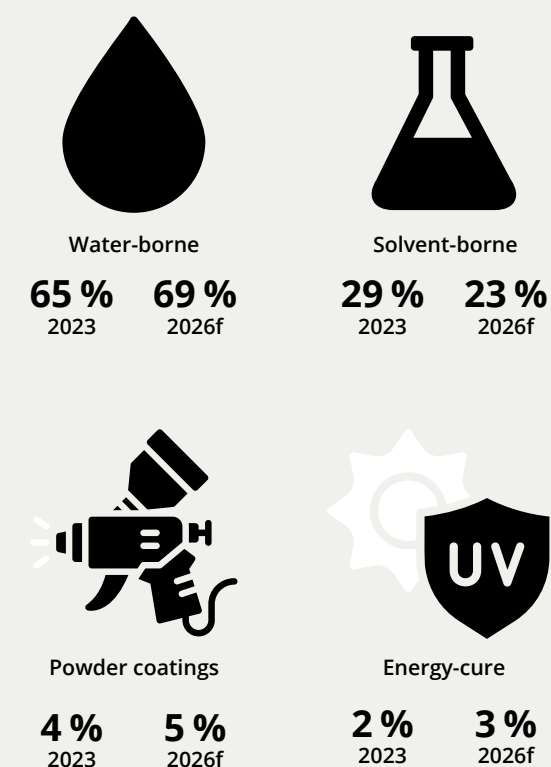
### Regional breakdown in 2023



### End-market breakdown in 2023



### Technology share by volume, 2023-2026f



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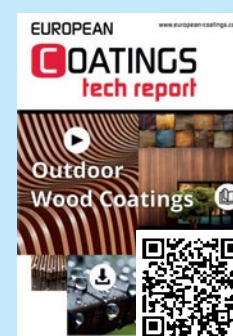
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# A BLEND OF HISTORY AND CHARM

Plenty of sights and restaurants in Nuremberg



**Nuremberg, Bavaria's second-largest city with a population of over half a million, offers a unique combination of historical significance and urban charm.**

**D**espite its size, the Old Town gives a quaint impression that can make the city feel more intimate than its numbers suggest. A key historical landmark is the Imperial Castle, Kaiserburg, parts of which are nearly a thousand years old. Albrecht Dürer, the renowned painter born in 1471, is closely associated with Nuremberg. His preserved home and workshop in the Old Town provide insight into his life and work. The city features a range of notable attractions, including the historic Old Town with its impressive buildings, the significant churches such as St. Lorenz, and

the charming winding streets. Other points of interest include the hidden rock passages, the historic St. John's Cemetery from the early 16th century, and the Nuremberg Zoo. For a more comprehensive look at Nuremberg's attractions, visit [www.tourismus.nuernberg.de/en](http://www.tourismus.nuernberg.de/en).

## DELICACIES APLENTY

No visit to Nuremberg is complete without sampling its local cuisine. The city is famous for its Nuremberg sausages, small, flavorful sausages often enjoyed with sauerkraut or potato salad. Another local specialty is the Nuremberg gingerbread, a sweet treat with a rich history that reflects the city's culinary heritage. Beyond traditional Bavarian food, Nuremberg also offers a diverse range of international cuisine. Visitors can

enjoy dishes from various regions, including Mediterranean, Asian, and Middle Eastern flavors. Moreover, the city is home to no less than nine Michelin restaurants. More information on food can be found at <https://tourismus.nuernberg.de/en/food-drink/>





# “DRY MORTARS IN THEMSELVES CONTRIBUTE TO SUSTAINABILITY IN CONSTRUCTION”

The status quo of the dry mortar industry



Ferdinand Leopolder  
Drymix.info

**Global turbulence has reshaped the construction chemicals and dry mortar industries. Yet, dry mortar thrives amid declining new builds, driven by renovations and sustainability goals. Ferdinand Leopolder, founder and president of Drymix.info, the international community for dry-mix mortar, on the status quo of the dry-mix mortar industry.**

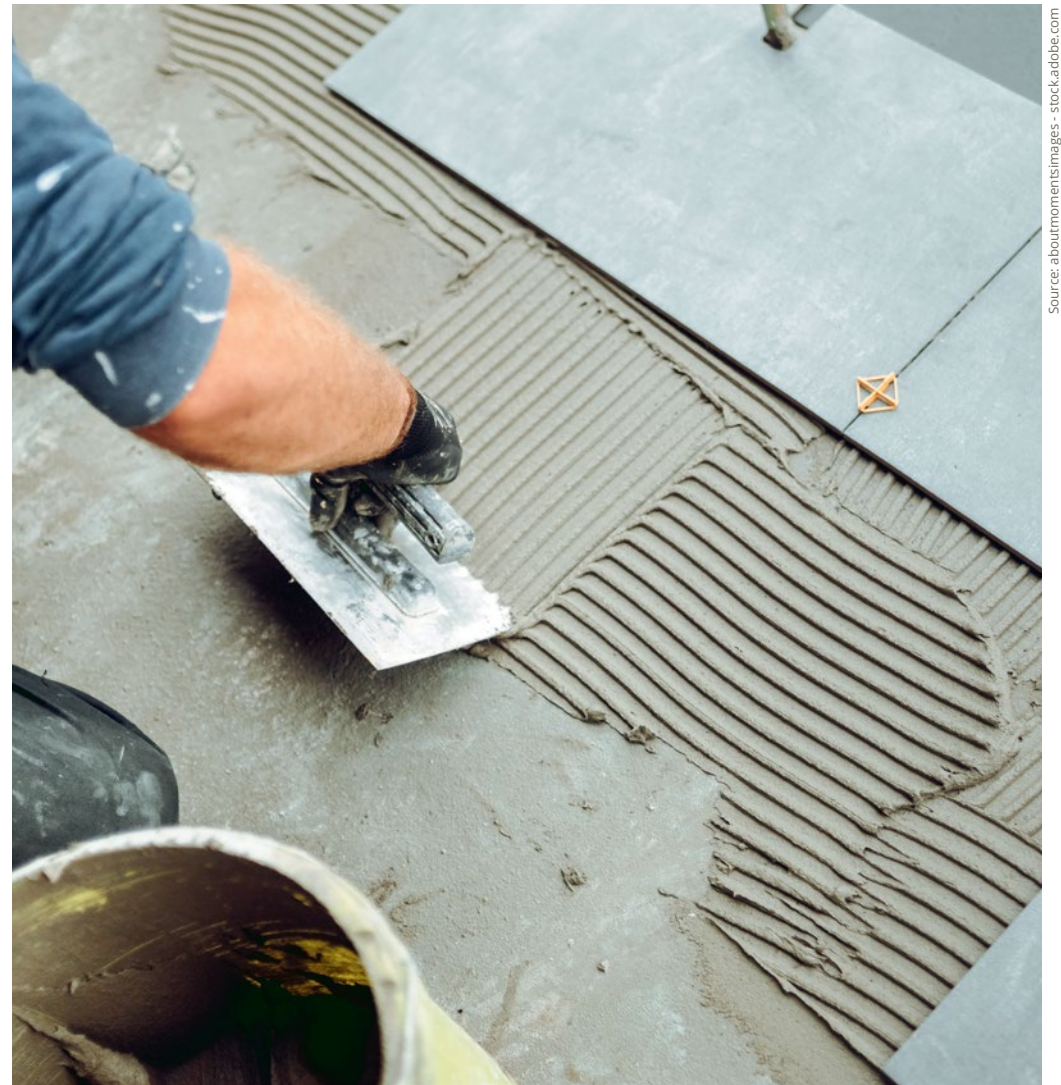
**How is the current economic situation affecting the construction chemicals industry and the dry mortar industry in particular?** The sequence of events – a construction recession in China (from 2019) – a pandemic (2020) – the war in Ukraine and a turnaround in interest rates (2022) – has unsettled, if not disrupted, global markets. For the construction industry, the knock-on effects were sometimes grotesque. In the first two years of the pandemic, the full order books were worked through at a leisurely pace, until the inter-

rupted supply chains for raw materials and equipment became noticeable at the end of 2021. Inflation and increased costs made a price increase necessary, with a simultaneous decline in new construction. However, a different picture emerges when we look at the dry mortar segment: when less is invested in new construction, renovation and (thermal) refurbishment flourish. As a result, our industry was able to record slight growth, while stagnation or even recession had to be noted for the main construction business. Globally, dry mortar applications are growing worldwide, and the remaining substitution potential is huge. A complex situation is currently emerging in Eastern Asia. China has had enormous overcapacities for a long time, both in terms of raw materials and dry mortar itself. These companies are now entering the world market (dry mortar: to Southeast Asia) as the domestic market shrinks.

**What are the technical trends in dry mortar?** In recent years, adapting formulations to new composite cements with dramatically reduced clinker content has played a major role, not only in Europe. The introduction of CEM II to CEM VI may play a lesser role in ready-mix concrete and in the production of prefabricated parts, but in dry mortar, with its many organic and inorganic additives in powder form, it requires more complex and costly adjustments. The aim of the exercise is, of course, sustainability while maintaining

the performance of the mortar. The three-dimensional extrusion of mortars (3D Construction Printing, 3DCP) is a spectacular new development that has been made possible by the increasing automation on construction sites in recent decades. In particular, silo systems and controllable mixers/pumps play a crucial role here, but the formulation of such mortars is also not trivial. In markets such as Germany or Japan, where skilled labor is scarce, 3DCP would certainly have a chance of catching on, but it cannot be ignored that the entire technology is not yet market-ready. It is not clear whether the technology is competitive and the (static) requirement profile for 3DCP for multi-story buildings is still unclear.

**What role do sustainable solutions play here?** Dry mortars in themselves contribute to sustainability in construction, not only because they are a crucial component of external thermal insulation systems (ETICS): they significantly extend the useful life of buildings, and they do so in thin, functional layers. They thus minimize the consumption of natural resources and the maintenance cycles. While in the last decade there was still some evidence of “greenwashing” of products by the industry, today we are dealing with serious efforts by the industry to make real improvements in the CO<sub>2</sub> balance of mortars. This is not only about the use of new composite cements and recycled building rubble (aggregates), but also about organic



Source: aboutmomentimages - stock.adobe.com

and inorganic additives becoming “greener”, for example, through so-called mass-balance processes, which reduce the use of fossil raw materials. Meanwhile, there are even high-performance mortars that, with the lowest cement con-

tent (less than 5%), far exceed the performance range of epoxy coatings and mortars. In the future, the focus of dry mortar production in industrialised countries and China must be on further developing and improving the environmental

performance of mortars, while in emerging markets, the substitution of conventional methods – especially on-site mixing – is paramount. **3**

## DIRECTIONS AND ACCESS

How to get to Nuremberg

**The event location of the ECS 2025 can easily be reached by car, train and airplane.**

### BY CAR

- > Fast connection to the A3, A6, A9, and A73 motorways
- > Signage from all directions and well-designed access routes to the Nuremberg Exhibition Centre
- > You always get the most efficient route thanks to Europe's leading traffic and parking guidance system
- > Address for your navigation system:

Karl-Schönleben-Strasse  
or “Sonderziel Messe”

### BY RAIL

- > High-speed trains like the ICE and national and international long-distance trains like the IC and EC connect the Nuremberg Central Train Station with all of Germany and Europe
- > Direct transfer at the Central Train Station: Take Underground Line 1 toward “Langwasser Süd” for about eight minutes to the “Messe” stop; Zone A single ticket or Day Ticket

(recommended if you expect multiple trips)

- > Check local public transportation connections online at: [www.vgn.de](http://www.vgn.de)

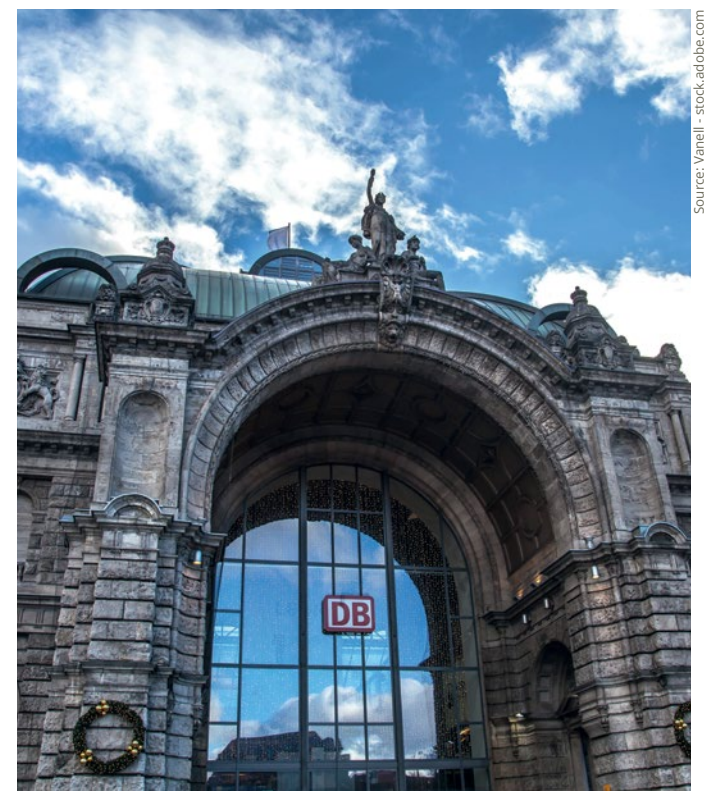
### BY AIR

- > Nuremberg Airport has numerous direct flights all over Europe and to the major European air hubs
- > Intercontinental flights out of Frankfurt and Munich Airports are easily accessible via connecting flights or ICE
- > Direct transfer to Underground trains:

Take Underground Line U2 from the “Airport” station towards “Nürnberg Röthenbach”; Zone A single ticket or Day Ticket (recommended if you expect multiple trips)

- > All you need is one change at the Central Train Station to Underground Line U1 towards “Langwasser Süd”; total travel time around 20 minutes from the “Airport” station to “Messe” **3**

Source: NürnbergMesse



Source: Vaneil - stock.adobe.com



# A MUST-ATTEND EVENT

Impressions from the European Coatings Show and Conference 2023



An exuberant atmosphere all around



Well-attended Product Presentations



Tangible excitement



Plenty of highlights at the Plenary Session



Demonstrating the latest developments



Discussions in full swing



Buzzing showfloor



Networking opportunities galore



Presenting innovations at the conference

Source: Heiko Stahl and Thomas Geiger (9)



# ADHESIVES AND SEALANTS

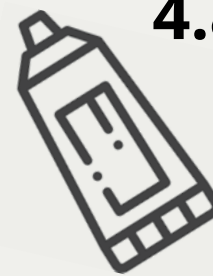
The market in numbers

Global market



~ EUR 63 billion

European market size



4.8 million tonnes

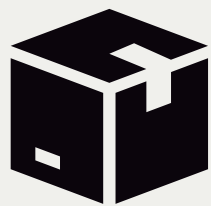
83.5 %  
adhesives  
16.5 %  
sealants

EUR 19.9 billion

75 %  
adhesives  
25 %  
sealants



European demand by market segment (value)



30 % Paper, board, etc.

Assembly/other 22.8 %



17.2 % Construction

Consumer/DIY 10.2 %



9.3 % Woodworking and joinery

Transportation 8.6 %



2 % Footwear and leather

European adhesives demand by product category

Volume  
(4 million tonnes)

Value  
(EUR 14.9 billion)

Volume (4 million tonnes)	Product Category	Value (EUR 14.9 billion)
45.4 %	Polymer dispersion and emulsions	27.6 %
19.5 %	Reactive systems	41.9 %
15.6 %	Hot melts	12.9 %
8.5 %	Adhesives based on natural polymers	3.7 %
6.9 %	Solvent-based systems	10.9 %
3.3 %	Adhesives based on water-soluble polymers	2.6 %
1.1 %	Others	0.3 %



# The Leading Coatings Shows & Conferences



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**Delhi, India**  
**January 30 – 31, 2025**  
[www.paintindia.in](http://www.paintindia.in)



**Nuremberg, Germany**  
**March 25 – 27, 2025**  
[www.european-coatings-show.com](http://www.european-coatings-show.com)



**São Paulo, Brazil**  
**September 23 – 25, 2025**  
[www.abrafatishow.com.br](http://www.abrafatishow.com.br)



**Jakarta, Indonesia**  
**October 29 – 31, 2025**  
[www.pacific-coatings-show.com](http://www.pacific-coatings-show.com)



**Sharjah, United Arab Emirates**  
**November 24 – 26, 2025**  
[www.gulf-coatings-show.com](http://www.gulf-coatings-show.com)



**Indianapolis, USA**  
**May 5 – 7, 2026**  
[www.american-coatings-show.com](http://www.american-coatings-show.com)