

The Show and Conference Daily I www.american-coatings-show.com I May 2, 2024

An Event On Point

Another successful day of networking and innovation



Yesterday was the second day of the American Coatings Show and Conference and once again the event was well-attended. As of yesterday, 8,000 people had attended the ACS.

L ike on Tuesday, the show floor was busy. There was also a great deal of exchange at the conference as eight more sessions took place.

"There is a never-ending list of options and networking opportunities for everyone that attends. The Product Presentations are sold out and are taking place every fifteen minutes," said Cheryl Matthews, vice president, Events & Expositions at the American Coatings Association. "We have over 90 conference presentations, and the largest student poster session in AC Conference history took place on Tuesday. I'm delighted with the positive feedback so far."

A common theme was more sustainable solutions. "The ACS highlighted the industry's commitment to sustainable practices, paving the way for a more environmentally conscious coatings sector," stated Matthias Janz, director Trade Shows in the Coatings Division at Vincentz Network. "I am eagerly awaiting the future developments and the presentation of prospective solutions in 2026."

After its launch in 2016, the Fun Run returned for its fourth edition, attracting

many participants for a 5k run for a good cause. It wasn't the only crowd-pleaser to make a comeback; the Powder Coatings Pavilion and the Product Presentations also drew many interested visitors.

MARK YOUR CALENDARS

Today's event wraps up at 1:00 pm, but the next American Coatings Show and Conference is set to return in two years. In 2026, the event will open on April 5 and run through May 7 at the Indiana Convention Center in Indianapolis.

For more information, visit: www. american-coatings-show.com

0



www.niemann.us

CONTENTS

AC Show Show Wrap-up Fun Run	
AC Conference Second Conference Day	5
I nterviews Polyurethane Coatings Functional and Smart Coatings	
Service Coatiings Literature	6

THINGS TO DO

- Check out the Lamborghini at Aal Chem, booth #2340
- Battle your colleagues in a game of Pacman at Keim-Additec Surface, booth #2046
- Play a game of mini golf
 at KW Container, booth #1929
- Check out the virtual reality glasses at Brenntag, booth #1954

Sustainable Technology-based Additive Solutions

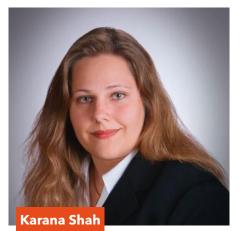
At Lumina, innovation begins with sustainable raw materials perfected with elegant engineering and custom chemistry. We welcome partnerships to develop next-generation paint additives.



- Ultra-white barium sulfate for solar reflectance
- Low-cost white microspheres
- Effective TiO2 replacements
- Safe intumescent coatings / FR

Extensive Areas of Application

Epoxy coatings are used in many market segments



Ascend Performance Materials Booth #3070

Karana Shah, technology director for specialty chemicals at Ascend Performance Materials, describes the versatility of epoxy coatings and interesting new developments. Where is your current research on epoxy coatings focused? Our research on epoxy coatings is focused on the use of amine curatives that are produced as co-products from our polyamide 6,6 manufacturing process. These amines (triaminononane, bishexamethylenetriamine, diaminocyclohexane) are similar in structure to ethyleneamines or IPDA, which are commonly used in epoxy coatings. We're developing data to show where these amines bring additional value compared to more traditional molecules that are used to cure epoxy coatings.

In which market segments are epoxy coatings most in demand, and why? Epoxy coatings are so versatile that they are used in many market segments including building and construction, transportation and industrial. In the industrial space, epoxy coatings that can cure at ambient temperature are in demand for protective coatings, especially for use over large surface areas. These include marine coatings, infrastructure coatings, tank linings and



floor coatings where epoxies provide the best balance of moderate viscosity, rapid cure, chemical resistance, toughness, and mechanical properties. Workability and cured resin properties can be tailored by the choice of epoxy and curing agent, formulation and curing cycle.

Which novel applications in this field do you consider especially interesting? The emerging technology around reversible bonds in cured epoxy that could allow reclamation of monomers and fibers/ fillers for truly recyclable thermoset systems is very compelling. Unfortunately, a lot of cured epoxy components cannot currently be recycled and end up in landfill or at best, ground up and used as filler for other products. I anticipate more growth in this area as the market continues to demand more sustainable products. Low/no VOC epoxy coatings are also an area where interesting developments are being made.



INTERVIEW

"Demand is Increasing for Bio-based Raw Materials in Both 2K and PUD Coatings"

Trends and challenges in polyurethane coatings



Chuck Jones, market segment manager for coatings at Ingevity, shares his insight into the polyurethane coatings sector.

What challenges is the polyurethane coatings sector facing? The first major challenge for polyurethane coatings at the moment is to improve their sustainability profiles while maintaining performance. This includes achieving lower (or zero) VOC levels, along with incorporating less hazardous raw materials. Another challenge is enabling water-based technologies (2K and polyurethane dispersions, or PUDs) that perform as well as their solvent-based counterparts. Corrosion resistance is an ongoing need for metal substrates, with the need for higher levels of resistance (C4 and above) with thinner film thicknesses.

How prevalent are water-based systems? Water-based polyurethane systems are prevalent in furniture and floor coatings as well as textile and leather applications. This is mainly due to their performance attributes that include a balance of chemical resistance and flexibility. In the automotive and industrial coatings sectors, there is room for growth of water-based polyurethane technologies. The majority of water-based systems are still 1K, with noticeable growth in UV-curable polyurethane dispersions.

What do you think will be key future trends in polyurethane coatings? The demand is increasing for bio-based raw materials in both 2K and PUD coatings. Another clear trend is the elimination of concerning substances that are widely used, for example TMP (trimethylolpropane) and heavy metals. Due to their versatility, I foresee the incorporation of smart technologies in polyurethane coatings, including anti-microbial, self-healing, and haptic technologies. With driverless vehicles on the horizon, interior automotive



Ingevity Booth #634

coatings will become more important to passengers that desire a more comfortable experience while riding in vehicles.

TexFRon[®] / Phosflex[®]

• 100% solid-based systems

• Water-based systems

Solvent-based systems

• 1K & 2K Systems: Acrylic,

PU, Epoxy, Alkyd, Hybrid

/ LaqFRon[®]

Powder coating

AC Show Daily 2024

Publishers

American Coatings Association (ACA) 901 New York Avenue, NW Suite 300 West Washington, DC 20001 www.paint.org



Vincentz Network (VN) 2885 Sandford Ave., SW #15817 Grandville, MI 49418



Editorial Contacts Danielle Chalom (ACA) T (202) 719-3692

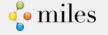
dchalom@paint.org Kirsten Wrede (VN) T +49 (511) 9910 212

kirsten.wrede@vincentz.net

Layout and Production Nathalie Heuer T +49 (511) 9910 267 nathalie.heuer@vincentz.net Sales Anette Pennartz T +49 (511) 9910 240 anette.pennartz@vincentz.net

Printer

Miles Printing 4923 W 78th Street Indianapolis, IN 46268 T (317) 243-571 www.milesprinting.com



Copyright

No portion of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical including photocopying, recording, or by any information storage or retrieval system without permission in writing from the publisher.

Place of jurisdiction: Washington, D.C.



Disclaimer. The views and opinions expressed in the articles and interviews in

the American Coatings Show Daily are those of the authors and interview subjects, and do not necessarily reflect the official positions of AC Media, the American Coatings Association, or Vincentz Network.



Flame Retardants for Coated Surfaces

ICL has a proven track record of providing flame retardant products with superior fire resistance, environmental safety and sustainability that mitigate risk by reducing exposure. We continually monitor flame retardant market trends in order to introduce cost effective innovations that make the most sense for the entire value chain and the environment.

Thanks for visiting us at the American Coatings Show 2024!

ICL / HALOX | 1326 Summer St. | Hammond, IN 46320, USA | P: +1-219-933-1560 ICL / BK Giulini GmbH | Am Hafen 2 | 68526 Ladenburg, Germany | P: + 49 6203 770 frinfo@icl-group.com / www.icl-industrialproducts.com

AC SHOW

Sustainability Remains the Dominating Theme

Busy second day at the American Coatings Show

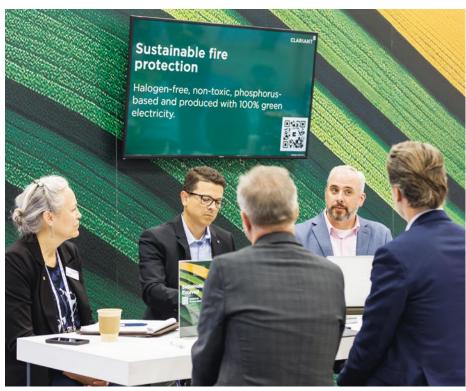
The second day of the ACS demonstrated an even busier show floor than on the opening day. As at the last edition, sustainability remains the dominant theme - but with even greater emphasis than in 2022, the first post-pandemic show.

"So far, the show has been great, we have a lot of visitors from different areas of the world," said Luis Carthery, senior business director - Americas, Performance Coatings, at Lubrizol Advanced Materials. "The trend I see is definitely related to how we can be more sustainable, how we can help customers to meet their requirements here," he observed. "There is a strong trend to maintain or improve performance, while meeting sustainability standards." Another important trend he cited is that customers are more concerned about sustainability in the supply chain, how they can be supplied consistently over time for their product lines. According to Carthery, customers are looking for suppliers with a global network to supply manufacturers.

For Séverine Dumay, global communications manager at Arkema Coatings Solutions, it's a "must" to be at the ACS, as the U.S. market is very important for the company. She also highlighted the mega trend of sustainability: "It's key for our company. We did a lot of internal educational training, and now our people are more and more committed to the process." As part of a transformation process, "we have moved from a product-centered view to a more market-centered view, because what we see is that our customers' customers are starting to make these demands," Dumay added. In her opinion it's not even Arkema pushing sustainability, but they are trying to react and adapt to what their customers and the customers' customers demand.

BASF's Frank Hezel, vice president global business management resins, and Denise N. Hartmann, senior vice president, dispersion and resins division, Amercas, were both pleased with the level of activity at their booth. Talking to their customers, they observed three general trends. First: helping their customers reduce costs. Second: performance enhancement: "We see a lot of requirements in the industry for less maintenance on the coated product," Hezel said. Third: sustainability. "This is a core topic, where we are looking at how we can support our customers to reduce their carbon footprint," he added. "By combining a bio mass balance and a bio-based concept our customers can actually choose the way of CO₂ reduction. We offer them the flexibility between the different concepts."

Scott Zimmerman, director - sales and customer service, Americas, Atlas Material Testing Solutions, has been coming to the ACS for a long time and was very pleased



A lot of exhibitors were pleased with the level of activity at their booths.

with the attendance especially on the second day. "My observation is a much more international crowd than I recall from previous years. I see a lot of folks from all over the world, which is good. It brings more life, more information into the U.S. American coatings market." Zimmerman stressed that Atlas is part of a very specific industry, focused on weathering. "People who come to see us are really focused on how their material performs in the real world."

Several exhibitors appreciated the fruitful combination of technical presentations at the American Coatings Conference and personal exchange and discussions at the exhibition booths and on the show floor.



"The U.S. market is very important to us, so we have to be here. Sustainability is the key topic for us. We have moved from a product-centered view to a more market-centered view, because what we see is that our customers' customers are starting to make these demands. "



Atlas Material Testing Solutions

"My observation is a much more international crowd than I recall from previous years. I see a lot of folks from all over the world, which is good. It brings more life and more information into the U.S. coatings market."

Exhibitors' Voices

Representatives of exhibiting companies comment on the show and trends challenging the industry.



"Talking to our customers, we see three general trends: Helping our customers to optimize their costs. Performance enhancement: We see a lot of requirements in the industry for less maintenance on the coated product. And very importantly, sustainability is a core topic, where we can support our customers in carbon footprint reduction."



"When I come to a show like this, the word that comes to mind is "more." More suppliers, more customers and more opportunities to talk to people more efficiently. It's all very conducive to success and more interaction, and that's what I tell my team."



Lubrizol Advanced Materials

"The trend I see is definitely related to how we can be more sustainable, how we can help customers meet their requirements. There is a strong trend to keep or improve performance, while meeting sustainability standards."

SHOW AND CONFERENCE

Savoring Science

With nearly 100 presentations on offer, the audience was faced with a tough choice

The American Coatings Conference kicked off on Tuesday with the keynote address and awards ceremony, four conference sessions, and concluded the first day with a Poster Session.

t was the largest selection of posters to date, with 36 presenters, including 30 students, showcasing work from their respective labs. The latest academic and industrial research was discussed during the concurrent Networking Reception.

More than 930 attendees registered for this year's American Coatings Conference, some of whom traveled far to attend. Attendees originated from a total of 29 countries.

With so much work being done by research and development teams, there was much to discover in terms of raw material innovations and formulations. The agenda left plenty of time to visit the show floor and network with fellow attendees and exhibitors. Yesterday, attendees enjoyed a full day at the American Coatings Conference.

MORNING SESSIONS

Morning sessions included Functional Coatings 1, Architectural Coatings 1, Industrial Coatings 2 and Waterborne Coatings 1. The Functional Coatings session, for example, attracted many interested attendees. Chaired by Dale McIntire of Behr, a presentation on novel additives for abrasion resistance in polymer coatings by Ryan Khawarizmi of PPG attracted an audience of over 120.

Equally popular was the session on architectural coatings. Chaired by Barbara Varone of Kowa, an audience of 150 listened intently as Daniel Fonseca of Dow reported on evaluating the self-cleaning performance of exterior paints.

AFTERNOON SESSIONS

The afternoon sessions were Functional Coatings 2, Architectural Coatings 2, Protective Coatings 1 and Waterborne Coatings 2. These sessions were well attended. Session 10 was a special highlight. One

of this year's American Coatings Award winners, Michael Krayer of BASF, spoke about novel bimodal high-solids polymer dispersions for architectural coatings.

FINAL CONFERENCE SESSIONS TODAY

Today, there will be four more noteworthy sessions: Bio-based Materials, Service Life Prediction and Durability, Protective Coatings 2, and Digitization and Big Data. The day will end with a light lunch on the show floor at 12:30.

LET'S MEET IN 2026

The next American Coatings Conference will be held May 5-7, 2026 at the Indiana Convention Center in Indianapolis. See you there! 0

• For more information, visit: www.american-coatings-show.com







Attendees took advantage of the opportunity to ask questions at the end of each presentation.



Voices from the Show Floor

Show attendees talk about the event



Pinturas Inca - AkzoNobel

"We are coming from South America and we have two goals at the ACS. One is to look for new suppliers and new opportunities, different than the ones we have in the South. Secondly, we want to understand the market a bit more."



Cardinal Paint & Powder

"I'm here to meet with some of our suppliers that we have great relations with, they've been very helpful with this. Plus, I am looking for updates on things that we've been working on and to see what the competitors might be releasing in the near future."



"This has been among the best organized shows I have seen. There is a lot of participation, there are a lot of substantial companies. So the impression has been very positive."



PPG Industries

"The turnout exceeded my expectations. The level of expertise from all the equipment manufacturers, which were the main priority for my visit here, was top notch."

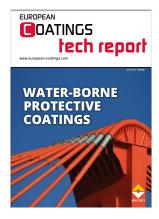
LITERATURE

The Entire Spectrum of Coatings Expertise

Extensive range of books available

Immerse yourself in the world of coatings with EC Library's vast collection of technical coatings literature, available at European Coatings at booth #2088. Whether you're a seasoned professional or just beginning your journey in coatings, the EC Library book series offers comprehensive literature on the range of coatings technology, from fundamental principles to advanced formulation techniques. Authored by industry experts, these books provide valuable insight into specialized applications, raw materials, and testing. Elevate your expertise and stay ahead of the curve with this carefully curated selection of coatings literature. Browse the complete book program at booth #2088.

Below you will find a selection of titles. The complete collection of books as well as the EC Tech Reports can also be found online at www.european-coatings.com/shop.



EC Tech Report: Water-borne Protective Coatings

This digital media bundle presents the most important innovations that have taken place in waterborne corrosion protection coatings over the last two years. Learn more about how corrosion protection is improved with the aid of nanostructured and phosphatised waterborne binders; find out how compliance with stricter regulations can be combined with improved concrete sealing by using latex binders that have a low VOC content and gain insights into a into a new class of liquid; and how modified polyamides that are used as a rheology additive to enable water-borne coating systems to adjust the flow behaviour of solvent-borne systems. In addition to these and further articles about the latest technical developments, this report offers valuable market insight and important fundamentals about waterborne protective coatings.



UNDERSTANDING

ADDITIVES

esthues + Danielmeier + Krunna + Snuille

POLYURETHANES

Polyurethanes

2nd revised edition, Hans-Ulrich Meier-Westhues, Karsten Danielmeier, Peter Kruppa, Edward Squiller

The chemistry of polyurethane coatings is of great significance in many applications worldwide. Moreover, their development potential has yet to be exhausted. New applications are being identified and the product range will be further developed. This book provides a comprehensive overview of the chemistry and the various possible application fields of polyurethanes. It starts by illustrating the principles of polyurethane chemistry, enabling the reader to understand the current significance of many applications and special developments. Newcomers learn about the key concepts of polyurethane chemistry and the main application technologies, while experienced specialists will value the insights into current trends and changes.



Automation in Coatings

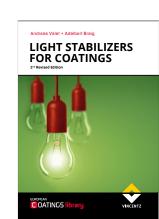
By Klaus-W. West et al.

While the automation of processes in many areas ensures higher efficiency and safety, this eBook shows what is already automatable and how the coatings industry can learn from other branches of industry to help make the workdays more efficient and future-ready.

Peter van den Berg and his team have already embraced this aspect of automation by using a 3D printer to make disposable applicators as well as a robotic interface to automate the inspection process in the paint production, to substantially reduce carbon footprint.

In this seminal text, Klaus West examines whether digitization and simultaneous automation in the chemical and pharmaceutical industries jeopardize jobs, how these are changing and what skills we will need to acquire today to safeguard future careers.

This eBook offers a compilation of different, trend-setting articles regarding the important role of planning in the development of new paint-making systems, a consistent product quality in a fully automated, continuous coating production or process adjustments in dispersing pigments and fillers.



Understanding Additives

By Bodo Müller, 2nd revised edition

This book covers everything about the mode of action, application and possible side effects of the most important coatings additives, presented in a textbook style. It reflects the needs of practical work, enabling the reader to rapidly gain a solid grounding in these critical, yet complex constituents of all paint formulations. It provides both an overview and in-depth basic knowledge of the most important classes of additives. The various types of damage eliminated or prevented by additives are vividly illustrated with colour photos. This book is an indispensable companion for formulators!

Light Stabilizers for Coatings By Andreas Valet and Adalbert Braig

Now in its second edition, this book explains how paint finishes can efficiently be stabilized and protected to prevent paint degradation. The authors illustrate the underlying principles of paint degradation clearly and highlight the functions and possible applications of common light stabilizers with the help of numerous practical examples. A valuable guide for formulators seeking to expand and consolidate their knowledge of light stabilization!



POLYESTER AND ALKYD RESINS

Polyester and Alkyd Resins By Ulrich Poth

Polyester and alkyd resins belong to the most diverse and important material classes of paint chemistry and their usage as binders is well established. This standard text details the composition, structure and properties of these important binder groups and subjects previous findings in that field to a critical review. It shows different precise calculation approaches in modern coatings development, ways to formulate polyester and alkyd resins in experimental designs and how to vary them systematically. This is a practice- and future-oriented reference book that should not be missing from any laboratory!



Stop by at **booth #2088** and **benefit** from the **special AC SHOW discount** on all on-site purchases and orders.

One year in the Arizona sun.

Just a few weeks in here.

Bring the real world into your lab with Atlas. Configurable to precisely simulate environmental conditions, our accelerated weathering instruments set the standard for accuracy and reliability. It's no wonder that Atlas is the durability testing platform of choice for the paint and coatings industry.



Atlas booth #1666 Stop by for a complimentary Paint & Coatings Standards Guide.

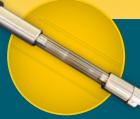


Ci4400 Weather-Ometer®

Delivering unmatched uniformity and precision, the Ci4400 has gained new design and engineering advancements.



Measure surface temperature with S3T Monitoring System



Simply plug-and-play with Atlas Sealed Lamp



Remotely monitor test data with WXView II[™]



atlas-mts.com

Sporty Start

Kicking off the day in sneakers

8

On your marks, set, go! After a brief announcement by Sue Farnsworth on behalf of BYK, sponsor of the 2024 Fun Run, the fourth edition of this popular event got underway at 7:15 a.m. sharp.

ver 300 runners had registered, making it a sell-out affair. Alfredo Vergara finished first in an impressive time of 16:47, just ahead of Martin Ocepek who ran the race in 16:56. Renner Winston completed the podium with a time of 17:30. The fastest woman was Alexandra Tully in eighth place clocking in at 20:19.

PERFECT CONDITIONS

As the show is taking place four weeks later than in previous years, the early May weather was pleasant, and many runners could be seen in shorts and t-shirts despite the early time of day. The sun had risen at 6:44 and after some initial clouds, the sun was coming out as the winner was coming down the home stretch.

CHALLENGING COURSE

The course was a 3-mile lap around White River State Park with a few hairpin

turns and gasps could be heard on the last mile. When the colourful arch at the finish line came in sight, there was one last surprise in store for the athletes. The course weaved left, away from the music and cheering spectators, around another corner and up a ramp. The runners had to mobilize their last energy reserves for that little detour and then finally completed the race.

For the majority of runners it was all about having fun and supporting a good cause. The proceeds from Fun Run registrations will be used to fund student participation at future American Coatings Conferences. After everyone had a chance to catch their breath, cereal bars and bananas were on hand in the finish area. In addition to those snacks and a bottle of water, everyone also got the good feeling of having been active before a busy day on the show floor. 0

1 For more information, visit: www.american-coatings-show.com/ fun-run-2024.com

The fun run is not about competing for most runners. Taking part is what counts.



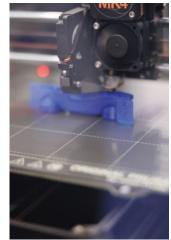


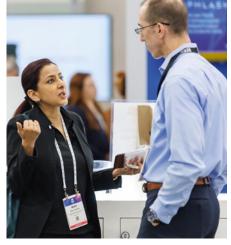
A Colorful Event

Impressions from the show and conference



















"Regulatory Updates are Both a Driver and a Challenge"

Trends in antibacterial coatings

Dr. Emma Wrigglesworth, technical lead at Inhibit Coatings, discusses the latest development in antibacterial coatings and adhesives.

Where does R&D in antibacterial coatings currently focus? The paint and coatings industry as a whole is currently occupied with the issue of sustainability, and R&D in antibacterial coatings is no different. Traditional, commercially available antibacterial products typically rely on the leaching of their active ingredient. Once leached, the antibacterial effect is no longer active and additional treatments or coatings must be applied, and further, these often toxic leached ingredients are then free to interact with humans and the environment. There is a push to develop antibacterial solutions that are safer and more sustainable, without loss of efficacy or increase in cost. At Inhibit Coatings, sustainability is key to all of our R&D. Our focus is on producing antibacterial solutions that are non-leaching, resulting in materials that are non-toxic, safe for the environment, and which last for the entire lifetime of the coating.

What are the latest developments in antibacterial adhesives? Adhesives and sealants are prone to degradation from bacterial and fungal attack, resulting in damage ranging from unattractive blemishes to complete failure of the material. They typically contain biocides to try to prevent this, but these only last for a limited time before being depleted - think of your bathroom sealant which grows unsightly mold over time. We've noticed an increase in consumers who want to address these issues and have been working on developing materials that add permanent antimicrobial activity without affecting the functionality of the material. Notably, antimicrobial adhesives for wearable medical devices are growing in demand, especially those designed to be directly in contact with the skin. The inclusion of an antimicrobial agent here reduces the risk of infection and also can have the added benefit of preventing odor. Of course, the leachability and safety of the active ingredient must be carefully considered when the product is directly in contact with the body.

What are the main drivers and challenges in the sector? Regulatory updates are both a driver and a challenge. Traditional biocides such as isothiazolinones are becoming increasingly regulated across multiple regions, driving innovation into alternative solutions that are still effective but safer and more sustainable. However, uncertainty around these changes introduces risk, and creating solutions that encompass all the diverse and dynamic regulatory requirements globally is a challenge.



Dr. Emma Wrigglesworth Inhibit Coatings

Another driver is a focus on healthcare and infection prevention, for example, reducing hospital-acquired infections which result in significant mortality and extensive costs to hospitals in the United States and around the world. There is a clear value proposition for effective antimicrobial agents in this field, particularly those that do not contribute to antimicrobial resistance.

Today's Product Presentations

Novelties in a nutshell

Find out more about the latest product developments with the popular Product Presentations.

9:20 - 9:35 am

Cooling Energy Savings from High Reflective Coatings Using Lightweight Fillers David Gonzalez Omya

9:40 - 9:55 am Dowsil 107F: Silicone Polyether Compound Defoamer with Balanced Antifoaming Efficiency and Coating Compatibility Lidaris San Miguel Rivera Dow

10:00 - 10:15 am New Pure Associative & Newtonian HEUR Polyurethane Thickener for Water-based Systems Haksu Lee Arkema 10:20 - 10:35 am Silanes for Waterborne Coatings Letitia Luu

Evonik

10:40 - 10:55 am PowderAdd 9780 - PTFE Free Coarse Texturing Agent for Powder Coatings Bill Ruth Lubrizol

11:00 - 11:15 am Getting Products to Market Faster: Al & ML in the Lab Sebastian Bernasek Albert Invent

11:20 - 11:35 am The Value of Using Gas Blacks for Coatings Vy Vo Orion Engineered Carbons



SAVE THE DATE May 5 -7, 2026

AMERICAN COATINGS SHORAF CONFERENCE





11

"Sensor Integration Holds Significant Promise"

Novel developments for functional and smart coatings

Tong Li, research scientist in coatings and polymeric materials at North Dakota State University, summarizes novel developments in anti-icing and functional coatings.

I have studied the relationship between the ice adhesion strength and modulus of nanoporous elastomers. Furthermore, the creation of surface stiffening-induced stress concentration sites on elastic surfaces has

"Expanding the functionality of functional and smart coatings to include sensors holds significant promise for various applications."

Could you please overview your current research focus on anti-icing surfaces? My research focuses on studying and understanding the interaction between ice and surfaces, and developing durable anti-icing coatings with mechanical robustness.

been demonstrated to improve the mechanical robustness of the coatings and lower the ice adhesion strength simultaneously. This approach can build material inhomogeneity and irregularity-induced cracks on the surface layer of elastic materials.

What other developments do you consider especially promising for functional and smart coatings? In my view, expanding the functionality of functional and smart coatings to include sensors holds significant promise for various applications. These coatings serve as the primary interface of the environment or other materials, making them ideal for collecting initial data. Moreover, the processed data can inform the behavior and functionality of the coatings themselves. This integration of sensors not only enhances the capabilities of the coatings but also enables data analysis for further insights and improvements.

What factors are driving R&D in this area? The market demand for smart and functional coatings is a primary driver for R&D in this area, complemented by breakthroughs in surface science. Concurrently, the drive for cost efficiency and competitiveness fosters efforts to refine formulations and manufacturing processes. In addition, advancements



North Dakota State University Booth #2930

in comprehending scientific inquiries during the development of coatings particularly in addressing application challenges – serves as an additional catalyst for fueling research and development endeavors. 0

like to thank Arxada (booth # 1538),

Visit the show floor and stop by to see them.



The Leading Coatings Shows & Conferences



Paintindia

Delhi, India January 30 – 31, 2025 www.paintindia.in

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

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

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

Sharjah, United Arab Emirates November 24 – 26, 2025 www.gulf-coatings-show.com

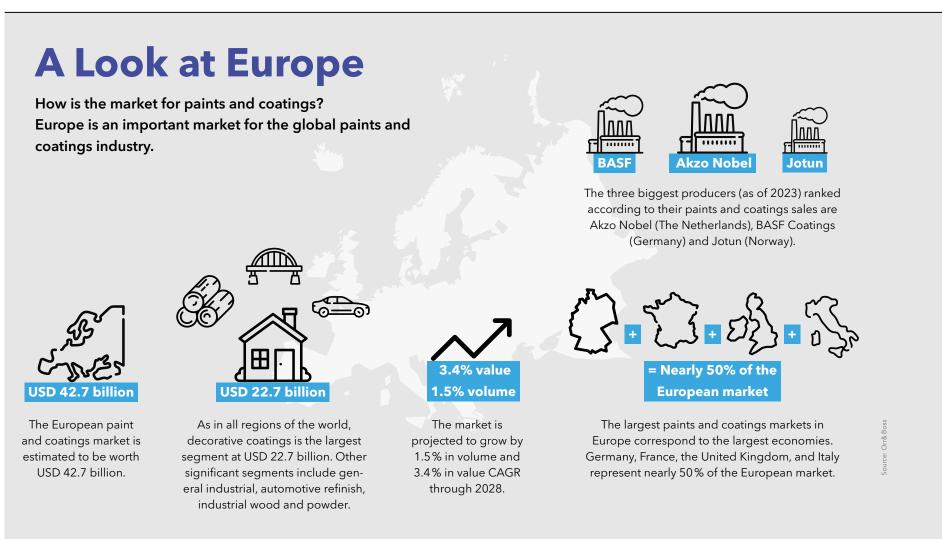








13





EUROPEAN EUROPEAN CONSTRUCTION CHEMICALS

SAVE THE DATE!

NUREMBERG // GERMANY

European Coalings Show: 25–27 March 2025

European Coalings Show Conference: 24–25 March 2025





www.european-coalings-show.com

PRODUCTS

Novelties at the ACS

New products on display

Once again, the American Coatings Show is host to a diverse array of innovative products from various industry players. Below, we've compiled a selection of the latest advancements featured at the event.

of "Reziance" industrial phenolic resins,

which have been developed for a variety

of industrial applications.

ASK Chemicals

DE- Hilden

Booth #661

Alkyd Resin Emulsions for Improved Environmental Protection and Sustainability

ASK Chemicals will be showcasing its VOC-free and sustainable binder developments. The company sets the focus on new developments of binders for industrial coatings, supplemented by the offer for the formulation of decorative coatings. Central to their presentation are the "Necowel" alkyd resins. In addition, ASK Chemicals will be presenting its range

Artistic Spray Paint Formulations

During the ACS, Univar Solutions will showcase its CASE lab in which the company develops specialty ingredients and lower VOC materials to create products for long-lasting, modern arts appeal.

The lab is collaborating with international muralist "Gonzo247," a Houston arts ambassador and public arts influencer, to develop spray paint formulations that are user friendly, safe, and functional for artistic demands. This exciting, innovative solution will be designed for commercial use in the arts and architectural paints and coatings sectors.

Univar Solutions,
 US - Downers Grove

www.univarsolutions.com/industries/ coatings Booth #2829

Slip and Mar Resistance to Extend Product Life

www.ask-chemicals.com/

The "Bioslip" product line offers biobased, sustainable wax micropowder additives, designed to provide outstanding slip and mar resistance with a controlled impact on gloss and clarity. These additives integrate naturally sourced materials into ink formulations and coatings, improving their performance and extending the useful life of the products.

Wax alloy powders in the "Maxwax" product line are designed to optimize two or more different types of waxes that can provide a multitude of performance-enhancing properties. These regulatory compliant materials deliver slip and mar resistance designed for applications in UV, wood, metal and industrial coatings.

 Shamrock Technologies, US - Newark www.shamrocktechnologies.com Booth #554

Making Swift Work of Chemical Ingredient Search

Chemformation is a one-of-a-kind, online resource for fast and accurate data on chemical products and ingredients covering a variety of industries. The database brings together information so that it is all in one place, making chemical products and related information easily searchable.

This resource offers dynamic search criteria designed for a range of professionals. It helps chemists, formulators, producers, distributors and purchasing agents search for and identify chemical products and ingredients. The online platform houses tens of thousands of chemical products, with new products added daily, and makes searching for chemical ingredients easy and fast.

Chemformation
 US - Dallas
 www.chemformation.com
 Booth #1772

Industrial Additives at

A high-tech manufacturer of indus-

trial additives, Hubei BlueSky New

Materials specializes in silane cross-linkers,

coupling agents, catalysts and electron-

ic-grade chemicals. At 100,000 metric

tons in annual production capacity, the

extensive manufacturing site houses an

R&D technology center along with work-

shops and warehouses, which enable the

company to supply its own raw materials

for production, ensuring higher purity

and lower residues. ISO-certified manu-

facturer of products used as enhancers,

modifiers and water repellents for sectors

including paints and coatings, adhesives,

sealants, glass fiber, minerals and fillers.

Hubei BlueSky New Material

www.blueskychemical.com

CN - Hubei

Booth #2375

High Capacities

Talent Acquisition for Global Chemicals Sector

Chemical Search International specialises exclusively in executive search and talent acquisition for the global chemicals value chain and allied sectors, including polymers and materials, natural resources, cleantech and biosciences. The international consulting team is uniquely comprised of highly experienced former executives from the industries the company serves. This understanding of the sector makes it possible to deliver more relevant talent, fast. A global professional network has been founded for the science and technology sectors, focused on twelve interconnected industries. This is free to join with over 35,000 members.

 Chemical Search International UK - London www.chemicalsearch.co.uk Booth #660

High-opacity TiO₂ **Pigments**

At the ACS 2024, the LB Group will promote its new pigments for coatings:

"BLR-891" is manufactured using the chloride process and offers excellent dispersion, opacity and tint strength for a wide range of interior coatings applications.

"TR53" is specifically designed for reverse laminate printing inks and has been optimized to deliver excellent dispersion and high opacity in relevant resin systems.

B Group, UK - Durham www.lomonbillions.global Booth #840

Color Matching Got you "Mixed" Up?

New Brook International will represent Bruchsaler Farben, a leading expert in dry color blending, at this year's ACS. The company can assist you in achieving RAL, Pantone, BCS, corporate or custom shades with high-performing pigments, minerals, fillers and anti-corrosive coating materials.

 New Brook International US - Wyckoff www.newbrookintl.com Booth #974



15

Green Polyols with Hydrolytic Stability



Gantrade has launched a product line of green polyols, which pave the way for integrating bio-based solutions into the high-performance segment of the polyurethane coatings and elastomers industry.

These new generation polyols offer exceptional hydrolytic stability in wet environments, low temperature flexibility, outstanding toughness, wear and abrasion resistance, flex fatigue life, durability, resiliency, and elastic recovery.

The company's extensive portfolio of aliphatic polyols in the polyurethane industry helps the industry produce robust and high-strength polyurethane coatings and elastomers with exceptional performance characteristics and favorable processing attributes.

Gantrade Corporation
 US - New Jersey
 www.gantrade.com
 Booth #2959

CE-certified Precision Gel Timers

Boost accuracy and repeatability with the new CE-certified gel timers specifically engineered to determine the gel time of materials such as resinous plastics, epoxy resins, adhesives, drying oils, FRP, two-component elastomers and paints. These gel timers are straightforward, easy to operate and constructed to deliver exceptional accuracy when carrying out gelation tests at ambient or elevated temperatures.

The new gel timers feature an improved interface, digital readout and a wide temperature control that delivers unparalleled accuracy and reliability. The new line offers two models: standard and heated versions, which are both CE compliant and come fully equipped with a universal power supply, ten wire stirrers and ten cups.

 Paul N. Gardner Company US - Columbia www.gardco.com Booth #2239

Enhanced Product Integrity and Safety

"Omni Plus" elevates standards of sustainable packaging by placing a strong emphasis on environmental friendliness and operational efficiency. Its innovative design facilitates recycling with components that can be easily separated, ensuring compliance with future recycling regulations. A lighter packaging design significantly reduces the carbon footprint while maintaining Group I UN certification with or without a plug. This packaging offers unmatched protection against contamination to maintain product integrity and safety and integrates anti-counterfeiting features through sophisticated design enhancements and optional holographic labels. The bottle's design improves the user experience as well as enhances brand visibility and cost efficiency, addressing today's environmental challenges.

Elemental Container
 US - South Union
 www.aluminumbottles.com
 Booth #2763

Enhancing Performance of 1K Polyurethane Coatings and Sealants

For formulators seeking superior performance in 1K polyurethane coatings and sealants, Incorez presents "Oxazolidine" and "Aldimine" curing agents. They offer:

- Enhanced through-cure and mechanical strength: Delivering tougher, more durable end products by eliminating CO₂ gassing, a common issue in high-solids systems.
- Greater productivity: Moisture-triggered curing utilizes the water in the atmosphere for application in all conditions.
- Formulation versatility: Compatible with aliphatic and aromatic 1K PU systems.
- Improved storage: Final products can withstand sub-zero temperatures down to -20 °C without crystallization, simplifying handling and storage.

A latent hardener for elastomeric coatings and a latent curing agent for ultra flexible yet tough PU sealants will also be showcased.

Incorez
 UK - Preston
 www.incorez.com
 Booth #329

Sustainable Savings when Curing Coatings

A global packaging, product, and material testing and measurement partner has launched a solution that allows customers to save on cost while also protecting the planet.

The "TQC Sheen CurveX" oven temperature logger offers invaluable insights into the efficiency of industrial ovens and provides detailed insights into the drying time of a package. Use this tool to discover exactly how much energy is needed for coating perfection.

Oven profiling information allows users to quantify the energy required in the curing reaction of their chosen material or package. Understanding the oven efficiency and curing reaction time can massively shift your operations and help save resources, energy and cost. One user used this advanced logging tool and reduced their overall energy consumption by two thirds.

Industrial Physics
 US - New Castle
 www.industrialphysics.com
 Booth #2757

THE AMERICAN COATINGS SHOW ORGANIZERS WOULD LIKE TO THANK THE FOLLOWING PREMIUM SPONSORS FOR THEIR SUPPORT.

AC Show Pocket Guide Rosedale Products

Mobile App Advertisements Univar Solutions

Industry Buyers' Lounge Penn Color

Hotel Key Cards ICL Phosphate Specialty Expo Tote Bags allnex

Fun Run & T-Shirts BYK USA

Lanyards Azelis Americas CASE





Don't Miss Our GRAND SHOWCASE

KW Container's showcase of revolutionary all-plastic products is making the old metal paint can a thing of the past!

There's the recycled resin TruSnap[™] container in several sizes, including the all-new one-piece quart. There are customizable IML lids. And there's the DOW Award-winning TwistCap and our very own Pour Spout!

> All this could be yours at ACS EXHIBIT #1929.

Learn more at kwcontainer.com.





kwcontainer.com

6