

CONNECT

FEICA NEWS 

The FEICA electronics Webinar

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'ADHESIVES AND SEALANTS' UNIQUE PROPERTIES IN ELECTRONICS UNDER THE EU ECODESIGN REGULATION'

The FEICA electronics Webinar will take place online on 23 November 2023 - 10:30 to 11:30 (CET Brussels)

Join this FEICA Webinar, which will delve into the different aspects of adhesives and sealants in the electronics sector, showcasing their unique properties and the integral role they play in contributing to the principles of the circular economy.

Our speakers will discuss how electronic devices can be debonded and recycled after being bonded and sealed, and will provide concrete examples about the circular economy potential of reversible bonding in smartphones.

This event is open to all interested stakeholders, FEICA members and non-members.

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FEICA Webinar - Adhesives and sealants' unique properties in electronics under the EU Ecodesign Regulation

23 November 2023

10:30 - 11:30 (UTC/GMT +02:00 - Europe / Brussels)

REGISTER HERE FOR THE FEICA ELECTRONICS WEBINAR

Webinar Agenda & Speakers:

- 10:30-10:35 - FEICA introduction & regulatory context – Mr Dimitris Soutzoukis, Senior Manager Regulatory Affairs, FEICA
- 10:35-10:50 - Adhesives and sealants' unique properties in the electronics sector – Dr Annett Linemann, Director Technology Outlook & Sustainability, H.B. Fuller, , Chair FEICA Electronics Technical Task Force
- 10:50-11:05 - Disassembly of electronics and possible adaptations of adhesives and sealants for reusability, repairability and recyclability of electronics 'Debonding on Demand' - Dr Matthias Popp, Group Leader Adhesive Formulation, Fraunhofer Institute
- 11:05-11:20 - The circular economy potential of reversible bonding in smartphones - Mr Ive Vanderreydt, Circular Economy Expert, VITO NV
- 11:20-11:30 - Q&A

www.feica.idloom.events/FEICA-webinar-electronics

Don't miss this opportunity to discover the innovative role of adhesives & sealants in shaping a more sustainable future for the electronics industry at this FEICA Webinar.

Product Sustainability Summit Europe 2023

FEICA will take part in the Product Sustainability Summit Europe 2023, which takes place from 29-30 November 2023 in Cologne, Germany.

For more information, click [here](#).

Adhesives and sealants' unique properties in electronics under the EU Ecodesign Regulation

- The role of adhesives and sealants for a sustainable transition
- Adhesives and sealants unique properties in the electronics sector
- Adhesives and sealants' functions enabling electronics disassembly, reusability, repairability and recyclability

Fanni Sypaseuth

Technical Service and Development Scientist & FEICA Electronics Task Force Vice Chair, Dow Silicones Belgium



FEICA members receive a 10 % discount if they attend this summit. Please see the [FEICA Extranet](#) for more details.

FEICA LAUNCHES MARKET REPORT FOR 2023-2028

New FEICA Market Report 'A quantitative demand analysis and trend forecast'

The European Adhesives and Sealants Market 2023-2028 is FEICA's eighth edition of the report and covers the period 2023-2028. The market size is defined for the year 2022, and a demand forecast for the period 2023-2028 is provided.

Based upon extensive desk and primary research and expertise checked by industry experts, the outlook to 2028 covers a range of industry challenges and issues, and highlight opportunities for growth in a fast-changing market.

Sustainability and energy efficiency continue to be key drivers of future demand.

Demand for adhesives and sealants

- ➡ The European adhesives and sealants market in 2022 was 4.8 million tonnes with a value of €19.9 billion.
- ➡ The combined demand for adhesives and sealants in Europe is forecast to see a small increase in volume.

European A&S market in 2022



Source: Smithers

With much disruption and uncertainty in the marketplace today, it is crucial to get an accurate picture of the market.

Prospects for growth in the various segments

The report considers A&S economic growth in terms of seven segments:

Paper & Packaging

Paper, board and related products accounted for the largest part of the overall European A&S market volume in 2022 with 35%, despite only adhesives being used by this segment. The main end use for adhesives here is in packaging, which is in a transition stage to reduce the environmental impact from single-use packaging.

Construction

The Building and Construction industry is the second largest segment by volume with a 28% share.

The need to improve the energy efficiency of older building stock by retrofitting insulation could benefit greater use of adhesives to fix insulation panels and for sealants to better seal the building envelope.

EUROPEAN ADHESIVES AND SEALANTS MARKET — 2023 - 2028 —

A QUANTITATIVE DEMAND ANALYSIS AND TREND FORECAST



Assembly/other

The Assembly/other segment covers a range of industrial manufacturing activities where adhesives and sealants are required for products made from metal, plastics, textiles, glass and ceramics. More products are being manufactured using a mix of substrates that is driving the growth in adhesive bonding to replace metal fasteners such as welding, screws, and bolts. Reactive adhesives and the use of digital processes in more end applications are also promoting growth in this segment.

Woodworking & Joinery

The Woodworking and Joinery segment growth is mainly linked to that of the construction industry. New opportunities for growth in adhesive use may come from an increase in the employment of timber construction methods to produce more sustainable buildings.

Consumer & DIY

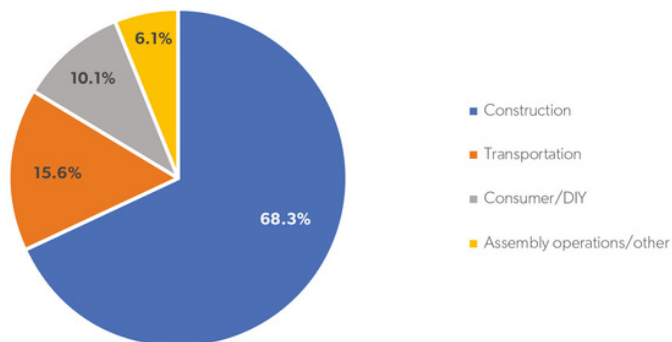
The Consumer/DIY boom from the lockdowns in 2020 started to slow in 2022. High inflation and increased mortgage rates have affected growth in this segment.

Transportation

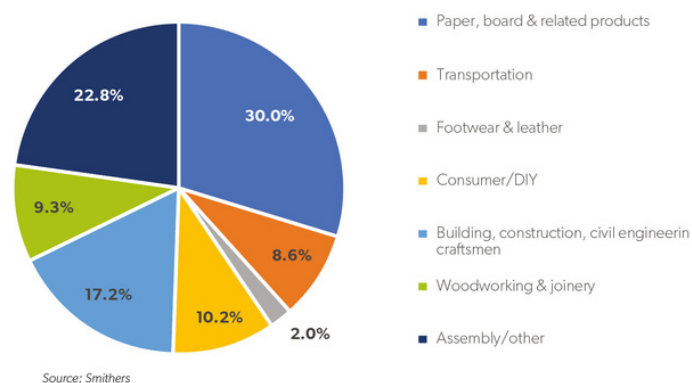
The Transportation segment uses adhesives and sealants in the production of various commercial and private vehicles, railway rolling stock and aeroplanes, and in marine applications. There are growing opportunities for the entire industry in this segment, including due to the growth of electric vehicle production.

Footwear & leather

The Footwear and leather segment is in gradual decline and is now largely focused on high-end or specialist products. The possible exception is Turkey, which still has a sizeable shoe manufacturing sector.



Europe sealants demand by market segment, 2022 (€ million)



Europe adhesives demand by market segment, 2022 (€ million)

The geographic scope of the study encompasses Europe, including Western Europe, Central and Eastern Europe (CEE) and Turkey. The 300+ page report is structured in such a way as to facilitate international comparisons between Europe, NAFTA and the Asia-Pacific region.

Click on the banner below for a description brochure with sample pages and order form.





FEICA 2023: INDUSTRY INNOVATION FOR SUSTAINABLE DEVELOPMENT

The FEICA 2023 European Adhesive & Sealant Conference and EXPO took place at the PortAventura Convention Centre in Tarragona, Spain, from 13 to 15 September 2023, and was attended by almost 700 delegates.

'Industry Innovation for Sustainable Development' was the theme for this year's Business Forum.

The event focussed on how companies can achieve their sustainability goals through expert discussions surrounding the 'Chemicals Strategy for Sustainability', by addressing how Europe can still be a leader in green industries, and by sharing strategies and showcasing technologies which will ensure alignment with the objectives of the European Green Deal.

The conference proceedings and photo gallery are available at:

www.feica-conferences.com.

86 % of respondents to the FEICA conference survey made new business connections at FEICA 2023 and 95 % expected follow-up conversations!



In your words:

'FEICA's conference in Tarragona was a very successful and unforgettable event. The presentations were useful and informative as they focussed on what really matters to the adhesives and sealants industry. The whole industry was perfectly represented, and FEICA did an excellent job in welcoming everyone and making sure they got the most out of 3 well-filled days. From the point of view of a national association member, cooperation with FEICA is a real win-win situation. Our input is not a one-way street at FEICA but something we truly benefit from. Commitment pays off at FEICA'.

- Martin Glöckner, Executive Director Regulatory Affairs, Deutsche Bauchemie e.V.

'This year's FEICA Conference was again everything we expected from it. The association's yearly event, as well as FEICA membership, provides Sika with global networking opportunities, access to industry insights, up-to-date regulatory information and platforms for collaboration. It promotes innovation, knowledge sharing and best practices, and enhances market presence and competitiveness while keeping pace with advances and standards in the adhesives and sealants industry. We are pleased to share our expertise within the FEICA community and to be at the forefront of industry developments.'

- Patricia Heidtman, Chief Innovation and Sustainability Manager, Sika AG

The 2024 FEICA Conference & EXPO will be held at Noordwijkerhout in the Netherlands, from 11 to 13 September 2024. Registration will start in 2024. For more information, please visit:

www.feica-conferences.com.





Mr Otto Linher, Senior Expert, DG Internal Market, Industry, Enterprise and SMEs, REACH Unit, European Commission at the FEICA 2023 Business Forum

THE FEICA SEMINAR

The FEICA Seminar 'A Business Perspective on Regulatory Challenges', took place on 13 September 2023.

These were this year's presentations:

- 'Market changes through Circular Economy' by Flor Peña Herron, Chair of the FEICA Sustainable Development Committee, Avery Dennison
- 'Prepare your portfolio for upcoming substance restrictions' by Kim Suetens, Chair of the FEICA Mixture Assessment TTF and Vice Chair of the Polymers TTF, Soudal



Dr Eva Griessbach and Mr Michael Frank at the 2023 FEICA Seminar

- 'Status report on FEICA advocacy' by Peter Boris Schmitt, Chair of the FEICA European Advocacy Group, Henkel
- 'Challenges and opportunities for packaging adhesives' by Elizabeth Staab, Chair of the FEICA Sustainability & Recycling of Adhesives in Paper & Packaging Applications TTF, H.B. Fuller

Please SAVE THE DATE for the FEICA Seminar 2024, which will take place on 11 September 2024 in Noordwijkerhout in the Netherlands.

The 2023 presentations are available on the [FEICA Extranet](#) for FEICA member companies, national associations and their member companies only, and are not for distribution.

Winner of the FEICA 2023 survey!

Aline Valteau, Adhesives & Joints Team Leader at Aliaxis, is the winner of the FREE registration for the 2024 FEICA Adhesive & Sealant Conference and EXPO in the Netherlands. Congratulations Aline!

THE FEICA GENERAL ASSEMBLY (GA) 2023

A new FEICA Board was elected at the 2023 General Assembly, with Mr Eric Dehasque (Sika) appointed as the next President, and Mr Stuart Jenkinson (H.B.Fuller) as new Vice President

The 2023 GA was held on 13 September 2023 in Tarragona, Spain, and was opened by outgoing FEICA President, Dr Guido Cami.

A new board was elected with Mr Eric Dehasque (Sika) as the next FEICA President and Stuart Jenkinson (H.B.Fuller) as FEICA's new Vice President.

Mr Jean-Paul Hautekeer (Dow) remains as FEICA Treasurer.

Dr Eva Griessbach (Dow) stepped down as European Technical Board (ETB) Chair as she is retiring next year. Dr Griessbach served as an outstanding ETB Chair for 12 years. Mr Michael Frank (Henkel) took over as the new ETB Chair.

A new executive board was also elected: representing the Direct Company Members (DCMs): Mr Roland Albers (Bostik), Mr Alessandro Passerini (Coim), Mr Thomas

Schiele (BASF), Mr Robert Szennyai (Henkel) and Mr Remko Tetenburg (Bolton Adhesives); representing the National Association Members (NAMs): Dr Guido Cami (AVISA), Mr Jean-Marc Barki (Stikoia/Sealock) AFICAM, Dr Boris Tasche (Henkel) IVK, Mr Phillip Lee (Ace Adhesives) BASA and Mr Lars Christensen (Dana Lim) DFL.

After the election, Dr Griessbach and Mr Frank, outgoing and incoming ETB Chairs, presented the ETB report. This was followed by FEICA's Secretary General, Kristel Ons, who presented the Secretarial report.

The minutes and presentation are available for FEICA members from the FEICA Extranet.

We thank Dr Cami for his two-year tenure as FEICA President and Dr Griessbach for more than a decade as ETB Chair, and wish a warm welcome to the new President, Vice President, ETB Chair and members of the FEICA board.



Left to right: Lars Christensen, Jean-Marc Barki, Robert Szennyai, Jean-Paul Hautekeer Phillip Lee, Eva Griessbach, Guido Cami, Eva Griessbach, Eric Dehasque, Roland Albers, Kristel Ons (FEICA Secretary General), Remko Tetenburg, Stuart Jenkinson, Alessandro Passerini, Thomas Schiele, Boris Tasche and Michael Frank.

#FEICA2023



UPDATE ON THE REACH REVISION

On 17 October 2023, the European Commission published its annual Commission work programme (CWP 2024), setting out the list of the most important actions in the year ahead. It is the last work programme of the Von der Leyen Commission as we enter the 'Year Of Change' with European elections in June and a new Commission taking up office by the end of 2024.

A missing key proposal from the CWP 2024 is the REACH revision, announced in the Chemical Strategy for Sustainability (CSS). After several delays, the revision was announced for Q4 2023, but it has since then not appeared on the agendas of the Commission cabinet and Commission.

President Von der Leyen avoided any commitment in her State of the Union speech in September and so did new EU Green Deal Commissioner Šefčovič in his recent European Parliament hearing.

While a hypothetical chance remains for publication until year end, it increasingly seems likely that the new Commission will have to consider the dossier, much to the liking of industry that has warned about the possible and considerable impact on the chemical sector.

The ongoing and upcoming REACH measures, e.g. REACH Restriction on PFAS, continue and are not impacted.

FEICA has been engaging in some of the proposed changes by the REACH revision due to their importance to the A&S industry.

The Mixture allocation factor (MAF):

The introduction of an additional risk factor to account for the combined effect of the exposure to unintentional mixtures.

IMPACT:

- Non-targeted MAFs could severely affect not only the A&S industry but also the users of A&S.
- It is uncertain whether it would be possible to demonstrate safe use for professional applications if additional risk management measures are implemented.
- It would not be possible to demonstrate safe use for consumer applications by implementing additional risk management measures.

Polymers Requiring Registration (PRR)

The obligation to register polymers under REACH.

IMPACT:

- A&S companies will face registration requirements and costs the first time. In a nutshell, these will cover: the notification of polymers, polymer grouping and fulfilment of standard information requirements for registration purposes. Notification costs per polymer: EUR 20000 to EUR 30000. Some SMEs will not be able to cover those costs, and will therefore stop formulating new, innovative polymers.

The extension of the GRA

This is an empowerment for the Commission to propose restrictions based on hazard considerations without carrying out a risk assessment.

continued on next page

IMPACT:

- A higher number of key ingredients used to formulate A&S will no longer be available and it might not always be possible to find suitable alternatives. For instance, silicone sealants which contain silicone dioxide as a reinforcing agent could not be used anymore.
- Professional workers will not be able to perform tasks that are very important to society, such as repairing goods or insulating buildings.
- This will ultimately lead to loss of product performance and job losses.

Keep up-to-date with FEICA's important work via www.feica.eu.



NEW GOOD PRACTICE STORIES PUBLISHED

Adhesives and sealants typically constitute only a small percentage of the final product they are incorporated into.

In the majority of applications, adhesives and sealants can play a significant role in enabling the efficiency of the manufacturing process they are used in or on, the end use of the bonded article, its durability, the opportunity to recycle the materials used at the end of its useful life, and more.

Good Practice Stories:

Good Practice stories help to share knowledge across the industry and enable the downstream users of adhesives and sealants to pursue more sustainable production practices in line with the European Commission's circular economy goals.

There are now 25 Good Practice stories available on the FEICA website. Each of them demonstrates how companies enable sustainability.

➔ These are our latest stories:

- Water-based adhesive for insulation material
- Adhesives for bonding floorings to the screed of underfloor heating systems

Check out these + all other Good Practice Stories via:

www.feica.eu/information-center/good-practices

P&P 2023 programme to feature leading experts from across the food contact supply chain

Plastics & Paper in Contact with Foodstuffs

The Plastics & Paper in Contact with Foodstuffs conference is being held at the Marriott Hotel in Amsterdam on 12-13 December 2023. Over 150 food contact representatives attended the 2022 P&P conference.

As the key meeting hub for the food contact industry, this event provides a unique opportunity for delegates to get the latest industry information and network face-to-face with global experts.

The scope of this event also provides insights into:

- The latest legislation
- Compliance case studies and pertinent issues of food packaging
- Information on inks, coatings and adhesives

P&P 2023 will feature 18 leading industry speakers including Barilla, FEICA, ISEGA, BASF, DS Smith De'Longhi to name a few.

Organised by Smithers, this event will include speakers such as Elisa Mayrhofer, Project Manager & Scientist at Austrian Research Institute for Chemistry & Technology, Marcello Pezzi, Product Safety Director at DS Smith, Dr. Martin Klatt, Executive Specialist Regulatory Affairs, Head of Product Stewardship Dispersions and Resins Europe at BASF, José Antonio Alarcon, Secretary of the Functional Barrier Consortium, CEO, IGBS at Petcore Europe and Alexandra Ross, Chair of the FEICA Technical Working Group 'Paper & Packaging', Product Regulatory Manager EIMEA at H.B. Fuller.

Attendees at the 2022 event included AB InBev, Akzo Nobel, CEPI, Coca-Cola, Exponent, Food Chain ID, Keller & Heckman, Knoell, Nestle, Sherwin-Williams and many more. View the full attendee list [here](#). To register, see www.food-contact.com

Alexandra Ross



Chair of Technical Working Group "Paper and Packaging" / Product Regulatory Manager EIMEA at FEICA / H.B. Fuller Deutschland GmbH

Role of adhesives in sustainable packaging

FEICA will present at P&P 2023 on 13 December 2023 (Day two) at 14:45.

For more information click [here](#).

FEICA members receive a 10 % discount. Please see the [FEICA Extranet](#) for more details.

Sponsored content:



UPCOMING: FEICA Report 'Laminating adhesives in the context of flexible plastic packaging recycling'

Compared to rigid packaging made from plastics and other materials, flexible plastic packaging offers environmental benefits through its unique material efficiency (i.e., thinness and lightness). At the same time, the recycling of flexible plastic packaging is today less developed than the recycling of rigid packaging.

A technical conversation on how to best design flexible plastic packaging for the existing and upcoming recycling infrastructure is ongoing. The compatibility of different elements in packaging designs, including adhesives, with the processes of waste sorting and recycling is actively discussed.

The upcoming FEICA Report 'Laminating adhesives in the context of flexible plastic packaging recycling' will seek to summarise the current state of play in terms of how laminating adhesives are reflected in design-for-recycling documents and in sortability and recyclability testing for flexible plastic packaging. Watch this space for more news on this topic coming soon.

The report will include suggestions on how the specification and recognition of laminating adhesives in these documents may be further improved, recognising both their importance for the manufacture of fit-for-purpose flexible plastic packaging and the needs of sorting and recycling operators.

Sponsored content:

SMITHERS

MARKET REPORT

The Future of Hot Melt Adhesives to 2027

FEICA Members get a 15 % discount. Please see the [FEICA Extranet](#) for more details

INTERNATIONAL ADHESIVE & SEALANT DAY

29 September 2023 was celebrated globally as International Adhesive & Sealant Day



29 September was globally recognised as 'International Adhesive & Sealant Day' at the 2022 World Adhesive and Sealant Conference (WAC 2022).

The very first edition of the day was a global success with the entire industry, worldwide, promoting adhesives and sealants as enablers of a sustainable future via both Social Media and Press Releases.

The International, celebratory day will undoubtedly improve the general public's knowledge of our incredible products, and especially our industry's 'Innovations for Sustainable Development':

www.internationaladhesiveandsealantday.com/innovations

In Europe, the day proved to be an ideal occasion to showcase end products that are essential for the European Union to reach its Green Deal targets, and that could not exist without adhesives and sealants:

- Our industry's adoption of digital technologies that are revolutionising the way businesses operate, setting new standards for efficiency, productivity, and innovation, as well as the importance of assembling electronic devices (digitalisation)
- Windmills, solar panels, batteries, the insulation of buildings and light-weight modes of transportation (essential for renewable energy and energy savings)
- Medical and dental care, prostheses and masks (essential for good health and well-being)
- Products used for electrolyzers to produce hydrogen, sustainable biogas and biomethane, for carbon capture and storage, and for power grids (essential for products relating to the EU strategic Industries)
- Water membranes and filters (essential for clean water and sanitation)
- Reusable packaging (essential for avoiding food waste)



In every issue of **CONNECT**, we give members of FEICA the opportunity to share, in their own words, interesting insights into their company in 'five fascinating facts'.

MEMBER PORTRAIT

Content by Dow.

Five interesting facts:



Dow combines its global reach; asset integration and scale; focussed innovation and materials science expertise; leading market positions; and commitment to environmental, social, and governance (ESG) leadership to drive profitable growth and contribute to a sustainable future. The company's ambition is to become the most innovative, customer-centric, inclusive and sustainable materials science company in the world. Dow's portfolio encompasses plastics, industrial intermediates, coatings and silicones, offering a diverse range of science-based products and solutions for customers in key market segments such as packaging, infrastructure, mobility and consumer applications. See the [2022 Progress Report](#).

Our company's approach to innovation centres around collaboration, working closely with our customers to address their specific product challenges and enhance sustainability, performance, and productivity. Our capabilities enable us to improve research and development productivity, expedite product development and provide solutions to modern-day challenges faced by our customers and society. Leveraging our extensive expertise, capabilities and global network, we strive to invent products, solutions and processes that positively transform the world. Our expertise spans analytical science, catalysis, engineering, formulation science, high-throughput capabilities, and materials engineering and modeling.

Dow Building & Infrastructure collaborates with professionals in the industry worldwide to develop solutions that enhance design, aesthetics, durability, energy efficiency, and the health and safety of building occupants. Taking a holistic approach, we leverage the collective experience across our organization to assist customers in overcoming a wide range of high-performance building challenges. Learn more about [Dow Building Science](#).

We believe that science, collaboration and innovation are crucial in creating a more sustainable world. At Dow, we are dedicated to delivering a sustainable future by connecting and collaborating to discover new material options that improve the quality of life for everyone. We have identified three focus areas—Climate Protection, Circular Economy and Safer Materials - in which we can make a significant difference and drive industry-wide change. These global priorities leverage our scientific expertise, global presence and value chain relationships to create shared opportunities for Dow and society.

In consideration of the challenges our industry faces in the development of a circular and sustainable society, it is critical that we rely upon industry-representing organizations like FEICA.

With members representing national associations, direct companies and suppliers, FEICA is well equipped to understand the critical needs, challenges and opportunities of our industry and to develop advocacy plans for relevant European organizations to ensure they know how adhesives and sealants benefit society and how to advocate for the industry in the regulatory framework. www.dow.com

MEMBER PORTRAIT



Content by BASF SE.

Five interesting facts:

BASF SE is a worldwide leading manufacturer of innovative and sustainable adhesive raw materials. BASF's products enable our customers to produce high-performance as well as environmentally friendly adhesives for a wide range of applications in different industries. We are developing today the solutions for tomorrow.

High quality standards: We are constantly developing and introducing new products in accordance with current market requirements. If you need sophisticated adhesives, we support you not only with state-of-the-art raw materials but also with regulatory expertise and consistently high standards in terms of reliability and safety, gained from many years of experience.

Innovation: Adhesives need to meet an ever-expanding range of requirements, which constantly leads to new challenges for the adhesive industry. By continuously improving the performance of our adhesive raw materials, we open up new fields of application for our customers. This is how BASF is helping adhesive manufacturers become even more successful – chemistry creates bonds in more than one sense of the word.

Sustainability: The European Green Deal (EGD) and the Circular Economy Action Plan (CEAP) as well as the new chemicals strategy for sustainability (CSS) contained therein, poses new challenges for the European adhesives and sealants industry, especially with the introduction of many chemical regulations, legislations and directives relevant for the industry with very tight time targets. These can be successfully mastered only through cooperation within the industry, between different industries and along value chains.

Collaboration and service: No matter the challenge: we are here to support you. BASF is not only producing high-quality raw materials for thousands of applications. We are also a reliable, long-term partner to adhesive manufacturers of all sizes. Development, application, testing, analytics or certification: our experienced team of technical and product experts provides you with the support you need, when you need it. As the leading manufacturer of adhesive raw materials with an extensive network around the globe, we are often ahead of the curve – and are thus able to provide our partners with the latest information about regulatory developments and trends.

Why is it important for us to be part of FEICA?

BASF SE wants to support FEICA in its efforts to represent the interests of the adhesives and sealants industry to the EU Commission. BASF SE sees its responsibility as a global chemical company and would like to actively contribute with its expertise in sustainable solutions as well as regulatory affairs and hereby underline its commitment to the adhesives and sealants industry.

For more information visit www.basf.com/adhesives or contact us adhesives@basf.com

FEICA & EURADH ADHESION INNOVATION AWARD (AIA 2023): THE TOP ENTRIES

In the last issue of **CONNECT**, **Issue 53**, we announced the winner of the 2023 (third) edition of the **FEICA/EURADH Adhesion Innovation Award 2023: Mr Marvin Kaufmann**.

Dr Catarina da Silva Pereira Borges was in second place and Mr Fabiano Icisaca Indicatti in third place.

For AIA 2023, seven candidates submitted outstanding papers in innovative adhesion science. The EURADH jury examined each submission for practical application, sustainability and scientific impact.

Winner: The Jury agreed that Mr Marvin Kaufmann's paper was the clear winner due to its combination of great experimental work and modelling which involved process development and systematic analysis to address a significant problem in adhesion.

His supervisor was Prof. Dr Andreas Hartwig, Deputy Institute Director Adhesive Bonding Technology and Surfaces, Fraunhofer IFAM, Bremen, Germany.

While a bachelor student Mr Kaufmann started working at Fraunhofer IFAM in 2016. A first-rate researcher, Mr. Kaufman received the Peter Wefing Prize in 2017 for his exceptional bachelor and master theses devoted to 'ecological and economical construction and effective use of resources'.

Mr Kaufmann contributed to 24 peer-reviewed papers listed on the Scopus database. He is currently finishing his doctoral thesis at Fraunhofer IFAM in Bremen, Germany.



Kristel Ons, FEICA Secretary General announces AIA 2023 winner at the 2023 FEICA Conference & EXPO in Tarragona, Spain

Mr Kaufmann's original publication, 'How adhesives flow during joining', can be found at M. Kaufmann et al., International Journal of Adhesion and Adhesives 122 (2023) 103313.

As described in his paper, the flow of adhesives is very complex, and in real applications usually an excess needs to be applied using an empirically determined pattern. For the sake of greater sustainability and the production of bonded parts with a perfect quality and appearance, it would be ideal to fill the gap between parts completely without uncontrolled adhesives squeezing out.

This problem can be solved only if one understands 'How adhesives flow during joining'.

In Mr Kaufmann's work, a methodology was developed which allows simulating the adhesives flow after application of the second part to be bonded if a distinct adhesive pattern is applied.

The ideal pattern is often not obvious, and the experimental proof shows that reality corresponds well with the pattern and flow simulation.

The new method improves sustainability not only through the reduction of experiments needed to work out the ideal application pattern, but also by complete avoidance of overfilling (reducing waste) and, as a direct result, the requirement of only minimal cleaning. In addition, the number of defect parts produced is significantly reduced.

Second place: Dr Catarina da Silva Pereira Borges.

Dr Borges worked under the supervision of Prof. Lucas F.M. da Silva, her dissertation director, INEGI Institute in Porto (Portugal).

Dr Borges completed her MSc in Mechanical Engineering in 2019. She completed her PhD in Mechanical Engineering in 2022 with the Faculty of Engineering of the University of Porto, Portugal. Her PhD thesis was completed when she was only 24 years old, making her the youngest PhD recipient in the history of the Faculty of Engineering. She is an Invited Assistant at the Faculty of Engineering of the University of Porto, teaching Materials, Material Science, Metallic Materials and Non-metallic Materials. For this achievement, she was awarded a Pedagogical Recognition Award in both years that she was eligible to receive this award.

Dr. Borges's original publication was Borges, C. S. P., et al. (2023), 'Effect of the Interface/Interphase on the Water Ingress Properties of Joints with PBT-GF30 and Aluminum Substrates Using Silicone Adhesive'.

The purpose of the paper was to analyse the difference between two types of interphases: adhesive/composite and adhesive/metal.

Silicone joints were used with two substrates, one with glass fibre and one with aluminum, at three different adhesive thicknesses. It was demonstrated that the glass fibre/silicone joint was more stable, not showing measurable amounts of water. The starting point for the paper was a project in conjunction with the company Robert Bosch GmbH that involved an electronic-components housing with two parts joined by a silicone adhesive.

It was possible to conclude that metal/silicone bonds are generically less stable than composite/silicone ones.

Dr Borges' outstanding paper is quite beneficial with regard to industrial applications, the circular economy, and sustainability. For example, in terms of industry, material waste can be lessened, and in terms of the environment, fewer parts are required to be manufactured. Moreover, electronic components can be recycled because they have not been water-damaged because of a failing joint.



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Third place: Mr Fabiano Icisaca Indicatti.

Mr Icisaca Indicatti's supervisor was Prof. Dr.-Ing. Klaus Dilger, Institut für Füge- und Schweißtechnik, Technische Universität Braunschweig, Braunschweig, Germany.

Mr Icisaca Indicatti is currently pursuing his PhD on an industry-basis at Robert Bosch GmbH. His research topic is on stencil printing of adhesive-based fuel cell sealings.

Within the first year of his programme, Mr Indicatti had his first journal paper accepted for publication.

Mr. Indicatti's original publication was Indicatti et al. (2022), 'Stencil printing of adhesive-based fuel cell sealings: The influence of rheology on bubble formation during the separation step'.

This paper concerns stencil printing as a technique, high in output, to provide adhesive sealings for fuel cells. Specifically, the problem of bubble formation at the separation step of stencil printing is dealt with.

The paper shows how phenomena occurring during printing can be linked to distinct rheological (matter-flow or matter-deformation) parameters, for instance, viscosity and surface tension.

The relationship discovered provides concrete rheological properties for improving print quality and eliminating bubbles.

As a result, communication between adhesive manufacturers and companies developing applications for stencil printing can be greatly improved, and more precise requirements for adhesives can be quickly determined.

Mr Indicatti's noteworthy research is relevant to the circular economy, sustainability, the environment and industry. The development of new production techniques, notably, stencil printing, is very important in view of the burgeoning adoption of fuel cell technology to displace fossil fuels and to further a sustainable economy.

All 7 submissions were commendable and we wholeheartedly congratulate all applicants!

The next (4th) edition of the FEICA/EURADH Adhesion Innovation Award (AIA 2025) will be launched in September 2024.

**ADHESION
INNOVATION
AWARD 2025**

The AIA 2023 FEICA Award presentation will take place at the 2024 FEICA Conference & EXPO, which will be held at Noordwijkerhout in the Netherlands, from 11 to 13 September 2024.

www.adhesionaward.org



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