vinyl plus

PROGRESS REPORT

REPORTING ON
2025 ACTIVITIES

Photo: VinylPlus®

TABLE OF CONTENTS

MESSAGE FROM THE CHAIRMAN 3

VINYLPLUS: OUR COMMITMENT TO SUSTAINABILITY 5
VINYLPLUS 2030 COMMITMENT: MID-TERM REVIEW 6

GOVERNANCE 8
VINYLPLUS STEERING BOARD 10
MONITORING COMMITTEE 11

2025 MARKET EVOLUTION AND REGULATORY FRAMEWORK 12

2025 PROGRESS 17
ENHANCING CIRCULARITY IN THE PVC VALUE CHAIN 18
MINIMISING THE ENVIRONMENTAL FOOTPRINT OF THE PVC VALUE CHAIN 37
BUILDING COALITIONS AND PARTNERSHIPS FOR SUSTAINABILITY 41

FINANCIAL REPORT 51

RECYCLED PVC TONNAGES 52

VERIFICATION STATEMENTS 53
PKF BOFIDI CERTIFICATION OF EXPENDITURE 53
PKF BOFIDI REPORT ON TONNAGES RECYCLED 53
SGS VERIFICATION STATEMENT 53

VINYLPLUS FOUNDING MEMBERS AND PARTNERS 54

PVC: A SMART, ADVANCED MATERIAL FOR A RESILIENT, SUSTAINABLE SOCIETY 58

PVC: A JOURNEY FROM MANUFACTURING TO RECYCLING 59

Building on resilience, responsibility, and evolution

Dr Karl-Martin Schellerer
Chairman of VinylPlus

In these early months of 2026, as I present the work of VinylPlus, we find ourselves operating in an increasingly complex environment shaped by shifting regulations, economic pressures and growing societal expectations. This period has been further unsettled by significant geopolitical disruptions and an unprecedented oil shock, the consequences of which remain difficult to predict even in the medium, let alone the longer term.

Now, more than ever, our industry must demonstrate resilience, credibility and agility. In this context, we take encouragement from the work completed over the past year to reassess VinylPlus' strategy, direction and organisational structure, alongside the planned mid-term review of our targets.

The new organisational framework reaffirms our commitment to delivering concrete and realistic objectives, grounded in a strong science-based approach and recognising the importance of deeper stakeholder engagement. This is further supported by a more structured political dialogue, enabling closer exchange with European and national institutions. Through this engagement, we aim to share our knowledge and experience to help strengthen the competitiveness of our industry in Europe and for Europe, while continuing to preserve the highest standards of health and safety for workers and consumers, as well as environmental protection.

The revision of the 2030 Commitment allows for the adoption of relevant, new targets while also demonstrating the success on achieved milestones. By aligning the revised commitment to the revised VinylPlus strategy, the overall impact of the commitment and the organisation/value-chain implementing it can be increased.

The revised VinylPlus Commitment strengthens our long-term ambition while providing greater flexibility to respond to evolving regulatory, technological and market conditions. It maintains a strong focus on circularity and carbon reduction, including the objective of achieving at least one million tonnes of recycled PVC used in new products by 2030. Compared to the previous framework, it is more action-oriented, focusing on outcomes and impact rather than prescriptive processes and intermediate steps. It also places increased emphasis on product-level sustainability, including life-cycle performance and contributions to climate goals. Overall, the revised Commitment reinforces VinylPlus as a proactive partner in delivering sustainable solutions for society.

Turning to our operational performance, the past year was once again marked by severe pressure on the European plastics sector, from resin production to recycling. High energy and production costs, weak demand, and low-priced imports from outside Europe have exacerbated the crisis, highlighting the urgent need for targeted policy action.

However, despite this highly challenging market environment, the PVC recycling industry has remained resilient. Although overall plastics recycling capacity in Europe has declined, PVC recycling capacity

stayed largely stable in 2025, and recycling volumes within the VinylPlus framework rose by 5.7% compared with 2024. This highlights the robustness of well-established European collection and recycling value chains.

Our circularity ambitions have focused on resource efficiency and producer responsibility, supported by smart design, effective collection systems, and both mechanical and advanced recycling technologies. These include thermo-chemical processes such as pyrolysis and gasification, which address mixed or contaminated PVC waste streams that are difficult to recycle through conventional methods.

Furthermore, VinylPlus has started its participation in European research and innovation funded initiatives such as the RETAIN project under Horizon Europe, aimed at developing a fully circular value chain for PVC tarpaulins.

We have also continued to make progress towards our targets on carbon reduction, renewable energy use, water footprint and sustainable feedstock sourcing, thereby contributing to the European Green Deal and the decarbonisation of the PVC industry. In parallel, a comprehensive revision of our sustainability certification schemes was initiated in 2025, ensuring alignment with key VinylPlus tools such as the Additive Sustainability Footprint® and the Digital Product Passport, as well as with broader developments including corporate sustainability reporting, the EU Taxonomy, bio-attributed additives and Operation Clean Sweep.®

Collaboration with stakeholders remains essential to driving a more sustainable and transformative PVC industry. The projects and initiatives supported by VinylPlus demonstrate how our sector can deliver practical solutions to key societal challenges, including climate adaptation, affordable housing and healthcare.

We firmly believe that PVC will continue to be an advanced material capable of delivering tangible benefits, supporting European competitiveness, accelerating the circular economy and fostering sustainable innovation.

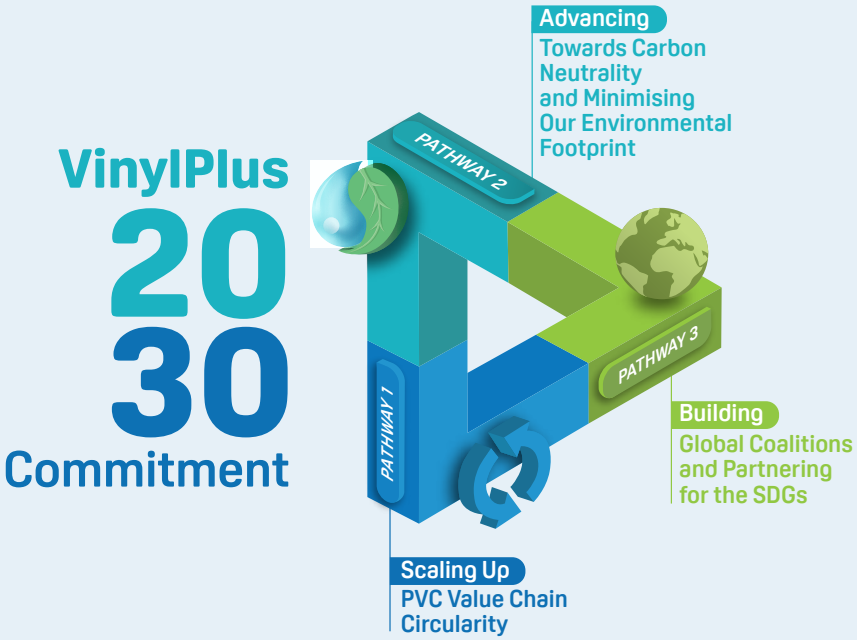
Together, as a united PVC industry, we can strengthen cross-sector collaborations and play a valuable role in supporting Europe's sustainable transition, while ensuring social and economic resilience.

Dr Karl-Martin Schellerer
Chairman of VinylPlus

OUR COMMITMENT TO SUSTAINABILITY

VinylPlus® is the European PVC industry's commitment to sustainable development. Through VinylPlus, the European PVC industry is creating a long-term sustainability framework for the entire PVC value chain, improving PVC products' sustainability and circularity, as well as their contribution to a sustainable society.

Launched in June 2021, the VinylPlus 2030 Commitment builds on over 20 years of progress and achievements throughout the EU-27, Norway, Switzerland, and the UK.



For targets, deadlines and status of achievement
SCAN THE QR CODE

Photo: VinylPlus®

VinylPlus 2030 Commitment: Mid-Term Review

As planned from the outset, VinylPlus undertook a comprehensive review of its 2030 Commitment in 2025 to refine its targets in line with industry performance, regulatory developments and its updated strategic direction. The review also sought to ensure that the industry transition remains not only sustainable but also just, by promoting inclusiveness, preventing polarisation and contributing to a truly resilient society.

A dedicated Revision Task Force was established in April 2025 to coordinate and implement the review process. Stakeholders from across the value chain (including partners and industry representatives from Europe and beyond), policymakers, NGOs and academia were actively engaged to help shape the next phase of VinylPlus.

The review was publicly launched at the VinylPlus Sustainability Forum 2025. A high-level stakeholder consultation was subsequently held in Brussels in October, bringing together representatives from the European Commission, the United Nations Industrial Development Organization (UNIDO), Zero Waste Europe (https://zerowasteeurope.eu), academic institutions and the PVC value chain.

Drawing on both internal and external insights, the Revision Task Force continued its work into the first months of 2026, focusing on strategic priorities, alignment with EU policy frameworks and ensuring full value chain participation.

Key elements of this comprehensive process included maintaining VinylPlus' long-term vision despite challenging market conditions, prioritising implementation in the market over further technological innovation, and sustaining strong engagement with external stakeholders from academia, civil society and the policy community.

Launched at the VinylPlus Sustainability Forum 2026 in June, the revised 2030 Commitment is available at vinylplus.eu/2030.

Photo: VinylPlus®

*As a **responsible industry** organisation, we have a duty to help enhance the competitiveness of our value chain and support the creation of a level playing field for both EU and non-EU actors. The PVC industry can play a role in **Europe's economic recovery** and be an essential actor in Europe's Clean Industrial Deal transition.*

*We are ready to reinforce our commitment to transparent and **effective cooperation** with all our stakeholders, in order to empower a future-proof PVC value chain and contribute to a more **sustainable society.***

CARSTEN HEUER
Vice-Chairman of VinylPlus

Photo: courtesy of PAO Peoples Architecture

GOVERNANCE

VinylPlus Aisbl is the legal entity set up to provide the organisational infrastructure to manage and monitor the implementation of the European PVC industry's Commitment to sustainable development.

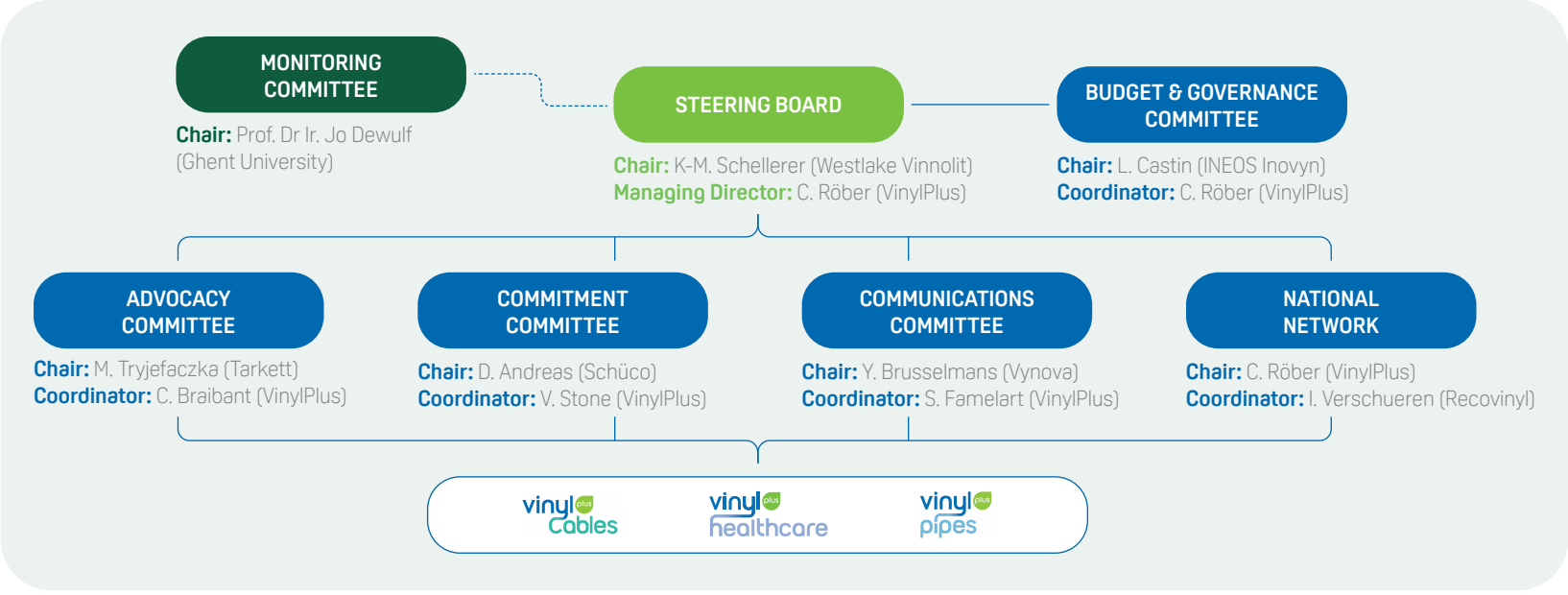
As reported in last year's Progress Report, an internal consultation was carried out in 2024 through workshops with representatives from across the entire PVC value chain, aimed at refining VinylPlus structure, strategy and vision. The objective was to proactively address the challenges presented by the current socioeconomic context, focusing on sustainability, competitiveness, and innovation, while fostering collaboration with European institutions in the implementation of economic recovery policies.

The refined strategy and vision and the new VinylPlus structure – approved by the Steering Board in December 2024 – were launched in April 2025.

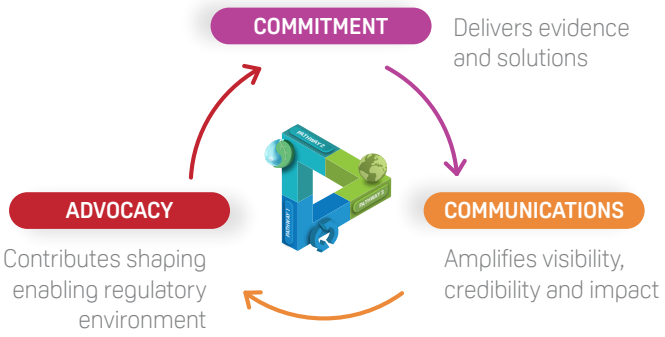
OUR VISION

VinylPlus enables a sustainable and future-proof PVC value chain, driving innovation and collaboration across Europe. We empower our partners to achieve their sustainability goals while championing social, economic, and environmental progress. Based on a robust scientific foundation, we nurture best practices, pioneer technical advances, and engage with stakeholders at all levels. VinylPlus leads the way in shaping a circular and responsible PVC value chain.

The new VinylPlus structure includes four dedicated Committees – Advocacy, Commitment, Communications, and Budget and Governance – and the National Network. It also integrates the application platforms dedicated to the cables, healthcare and pipes under VinylPlus.



The new structure is designed to support VinylPlus in the implementation and completion of its 2030 Commitment and to enhance the collaboration with VinylPlus partner companies and national and sectoral associations along the entire PVC value chain. It ensures a consistent link between the **Commitment**, related EU and national policies and external work on **communications** and **advocacy**.



STEERING BOARD

VinylPlus is managed by a Steering Board composed of six voting members and six substitutes, all from partner companies in representation of VinylPlus founding members,[1] and with the participation of the VinylPlus Managing Director and the Vinyl Foundation[2] General Manager.

Members

Mr Christophe André	ECVM 2010[3]
Mr Hendrik Fischer	European Plasticisers[4]
Mr Jan Hesterkamp	ECVM 2010
Mr Carsten Heuer	Vice Chairman (converters)[5]
Mr Karsten Jänicke	Converters
Mr Andy Jones	ESPA[6]
Dr Luca Malfatto[(a)]	European Plasticisers
Dr Ettore Nanni	Treasurer (ESPA)

Dr Matthias Pfeiffer[(b)]	European Plasticisers
Ms Charlotte Röber	Managing Director of VinylPlus
Dr Karl-Martin Schellerer	Chairman (ECVM 2010)
Mr Sascha Schmahl	Compounders[5]
Mr Geoffroy Tillieux	General Manager of the Vinyl Foundation
Ms Myriam Tryjefaczka	Converters
Mr Arnaud Valenduc	ECVM 2010

(a) From December 2025
(b) Until December 2025

1. See p. 54
2. Vinyl Foundation: the funding mechanism run by EuPC to collect PVC converters' contribution to VinylPlus
3. ECVM 2010: the formal legal entity of ECVM (The European Council of Vinyl Manufacturers – www.pvc.org), registered in Belgium
4. European Plasticisers: is a sector group within Cefic, the European Chemical Industry Council. European Plasticisers (www.plasticisers.org) is legally represented in VinylPlus by PlasticisersPlus, the legal entity registered in Belgium
5. Representatives designated by the Vinyl Foundation Board
6. ESPA: European Stabiliser Producers Association is a sector group within Cefic. ESPA (www.stabilisers.eu) is legally represented in VinylPlus by StabilisersPlus, the legal entity registered in Belgium

MONITORING COMMITTEE

The VinylPlus Monitoring Committee is the independent body supervising the implementation of the VinylPlus 2030 Commitment. It plays a fundamental role in ensuring the transparency, participation and accountability of VinylPlus, and in providing guidance and advice. Open to all external stakeholders, it currently includes representatives of the European Commission, the European Parliament, academic institutions, consumer organisations, and the European PVC industry. The Committee met formally twice in 2025, in April and in December.

To ensure maximum transparency, the minutes of each Monitoring Committee meeting are published on the VinylPlus website after formal approval at the following meeting.

Members

Ms Laure Baillargeon[(a)]	Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW), European Commission
Mr Werner Bosmans[(b)]	Directorate-General Environment (DG ENV), European Commission
Mr Armand De Wasch	Euroconsumers Group[7]
Prof. Dr Ir. Jo Dewulf[8]	Chairman of the Monitoring Committee
Dr Ettore Nanni	Treasurer of VinylPlus
Ms Dorota Napierska[(c)]	Zero Waste Europe
Ms Olga Pozlevic[(c)]	Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW), European Commission
Ms Charlotte Röber	Managing Director of VinylPlus
Mr Geoffroy Tillieux	General Manager of the Vinyl Foundation
Mr Wolfgang Trunk[(d)]	Directorate-General Environment (DG ENV), European Commission
Mr Johan Van Overtveldt	Member of the European Parliament

7. European Consumer Organisation (www.euroconsumers.org)
8. Faculty of Bioscience Engineering, Ghent University, Belgium (www.ugent.be/en)

(a) Until April 2025
(b) Until December 2025
(c) From April 2025
(d) From December 2025

2025 MARKET EVOLUTION AND REGULATORY FRAMEWORK

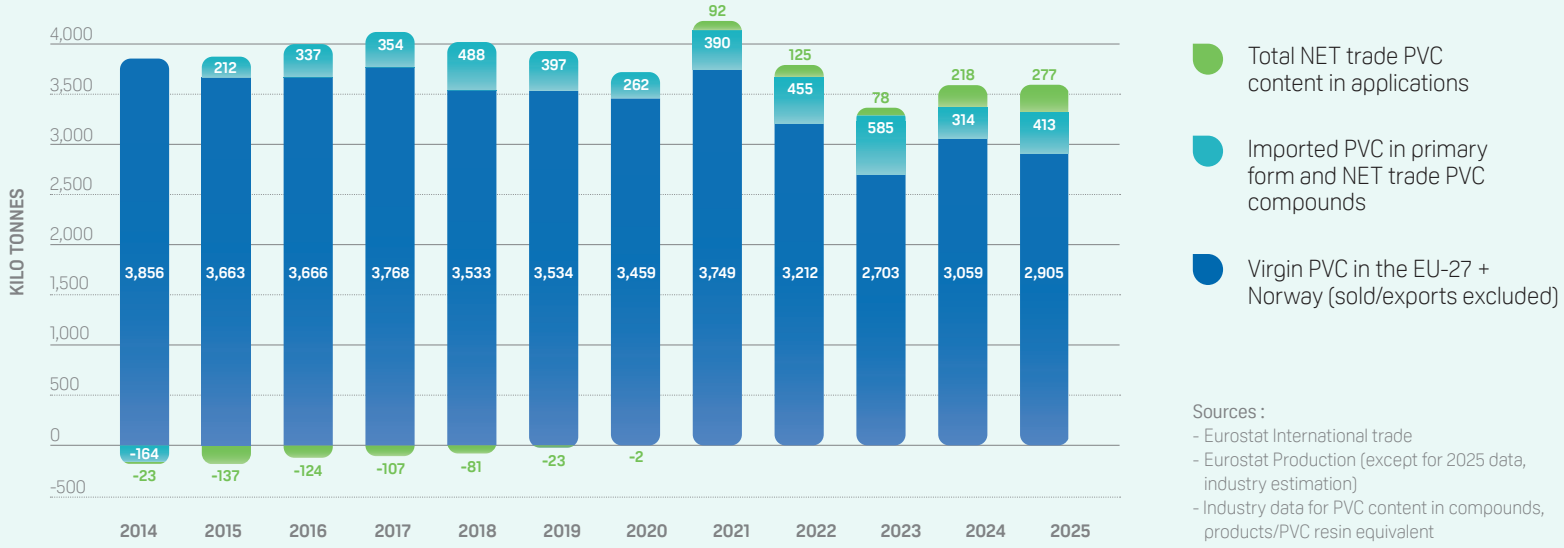
The macroeconomic environment continued to place severe pressure on the plastics sector in 2025, from polymer production to recycling.

Despite a modest stabilisation in production volumes in 2024 (+0.4% to 54.6 Mt) after a record contraction in 2023 (-7.6%), Europe's global market share has continued to erode – collapsing from 22% in 2006 to just 12% in 2024. Industry turnover has also fallen sharply, from €457 bn in 2022 to €398 bn in 2024 (-13%).[9]

High energy and production costs, falling demand, and increasing volumes of low-priced imports of plastics from outside Europe have intensified the crisis, highlighting the urgent need for targeted policy action. These pressures have accelerated plant closures and threatened the EU's circular economy ambitions.

In 2025, the PVC industry also continued to be under severe pressure. Imports of low-priced virgin PVC, PVC compounds and PVC products from non-EU countries continued to grow.

PVC PUT IN THE EU-27+NORWAY MARKET



Sources :
- Eurostat International trade
- Eurostat Production (except for 2025 data, industry estimation)
- Industry data for PVC content in compounds, products/PVC resin equivalent

Since 2015, the share of virgin PVC produced in the EU-27 and Norway has steadily declined, with only a limited recovery in 2025. As a result, Europe is becoming less self-sufficient. Domestic production is losing ground, and the market is increasingly reliant on external sources, including imports and net trade. In 2025, PVC resin imports – both in primary form and as compounds – accounted for 19% of the market.

At the same time, Europe has shifted from being a net exporter to a net importer of PVC in applications. While the period from 2014 to 2020 was characterised by net exports, imports have grown consistently since 2021, often at lower prices, pointing to a structural change in trade dynamics for PVC products.

Although converters continue to operate at healthy capacity, sustained price competitiveness of imports is likely to encourage a shift away from EU-based producers. As buyers turn to imports, operating rates may decline, leading to reduced domestic production. Meanwhile, recycled PVC is not expanding at a sufficient pace to compensate for the decline in virgin production or to reduce Europe's growing dependence on imports.

In September 2025, VinylPlus, together with 27 leading organisations across the European plastics value chain, sent a joint letter[10] to EU policymakers calling for immediate measures to address these challenges. The signatories proposed strategic recommendations aimed at strengthening industrial competitiveness, improving supply chain resilience, increasing investment incentives, and supporting the transition to a sustainable, circular, and innovation-driven plastics economy in Europe.

9. Source: Plastics Europe (https://plasticseurope.org/media/european-plastics-industry-at-cliff-edge-as-competitiveness-collapses)
10. https://www.vinylplus.eu/news/vinylplus-co-signs-letter-from-plastics-value-chain-demanding-immediate-action-to-save-eu-industry

*We call on policymakers to take immediate action to **safeguard Europe's PVC sector** and strengthen a resilient, innovative and sustainable recycling value chain. Without firm intervention, Europe risks lasting damage to its industrial base, its leadership in the circular plastics transition, and its long-term global competitiveness.*

*The European PVC value chain can directly contribute to **Europe's economic resilience** and strategic autonomy. Through VinylPlus, we are committed to help preserving and strengthening the EU's critical chemicals sector and its wider industrial fabric.*

*We stand **ready to support** the European Commission and Member States in delivering key environmental, economic and social objectives.*

CHARLOTTE RÖBER
Managing Director of VinylPlus

Throughout the year, VinylPlus actively engaged with European institutions, from the European Commission to Member States, to help deliver key environmental, economic and social objectives. This included providing its contribution to initiatives like the Circular Economy Act, the European Affordable Housing Plan, Water Resilience and Green Technologies, and broader Green Deal and Clean Industrial Deal initiatives.

In 2025 only, VinylPlus actively participated in 19 calls for evidence and public consultations and prepared strategic recommendations on six relevant topics, providing evidence-based proposals to enhance competitiveness and circularity in the European PVC and plastics industry. This work also demonstrated how the European PVC value chain can contribute to economic resilience and strategic autonomy by supporting critical chemicals production and the broader industrial base in the EU.

For VinylPlus, circularity, sustainability and EU competitiveness are intertwined. Thanks also to its new internal organisation, VinylPlus intends to intensify further its commitment to providing data, analysis and evidence-based policy input to improve regulatory frameworks and avoid fragmented approaches.

VinylPlus believes that Europe does not need more regulation, but better and more coherent regulation. By aligning product design, waste management and economic incentives, the EU can create a truly circular industrial model that is science-based, investment-friendly and globally credible.

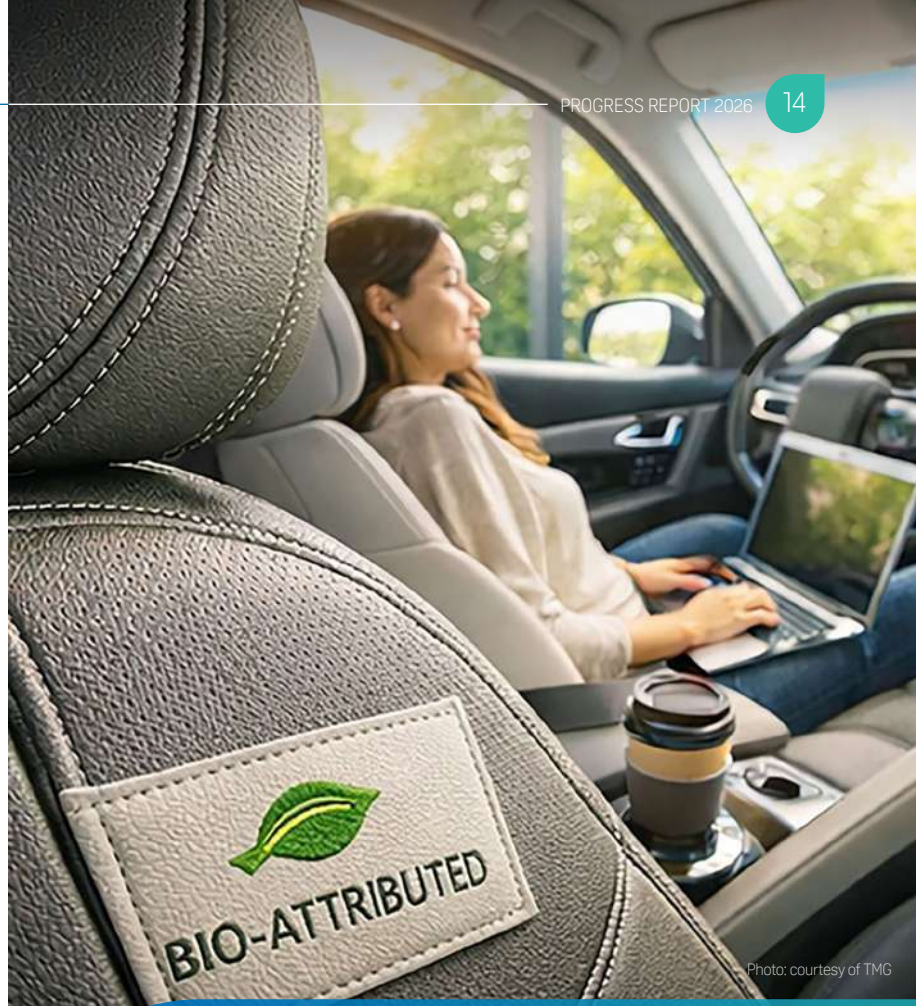


Photo: courtesy of TMG

PVC is an advanced material that delivers tangible benefits in Europe and for Europe, strengthening the EU competitiveness, accelerating the circular economy and sustainable innovation, and ultimately enhancing EU's strategic autonomy.

DELIVERING CIRCULAR PVC IN EUROPE, FOR EUROPE

Waste is recycled into recyclate

1. **EoW CRITERIA:** Establish EU-wide harmonised End of Waste criteria, where EoW criteria are necessary, including for mechanical (e.g., recycled polymer) and chemical (e.g., pyrolysis oil) recycling outputs
2. **TRANSPORT:** Allow wastes destined to recycling in Europe to be transported in line with Annex III of the Waste Shipment Regulation (in a harmonised and digitalised manner) (also applies to recyclates which have not met their End of Waste (EoW) status)
3. **FAIR COMPETITION:** Harmonise trade and market surveillance and reinforce trade defence, especially regarding imported recyclates (to protect fair competition and Europe's economic resilience)

Product reaches end of life and becomes waste

1. **CLASSIFICATION:** Revise Technical Guidance on waste classification to ensure waste classification follows an End of Life (EoL) product classification logic
2. **COLLECTION:** Make pre-demolition/renovation audits and separate collection at source, and identification of recyclable waste streams, mandatory (above a certain surface area) to optimise the technical and financial efficiency of recycling
3. **TRANSPORT:** Allow wastes destined to recycling in Europe (to be defined) to be transported in line with Annex III of the Waste Shipment Regulation (in a harmonised and digitalised manner)
4. **RECOVERY:** Establish EU-wide mandatory minimum levy on landfill and incineration (of recyclable wastes) and include waste incineration activities in EU ETS, to further discourage incineration where possible

Product is manufactured and supplied

1. **DESIGN:** Insert recycled content targets in product-specific standards and/or legislation (taking into account of available pre-consumer and post-consumer quantities, differences between short- and long-life products, and recycling technologies in the EEA+UK and prioritise recyclates from this geographical region)
2. **EPR:** Establish EU-wide mandatory minimum EPR requirements (including for EPR fees) vs national/local specificities. Also ensure EPR fees reward demonstrated durability, long service-life, and collection and recycling (using LCAs accounting for full service-life and full (multi-cycle) recyclability)
3. **INCENTIVES:** Reward EU made/recycled content in Ecolabels, (Green) Public procurement, rebates, reduced VAT rates, tax credits and other tax instruments (instead of sanctions)
4. **TRACEABILITY:** Implement Digital Product Passports to track products up to the end of their life and enhance waste and recycled content traceability
5. **FAIR COMPETITION:** Harmonise trade and market surveillance and reinforce trade defence, especially regarding imported resins and transformed products (to protect fair competition and Europe's economic resilience)

EU's rules of origin *are increasingly viewed as a key factor for restoring and safeguarding the competitiveness of the European plastics and recycling industry. VinylPlus strongly supports the Commission's objective of ensuring that the Union's rules of origin remain fit for purpose and coherent with the EU's competitiveness and circular economy policy agendas.*

To strengthen coherence across EU legislation, we recommend that the Union's rules of origin serve as a common reference point not only for origin marking in the context of customs and trade policy, but also for public procurement and other instruments that increasingly incorporate 'Made in Europe' as European preference criteria in product legislation, as well as in purchasing and consumption decisions, to support the EU's strategic autonomy and economic resilience.

GABRIEL SPRUIJT
Executive Vice-President, DYKA Group

2025 PROGRESS

Technical projects and initiatives, scientific studies and research coordinated under the Commitment Committee, as well as advocacy and communications activities are conducted every year to progress towards the achievement of the targets set in the VinylPlus 2030 Commitment.

2025 activities

For detailed description of projects and activities
SCAN THE QR CODE

Photo: courtesy of Maris Mezulis / Herzog & de Meuron

Photo: courtesy of INEOS Inovyn

Photo: VinylPlus®

Pathway 1
ENHANCING CIRCULARITY
in the PVC Value Chain

Aligned with the relevant EU policies, VinylPlus is driving the European PVC industry towards a circular economy by enhancing PVC sustainability, increasing recycling efforts, and ensuring the safe and sustainable use of recyclates.

RECYCLING ACHIEVEMENTS

As previously reported, 2025 was another critical year for the whole European plastics industry. The European plastics recycling sector has lost around 460,000 tonnes (i.e., around 3.5%) of installed capacity in 2025 only, marking the largest annual reduction in the industry's history.[11]

A surge in low-priced imports of recycled plastics, the resulting decline in demand for EU-produced recyclates, mounting economic pressures and excessive regulatory burdens are forcing an increasing number of European recyclers out of business. This is leading to falling production and recycling capacity, threatening the viability of this strategic sector.

This widespread crisis has also affected PVC recycling, even if, compared with other plastics, PVC installed recycling capacity in Europe remained stable. Low virgin material prices and cheap-priced imports, notably in Germany, Italy and France, were barriers to demand for recyclates.

11. Source: Plastics Recyclers Europe (PRE) – https://recyclinginternational.com/commodities/plastics-recycling/plastics-crisis-one-million-tonnes-of-recycling-capacity-lost/63244

Photo: courtesy of Sioen Industries

*Industry needs **enabling and harmonised regulations** to support the ambitions of the European Green Industrial Deal.*

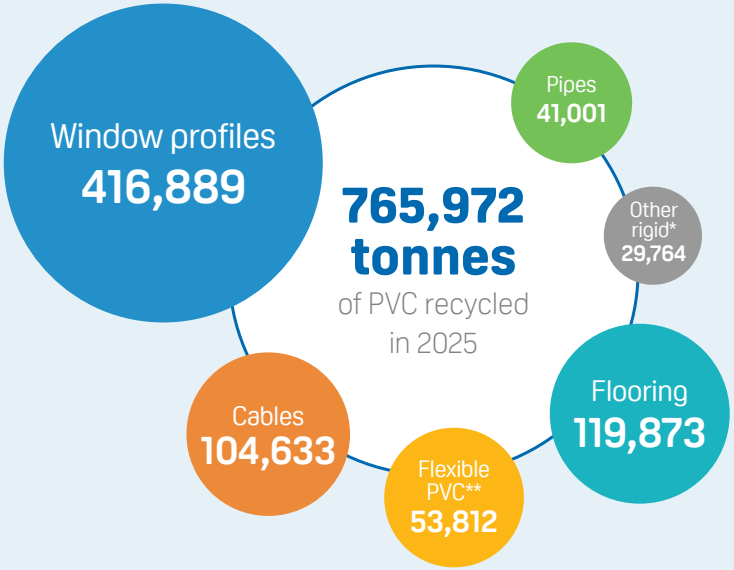
*In relation to collection, sorting and transport, this means ensuring separate collection systems that operate close to the source and directing materials towards the most appropriate **recycling solution** – whether mechanical recycling, which is widely available, or other advanced recycling solutions such as for example dissolution or pyrolysis in the future. These measures must be underpinned by harmonised rules across the European Union regarding efficient cross-border transportation and logistics without bureaucratic barriers.*

*With regard to recycled content mandates, the framework should incentivise the entire value chain to invest and grow locally, while promoting the effective use of recycled content in key applications. Harmonised and easy to handle Extended Producer Responsibility schemes across the EU are essential, and particular emphasis should be placed on materials that are **'Recycled in the EU'**, thereby strengthening European competitiveness and circularity to multiply and accelerate sustainable and circular PVC solutions, for example, in order to support important initiatives like the Affordable Housing EU programmes.*

CARSTEN HEUER
Vice-Chairman of VinylPlus

However, PVC recycling has shown resilience, supported by well-established European collection and recycling value chains and a functioning market for recycled material. Within the VinylPlus framework, recycling volumes increased by 5.7% compared with 2024, reflecting growth across applications. A total of 765,972 tonnes of PVC waste were recycled, of which 58.8% was pre-consumer waste and 41.2% was post-consumer waste.

PVC RECYCLED WITHIN THE VINYLPLUS FRAMEWORK



* including rigid films
** including roofing and waterproofing membranes and films

OUR RECYCLING HIGHLIGHTS

10.3M
tonnes of PVC recycled since 2000

20.6M
tonnes of CO_2 saved since 2000

+1,500
direct jobs in recycling plants

The total uptake of recycled PVC (rPVC) registered in RecoTrace® (https://recotrace.com) by converters was 508,109 tonnes, a 3.6% increase compared with 2024.

The market outlook for 2026 continues to be uncertain, with existing and evolving challenges expected to persist. While some regions may experience improvement, overall sentiment remains cautious. Geopolitical disruptions and broader global trends could introduce new risks and shifting dynamics in the months ahead, making it difficult to predict future conditions with confidence. Energy costs remain a dominant component of recyclers' cost structures; any renewed energy crisis on the horizon could once again put significant pressure on the PVC recycling industry.

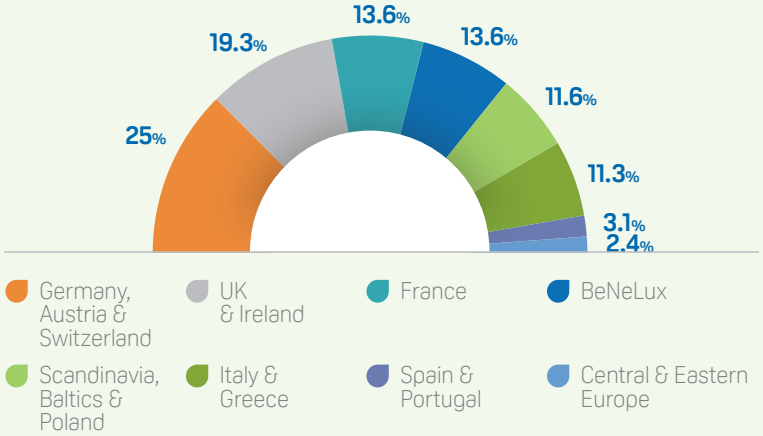
Localisation and effective recycling of post-consumer PVC waste

Reflecting developments in the recycling market, Recovinyl®[12] adopted a renewed strategic direction in 2025. Rather than concentrating primarily on monitoring and data reporting,[13] Recovinyl® is now investing in and taking a proactive role in enabling the localisation, collection and effective recycling of post-consumer PVC waste.

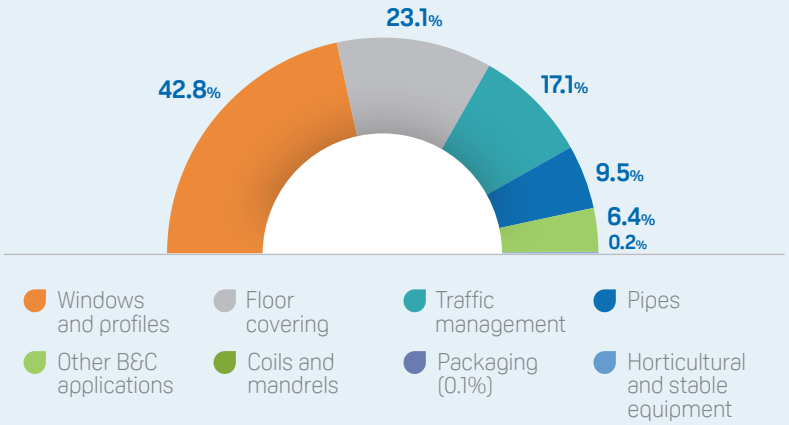
The first step was to build a consistent and detailed picture across Europe in order to identify gaps and opportunities. To this end, a **Post-Consumer Waste Information Project** was launched, including a questionnaire-based mapping across multiple waste-chain stakeholders, follow-up interviews to clarify assumptions and address data gaps, and a preliminary mapping report setting out key observations and recommendations. This work has provided a structured overview of PVC waste flows and is already supporting strategic thinking and the development of an action plan for the 2026-2027 period. However, coverage remains uneven, with some waste streams and geographical areas still insufficiently represented. The immediate priority will therefore be to strengthen the robustness of the dataset and close the main geographical and application gaps.

All these initiatives will be undertaken in close collaboration with the National Network, ensuring broad engagement and expertise across the sector. An updated report is expected to be finalised by the end of 2026, reflecting the progress achieved and outlining future priorities.

RECYCLED PVC WASTE PER REGION IN 2025

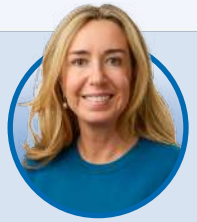


USAGE OF RECYCLED PVC IN 2025



12. Recovinyl® is the organisation set up in 2003 to facilitate PVC waste collection and recycling in the framework of the European PVC industry's Commitments. It plays a key role in monitoring, verifying and reporting PVC recycling and the use of rPVC in Europe (www.recovinyl.com)
13. See p. 14 of VinylPlus Progress Report 2025

*While plastics recycling capacity in Europe has declined overall, **PVC recycling has shown resilience**, with stable capacity and continued growth in volumes. However, reaching our target of 1 million tonnes by 2030 will not happen without cutting through EU bureaucracy and tackling the lack of investment. Today, uncertainty, slow and complex processes, and inflation concerns are holding back the capital needed to scale up. Policymakers must now move from added complexity to delivery: **simplify and harmonise EU rules** for collection, sorting and recycled-content implementation, align EPR schemes across Member States, and create real market pull for 'Recycled in the EU' materials so European recycling can invest and grow.*



INGRID VERSCHUEREN
General Manager of Recovinyl

To maximise the opportunities to achieve higher recycling rates of post-consumer PVC waste in Europe, VinylPlus continued in 2025 to support projects and initiatives aimed at enhancing the collection and recycling of specific PVC applications, establishing additional collection and recycling schemes where needed, and promoting the use of recycled PVC in new products.

Photo: courtesy of PVCH

In the last 15 years, the European PVC window sector has increased the annual rate of PVC profiles recycled by nearly 4 times, exceeding 416,000 tonnes of PVC profiles in 2025 alone, which prevented over 932,000 tonnes of CO_2 emissions being released in the atmosphere.

Improving collection and recycling in the building and construction sector

Approximately 70% of PVC is used in the building and construction sector, in products such as window frames, flooring, cables, piping systems and waterproofing membranes. It provides high-performance, cost-effective and low-maintenance solutions that meet the technical requirements of modern construction. PVC building products are not only durable and affordable, but also recyclable and recycled, retaining their core technical properties across multiple life cycles. Currently, building applications account for around 90% of the total volume of PVC waste recycled within the VinylPlus framework.

In 2025, for the PVC window profile sector, **EPPA**[14] commissioned the consultancy TNO (www.tno.nl/en) to develop a comprehensive study assessing the feasibility and impacts of a **European Extended Producer Responsibility (EPR) Scheme for Windows**, aiming to provide an evidence-based framework for EU and national policy discussions. The study concluded that a future EPR scheme for windows should ensure transparent and fair processes, prevent free riding through EU-level registration of windows producers, introduce fees that stimulate circular innovation, and apply progressive financing to promote recycled content and sustainable design. The findings supported EPPA members in positioning PVC windows within the EU circular economy policy framework, while also contributing to ongoing policy debates.

14. EPPA: the European Trade Association of PVC Window System Suppliers (www.eppa-profiles.eu)

As part of EPPA's **post-consumer window recycling action plan**, activities in 2025 mainly focused on strengthening the PVC window profile recycling and supporting investment planning in the Polish market. This approach aimed to build local recycling capacity and prepare the market for future scale-up. The initiative brought together PVC profile and window manufacturers, installers, recyclers, EPPA members and wider window industry stakeholders to ensure alignment across the value chain. Engagement activities promoted collaboration, structured stakeholder dialogue and awareness raising. Key actions included targeted meetings with recyclers such as Guardian Glass, Dekos and Molle Group, and participation in the Glass Horizons 2025 Conference in Warsaw. These efforts led to stronger cooperation across the value chain and increased PVC recovery volumes – a 12.5% increase compared with 2024, while laying a solid foundation to further increased operational deployment in 2026.

The **Revinylfloor** project brought together **ERFMI**[15] members, technology development partners and external experts to scale up the recycling of post-consumer PVC flooring in Europe through improved collection, sorting and system design. Key activities undertaken in 2025 included successful laboratory-scale sorting trials carried out in collaboration with Steinert[16] and Phoenix RTO.[17] These trials enabled the separation of flooring containing legacy additives,[18] such as DEHP, from other flooring wastes, as well as the differentiation of resilient flooring types such as PVC, rubber, linoleum and cork.

During the year, Revinylfloor also launched its *'Project Loop – Concept Design & Hub Establishment'* initiative, aimed at developing a dedicated collection, sorting and recycling hub for post-consumer PVC flooring in Belgium. The consultancy Recydata[19] was appointed to develop a detailed implementation pilot plan, including stakeholder mapping, technical scoping and partnership engagement.

Modern PVC floorings can offer acoustic insulation, anti-slip, and electrostatic dissipative properties, improving comfort and safety in homes, schools, and healthcare settings. The smooth, non-porous surface prevents bacterial growth and allows easy cleaning with minimal chemicals.

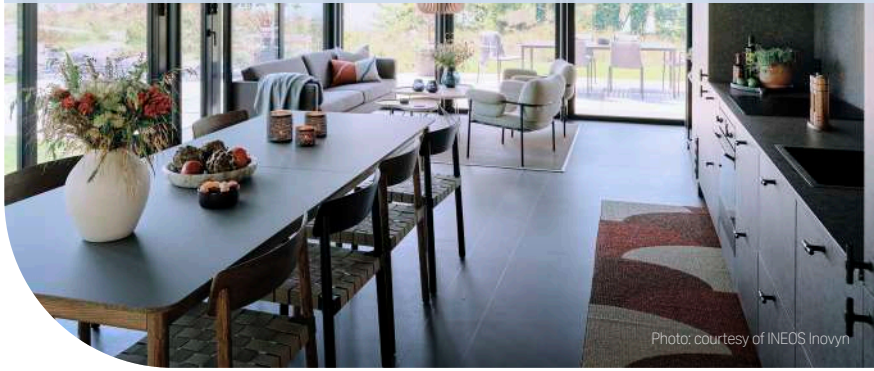


Photo: courtesy of INEOS Inovyn

15. ERFMI: European Resilient Flooring Manufacturers' Institute (www.erfmi.com)
16. https://steinertglobal.com
17. www.phoenix-rto.com
18. Legacy additives are substances that are no longer used in new PVC products but can be present in recycled PVC
19. Recydata: a Belgian consultancy specialising in circular solutions for industry (https://www.recydata.be/en)

For the plastic pipes industry, as reported last year, **TEPPFA**,[20] in collaboration with the BPF[21] Pipes Group, commissioned the consultancy Oakdene Hollins[22] to carry out a **material flow analysis (MFA) of plastic pipes** in the UK in 2024. The study examined material flows across the UK plastic pipe industry and established a baseline to support future initiatives to improve the collection, sorting and processing of plastic pipe waste. It provided an overview of key market participants, production volumes by application, waste generation and recycling practices, and assessed the use of post-consumer recyclates in plastic pipe manufacturing. Findings of the final report,[23] which was published in early 2025, indicate that *"the future of plastic pipes in the UK lies in the industry's ability to adapt to the demands of sustainability and circularity. By prioritising the quality of recyclate, fostering collaboration among stakeholders, and investing in upskilling the workforce, the plastic pipe sector can significantly reduce its environmental footprint while maintaining the high standards required for infrastructure projects."*

Advancing circularity in the healthcare sector

PVC is a material of choice and is widely used in the healthcare industry for its versatility, functionality, reliability and high safety standards. Single-use, PVC medical devices are fundamental in hospitals. They are hygienic, safe and affordable. Most PVC medical waste is non-infectious and can be properly sorted, collected, and recycled.

Launched in 2025, **VinylPlus Healthcare** serves as the central hub for fostering collaboration and partnerships in the healthcare value chain. It unites the European PVC industry's sustainability efforts in healthcare to drive innovation, responsible material use and circularity in medical PVC applications. It brings together the activities of VinylPlus® Med for medical device recycling and VinylPlus® PharmPack for pharmaceutical blister packaging recycling.

VinylPlus® Med was launched in Belgium in 2021 to facilitate the recycling of discarded single-use PVC medical devices, such as masks and tubing, into new, durable products for healthcare settings, including wall coverings and flooring. In 2025, the project continued in Belgium with the same hospitals involved in 2024,[24] focusing on collecting, sorting, and processing non-contaminated PVC medical devices.

20. TEPPFA: the European Plastic Pipes and Fittings Association (www.teppfa.eu)
21. BPF: British Plastics Federation, the leading trade association for the UK plastics industry (www.bpf.co.uk)
22. Oakdene Hollins: sustainability and circular economy consultancy (www.oakdenehollins.com)
23. https://it.scribd.com/document/877099438/BPF-PG-MFA-Report-v-14-final-210125
24. See p. 19 of VinylPlus Progress Report 2025

Photo: VinylPlus®

VinylPlus® Med activities progressed significantly in France in 2025, with the collection and sorting of DEHP-free single-use medical devices from Hôpital Édouard Herriot in Lyon, using a handheld NIR scanner[25] developed by Phoenix RTO. In December 2025, the first medical PVC waste collection was completed, comprising 89 kg of material, which was manually dismantled and sorted by Elise, a social enterprise specialising in waste management. Approximately 60 kg of PVC waste, including tubing and masks, was made available for mechanical recycling.

As part of its activities, VinylPlus® Med, through VinylPlus, partnered with **Select4Care**. This two-year partnership project,[26] funded by the Flemish government, was concluded at the end of 2025, with the closing event taking place in January 2026. Aiming to investigate how to optimise waste collection logistics and maximise recycling rates for non-infectious plastic waste in hospitals, Select4Care demonstrated that established material knowledge, regulatory compliance, and value chain collaboration can support scalable recycling models for medical plastics. By designing medical products with recycling in mind and rethinking the management of single-use medical materials, hospitals can significantly reduce waste streams while simultaneously contributing to a more sustainable healthcare system. The Select4Care partnership project was supported by twenty organisations, including hospitals, manufacturers of medical materials, day-care centres, and waste management and recycling companies. As a project partner, VinylPlus contributed its expertise and shared the best practices developed through VinylPlus® Med.

The **VinylPlus® PharmPack** project,[27] run by VinylPlus Deutschland, aims to demonstrate the recyclability of pharmaceutical blister packaging made of aluminium and PVC, supported by the development of solvent-based recycling technologies to produce recycled PVC suitable for reuse in film calendering. The successful separation of PVC from aluminium achieved in large-scale trials at Fraunhofer IVV[28] in 2024 led to the preparation of a paper in 2025 for submission to a peer-reviewed scientific journal.

During 2025, the project focused on engaging hospital pharmacies as collection points and mechanically recycling post-consumer blister waste. One pharmacy implemented collections throughout the year, while five additional pharmacies were secured, four of which commenced collection activities in 2025, with another scheduled to start in early 2026. Engagements with specialists and government officials led to a strong and positive perception of the project, including constructive discussions with the Service and Purchasing Association of Municipal Hospitals and presentations to the German National Support Group for Chemical Recycling in the presence of policymakers.

25. See p. 16-17 of VinylPlus Progress Report 2023
26. See p. 19 of VinylPlus Progress Report 2025
27. See p. 20 of VinylPlus Progress Report 2025
28. Fraunhofer IVV: Fraunhofer Institute for Process Engineering and Packaging (www.ivv.fraunhofer.de)

SAFE AND SUSTAINABLE USE OF ADDITIVES

The VinylPlus commitment to circularity involves providing scientific evidence to demonstrate the safe use of additives and of PVC articles containing recyclates with legacy additives. It also includes supporting R&D projects to detect, sort, reduce, or remove legacy additives in PVC waste streams. For the past two decades, the European PVC industry has been working not only on solutions for legacy additives but also on methods (see the ASF methodology at page 38) to ensure that additives used in new PVC products remain safe and high-performing, also in the foreseeable future. VinylPlus will continue to support research and studies to provide users and consumers with safe and sustainable PVC products, in line with upcoming European initiatives.

For a safe use of additives and recyclates with legacy additives

An industry-led **Risk Management Option Analysis (i-RMOA)** was conducted on organotin stabilisers and ortho-phthalate plasticisers used in PVC, in order to identify the most suitable regulatory action to manage residual risks related to the PVC additives singled out by ECHA in its Investigation Report.[29] Key outcomes of the study carried out by the consultancy ChemService (https://chemservice-group.com) include: (i) the recommendation to develop harmonised occupational exposure limits for organotins – meaning a single clear legal limit on worker exposure, applied and enforced consistently across Europe – and (ii) confirmation that no further regulatory action is necessary for high-molecular-weight ortho-phthalates, alongside voluntary industry initiatives to improve biomonitoring and exposure control, based on the information available at the time of producing the i-RMOA.

In relation to the new EU limits on lead[30] in PVC products, VinylPlus commissioned the consultancy TAUW[31] to **assess the impact on PVC recycling**. Under current regulations, the general maximum lead concentration in PVC articles is 0.1% by weight. Temporary derogations allowed higher levels in products containing recycled PVC: up to 1.5% lead in flexible PVC until 28 May 2025, and up to 1.5% in rigid PVC until 28 May 2033. The study assessed scenarios linked to possible regulatory outcomes and technological progress in lead removal.

Results and recommendations of the i-RMOA study were shared with VinylPlus partners and the PVC value chain in a dedicated webinar in May 2025. It attracted more than 100 participants.

i-RMOA

To download the **i-RMOA Executive Summary**

SCAN THE QR CODE

29. See p. 21 of VinylPlus Progress Report 2025
30. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32023R0923
31. TAUW: Environmental Engineering Consultancy (www.tauw.com)

In light of ECHA's 2023 Investigation Report, the ongoing occupational exposure limit (OEL) scoping study on organotins – also recommended by the industry-led Risk Management Option Analysis (i-RMOA) – and the harmonised classification (CLH) process for specific low-molecular-weight ortho-phthalates, VinylPlus considers that the 'PVC and PVC additives' entry can now be removed from the REACH Restriction Roadmap, with any remaining risks relating to phthalates to be addressed through the existing substance-specific entry in the Roadmap.

CAROLINE BRAIBANT
External Affairs Senior Manager of VinylPlus

Preliminary key findings indicate that ending the derogation for rigid PVC in 2033 could significantly affect profiles, pipes and fittings recycling, potentially limiting maximum recycled content levels to below 25% (with higher recycled content levels leading to higher lead concentrations than the permitted 0.1% by weight) and causing a decrease in PVC recycling. They also highlight the importance of continuing to develop lead detection and lead-containing PVC wastes sorting technologies. The authors finally conclude that *"an extension of the derogation of approximately 5 years would greatly help the European PVC recycling industry to have enough post-consumer PVC waste suitable for processing."*

Detecting and sorting legacy additives from PVC waste streams

Detection Technologies for Legacy Additives in PVC Products is a collaborative project[32] by EuPC and VinylPlus Cables (former PVC4Cables) to tackle the challenge of recycling PVC waste containing additives, including lead, cadmium, tin, low-molecular-weight (LMW) orto-phthalates (DEHP, DINP and DIDP) and medium-chain chlorinated paraffins (MCCPs). In 2025, Phoenix RTO conducted further lab tests and feasibility studies on detecting tin (Sn) and cadmium (Cd) using X-ray fluorescence (XRF), with promising results for tin and further refinement required for cadmium. While the feasibility of the detection of DEHP, DINP, DIDP and MCCP by near-infrared hyperspectral imaging (NIR) was demonstrated in 2025, preliminary NIR testing of samples containing varying types, mixtures and concentrations of ortho-phthalates were conducted, with results expected in 2026.

32. See p. 22 of VinylPlus Progress Report 2025

SUPPORTING INNOVATIVE RECYCLING TECHNOLOGIES

Mechanical recycling remains the preferred and most widely used method for processing PVC waste today, reflecting its established efficiency and environmental benefits. It plays a central role in preserving material value, reducing resource consumption and supporting circular economy objectives.

To continue progressing towards circularity and reach ever more ambitious recycling targets, the industry is exploring advanced recycling technologies to tackle the PVC waste that cannot be mechanically recycled, because it contains legacy additives (such as lead, DEHP, chlorinated paraffins, etc.) or because it is included in complex, hard-to-separate composite products. These technologies include for example dissolution, pyrolysis, gasification, or chlorine recovery in waste-to-energy plants.

Photo: courtesy of Arcus

Recycling advances

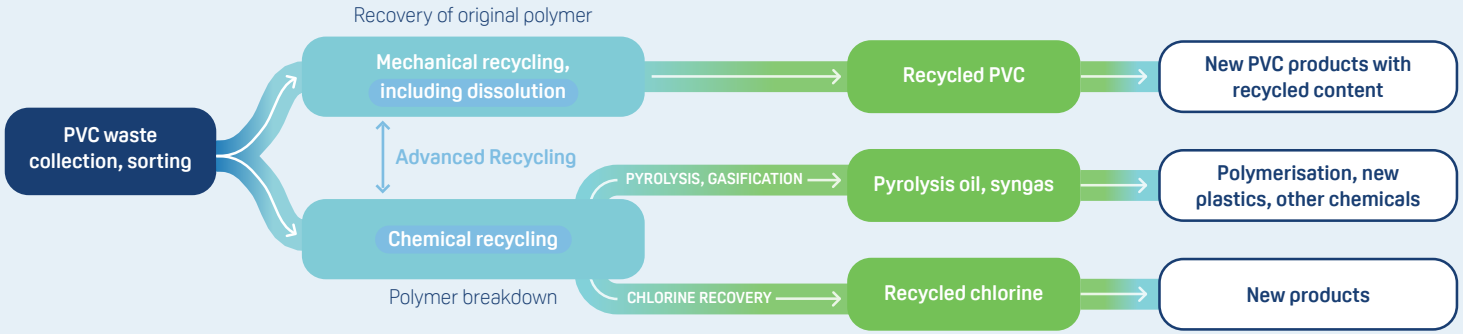
EXPLORE PVC RECYCLING ADVANCES

To learn more about cutting-edge chemical recycling of PVC and discover VinylPlus Partners progress in advanced recycling technologies for industrial-scale solutions

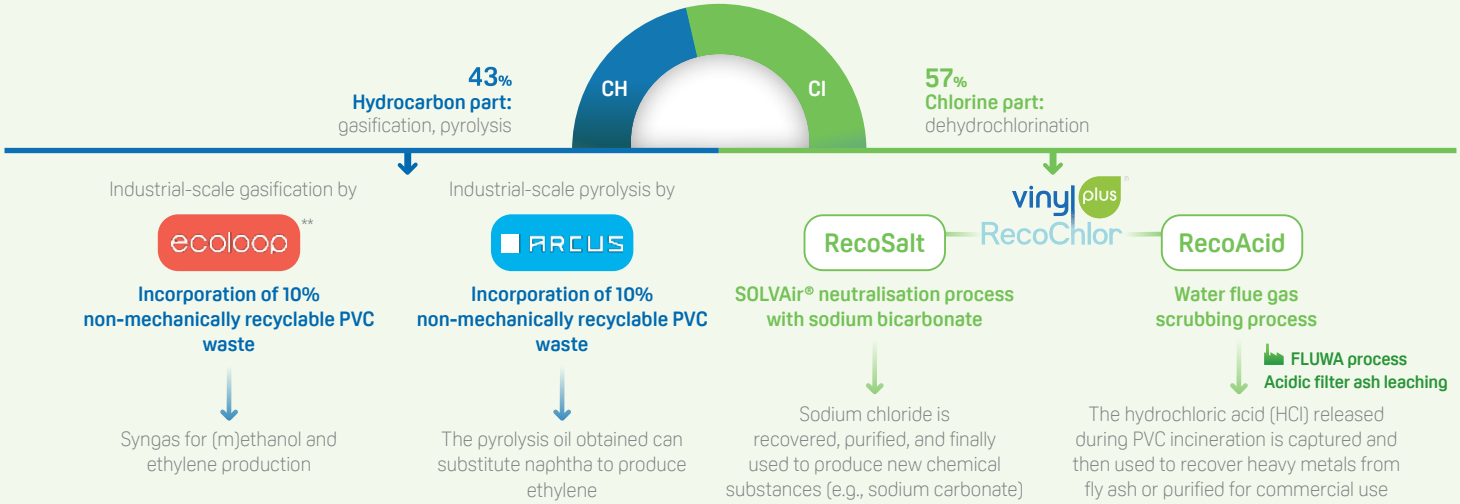
SCAN THE QR CODE

Photo: courtesy of INEOS Inovyn

PVC CIRCULARITY: ALL RECYCLING TECHNOLOGIES ARE REQUIRED



CHEMICAL RECYCLING OF PVC AND ITS CONTRIBUTION TO CIRCULARITY



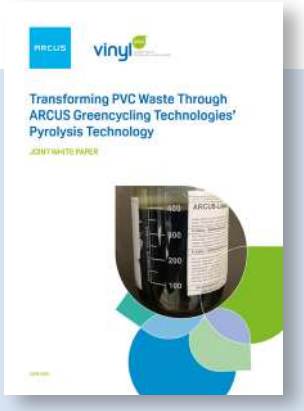
** Project started in 2025. Bench-scale trials scheduled in 2026.

RESEARCH AND BEST PRACTICES

The **Arcus project** has demonstrated the conversion of PVC waste that cannot be mechanically recycled, into pyrolysis oil for use in the petrochemical industry. Pyrolysis is a thermochemical decomposition process that breaks down organic materials using intense heat (300 °C – 600 °C) in an oxygen-free environment. Through pyrolysis, plastics are transformed into oils and chemical components that can serve as a basis for producing new products or be utilised in specific industrial processes. In 2024, industrial trials at Arcus Greencycling Technologies' (www.arcus-greencycling.com) process demonstration unit in Frankfurt-Höchst showed that adding 10% flexible PVC into a mixed polyolefin (MPO) feedstock did not affect the recycling process or oil quality. The resulting oil can be used in steam crackers to produce new raw materials for plastics, supporting a circular economy.

Additional analyses conducted in 2025 have confirmed that the industrial-scale test has delivered similar pyrolysis oil quality and higher chlorine removal (over 99.8%), with lower coke yields but higher-than-desired pyrolysis gas yields, indicating potential for further oil yield optimisation. No adverse impacts from the PVC waste fraction were observed on coke quality, wastewater behaviour, or dioxin formation in exhaust gases.

An independent assessment of the oil produced by the project has been performed by Professor Kevin Van Geem from the Ghent University. A comprehensive set of analytical data has confirmed that the oil can be processed in steam crackers after dilution or standard hydrotreatment as any other pyrolysis oil produced from a 100% MPO feedstock. Professor Kevin Van Geem concluded that the Arcus project marks a significant step forward in the sustainable valorisation of PVC waste.



White Paper

To download the **VinylPlus-ARCUS white paper**

SCAN THE QR CODE

Photo: courtesy of INEOS Inovyn

CIRCULARITY GOLD AWARD

ARCUS Greencycling Technologies won the Gold Award for Circularity of the INOVYN AWARDS 2025.[33]

33. www.inovynawards.com/winners-2025

The projects with ARCUS and ecoloop reflect VinylPlus' continued ***investment in circular solutions*** *and its commitment to advancing complementary technologies, including pyrolysis and gasification, to address mixed or contaminated PVC waste fractions that are difficult to recycle mechanically.*

These projects are designed to foster ***new collaborative initiatives*** *between the European PVC converters, waste management companies, ARCUS and ecoloop, further strengthening the circular value chain.*

VINCENT STONE
Technical and Environmental Affairs Senior Manager of VinylPlus

In 2025, bench-scale pyrolysis trials were conducted using lead-containing cable sheathing waste in the feedstock, to assess the impact of lead on the quality and yield of the pyrolysis oil produced. The bench-scale trials showed that lead had no measurable impact on pyrolysis oil yield or quality, with metal levels below detection limits and chlorine removal exceeding 99.5%. No effects were observed on coke residual carbon or wastewater chlorine distribution and biodegradability. These results have shown that the Arcus pyrolysis technology is a viable recycling option for lead-containing flexible PVC waste streams.

VinylPlus® RecoChlor is a programme aimed at recovering chlorine from difficult-to-recycle PVC waste treated in waste-to-energy plants. The chlorine part of the PVC waste stream is recovered during the flue gas treatment, either as sodium chloride (**RecoSalt**, dry flue gas treatment) or as diluted hydrochloric acid (**RecoAcid**, wet flue gas treatment), while the hydrocarbon fraction is recovered as energy.[34]

34. See p. 23-24 of VinylPlus Progress Report 2025

RESEARCH AND BEST PRACTICES

Photo: courtesy of Somfy, CreatAR Images

The FLUWA process (Fly Ash Washing/acid leaching)[35] is a standard process that will be compulsory in Switzerland in 2026. The process recovers heavy metals from fly ash generated by municipal solid waste incineration. In this process, fly ash is treated with acidic scrub water containing hydrochloric acid from the flue gas treatment systems.

The presence of PVC in the waste feedstock has been shown to promote the transfer of heavy metals from the bottom ash to the fly ash via volatilisation, increasing the overall metal recovery in the fly ash by the FLUWA process and reducing contamination of the bottom ash that should be landfilled. As waste-to-energy plants do not produce sufficient acid with the typical PVC waste concentration found in the feedstock, additional hydrochloric acid must typically be supplied to implement the FLUWA process. Building on the RecoAcid process, the **VinylMet** project, co-funded by the Swiss Federal Office for the Environment, aims to generate enough hydrochloric acid in situ and optimise the heavy metal transfer during incineration of the municipal waste feedstock by adding industrial PVC waste. Trials were carried out in December 2024 at the municipal waste incinerator in Basel, Switzerland, with PVC granulates from cable sheathing added to the feedstock to achieve a 50% increase in chlorine concentration compared with a normal feedstock composition. Analytical results obtained in 2025, confirmed the increased acid production and the higher heavy metal concentrations in fly ash, with no additional dioxin formation in cleaned exhaust gases. Additional industrial trials are scheduled to be conducted in Basel in May 2026 for mass balance calculations on chlorine.

Overall, RecoAcid was found to offer environmental and economic benefits compared with incineration or landfilling and can complement mechanical PVC recycling. These benefits could trigger higher acceptance in other European countries.

35. www.researchgate.net/figure/Basic-concept-of-acidic-fly-ash-leaching-FLUWA_fig3_324686629

Sorting and separation technologies for complex PVC products

RETAIN

VinylPlus is a partner in **RETAIN**,[36] a project funded by the European Commission under the Horizon Europe programme which was launched in May 2025. RETAIN aims to build a fully circular value chain for PVC tarpaulins, which are widely used in transport, construction and industry, but are difficult to recycle due to their composite structure. RETAIN addresses this challenge through advanced mechanical, physical and selective dissolution recycling technologies, supported by circular business models and digital product passports.

The project aims for at least 90% of tarpaulins produced in Europe to be repaired, reused, remanufactured or recycled by 2036, in line with the EU sustainability goals, while also contributing to relevant standards and connecting with other recycling initiatives in the EU and abroad. RETAIN is driven by a strong international collaboration, bringing together 15 partners from seven EU countries to address the environmental and technical challenges associated with these widely used materials. VinylPlus contributes to communications, stakeholder engagement, logistics and gate control systems, recycling process optimisation and market development for recyclates.

Photo: VinylPlus®

Photo: courtesy of Sattler

36. www.retain-project.eu

PRIORITISING CIRCULARITY THROUGH ECODESIGN

The Ecodesign for Sustainable Products Regulation (ESPR)[37] establishes a framework to improve the environmental performance of products placed on the EU market. The ESPR sets sustainability requirements, including energy efficiency, durability, reparability and recyclability, to reduce impacts across the product life cycle, and clarifies that sustainability improvements should not compromise product performance or safety.

To ensure consistent implementation, the European Commission works with European standardisation bodies to develop harmonised standards. These standards translate legal requirements into technical specifications and test methods, providing a practical route to demonstrate compliance.

In line with the ESPR spirit and with the European Commission's Standardisation Mandate M/584,[38] titled *'Plastics Recycling and Recycled Plastics'*, VinylPlus is committed to discuss and collaborate with standard organisations and technical working groups that norm the most relevant PVC applications such as cables, windows and pipes and cross-linked topics, including design-for-recycling and fire safety.

The **design-for-recycling guidelines for thermoplastic pipes and fittings** used as construction products or to supply water to irrigation systems, developed with the contribution of TEPPFA, were released in June 2025 and are available in most European countries through the respective national standardisation bodies.

37. ESPR: Regulation (EU) 2024/1781 (https://eur-lex.europa.eu/eli/reg/2024/1781/oj)
38. See p. 25 of VinylPlus Progress Report 2025

In 2025, VinylPlus Cables commissioned NZ Studio Tecnico, an Italian consultancy specialising in fire safety engineering, to analyse the **fire behaviour of PVC cables using fire scenario modelling.**

The study assessed whether laboratory tests referenced in standards under the EU Construction Products Regulation (CPR) are representative of real fire conditions in two civil and industrial settings. The Fire Dynamics Simulator (FDS-6), developed by the US National Institute of Standards and Technology (NIST), was used to model realistic fire scenarios. The results indicate that current standard fire test methodologies for PVC cables do not adequately reflect real fire behaviour, suggesting that existing standards may need revision and that realistic testing approaches and scenarios modelled through more appropriate tests should be considered for a more comprehensive and meaningful assessment of the fire safety of PVC with additives.

Photo: VinylPlus®

*VinylPlus remains committed to discuss and collaborate with standardisation organisations. We are in favour of **assessment methodologies** that rewards actual sustainability performance, supports circular material systems, and recognizes the substantial progress made by the PVC industry towards safety and circularity. A **science-based, risk-informed approach** will better serve manufacturers, consumers, and the environment.*

MAGDALENA GARCZYŃSKA
Senior Technical Project Manager of VinylPlus

Pathway 2

MINIMISING THE ENVIRONMENTAL FOOTPRINT
of the PVC Value Chain

ADVANCING TOWARDS CARBON NEUTRALITY

VinylPlus is working with the consulting firm Carbon Minds (www.carbon-minds.com) to progress on its targets for carbon reduction, renewable energy use, water footprint and sustainable feedstock sourcing, supporting the European Clean Industrial Deal and the decarbonisation of the PVC industry.

Preliminary findings of the Carbon Minds' study showed that decarbonisation pathways are technically feasible but highly energy-dependent, relying on electrification, low-carbon electricity, and hydrogen.

Decarbonisation may affect water use positively or negatively, for example through electrolysis or cooling, and water impacts are highly site-specific. The water footprint of PVC production is moderate compared with other industrial materials, with most water used for cooling and process water rather than being embedded in the product, and the majority is returned rather than consumed. Circular PVC offers clear benefits, significantly reducing both carbon and water footprints compared with virgin materials. These results highlight that careful energy and water management, alongside circular practices, can support more sustainable PVC production.

More than 120 participants attended the webinar organised by VinylPlus in June 2025 to present the initial findings of the project with Carbon Minds assessing the potential for core carbon reduction by 2030 in the PVC value chain. A 2nd webinar will be organised in 2026 to present the final report.

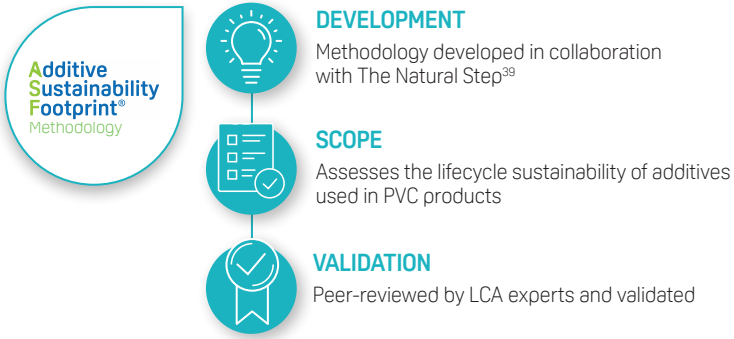
Despite the strong climate and carbon pricing frameworks in place in Europe, the decarbonisation of industry is hampered in practice by high and volatile electricity costs, limited grid capacity and the slow deployment of energy infrastructure.

Consequently, many electrification or hydrogen projects cannot proceed due to the lack of reliable access to affordable, low-carbon energy, which means that industry cannot transition faster than the energy system can supply clean power.

DR KARL-MARTIN SCHELLERER
Senior Vice-President, Europe and Asia Performance and Essential Materials, Westlake Vinnolit

VinylPlus commissioned the consultancy Life Cycle Engineering SpA (www.lcengineering.eu) to develop a **LCA study to evaluate the environmental performance of PVC cables** used for telecommunication purposes and power transmission. The study also aimed to benchmark these cables against alternative solutions available in the market and generally confirmed that for PVC and PE cables there is no general superiority of one material over the other. Nevertheless, in terms of circularity index (the indicator that measures the degree of circularity of a material) the recyclability of PVC cables represents a significant advantage.

EMBRACING THE SUSTAINABLE USE OF CHEMICAL SUBSTANCES



The **Additive Sustainability Footprint® (ASF)**[40] is a methodology to proactively assess and promote the sustainable production and use of PVC additives throughout entire product life cycles, including the roles of additives in the performance of PVC products. Over the past decades,

39. The Natural Step: sustainability expert (www.thenaturalstep.org)
40. www.vinylplus.eu/asf

VinylPlus additive partners have worked hard to ensure that the additives used in new PVC products not only fully comply with current legislation but are also developed to be safe and high performing in the foreseeable future. The ASF methodology has significantly influenced their research and development efforts.

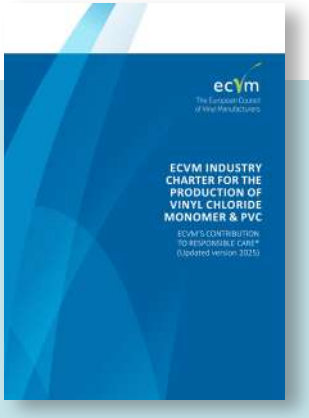
In 2025, the ASF methodology has been included as a *Good Practice* by ICESP, the Italian Circular Economy Stakeholder Platform, and as *Good Guidelines* by ECESP, the European Circular Economy Stakeholder Platform.[41]

The Additive Sustainability Footprint® is a key component of the VinylPlus Sustainability Certifications. As part of a comprehensive revision of the certification schemes (see page 42), the ASF will be updated in 2027 and fully integrated into the VinylPlus® Supplier Certificates (VSCs) for Compounders and for Materials Suppliers. The revised VSCs for Materials Suppliers will incorporate evaluation criteria for additive manufacturers, resin producers and PVC recyclers, with the ASF forming an integral part of this framework.

MINIMISING OUR ENVIRONMENTAL FOOTPRINT

Aligned with the EU Chemicals Strategy for Sustainability, VinylPlus is firmly committed to reducing the environmental footprint of all PVC products, along with their supply chains and manufacturing processes. This includes supporting partner companies in minimising emissions, encouraging the use of life cycle assessments (LCAs) and environmental product declarations (EPDs), and promoting the responsible handling and minimisation of potential polymer and compound spillages.

All ECVM members have committed, since the mid '90s, to continuously reduce their environmental and human health footprint through compliance with the requirements of the voluntary **ECVM Industry Charter**[42] for the production of Vinyl Chloride Monomer (VCM) and PVC. The updated version[43] of the ECVM Industry Charter was released in December 2025. It integrates stricter environmental emissions criteria aligned with the latest BREFs,[44] a new occupational criterion on exposure to ethylene dichloride aligned with the European limit, as well as a new commitment to abide with Cefic's Best Practice Guidelines for Safe Working at Height,[45] which was published in November 2024. A third-party verification of compliance with the criteria of the 2025 Charter is scheduled for the first half of 2028, based on 2027 data.



ECVM Charter

To download the **ECVM Industry Charter**

SCAN THE QR CODE

41. www.icesp.it/buone-pratiche/additives-sustainability-footprint and https://circulareconomy.europa.eu/platform/en/toolkits-guidelines/additives-sustainability-footprint-asf-method
42. ECVM Industry Charter: it is aimed at minimising any detrimental effects from activities and products to the environment or human health in the production phase (https://pvc.org/sustainability/industry-responsible-care/ecvm-charter)
43. See p. 28 of VinylPlus Progress Report 2025
44. BREFs: BAT (Best Available Techniques) Reference Documents
45. https://cefic.org/resources/best-practice-guidelines-for-safe-working-at-height-in-the-logistics-supply-chain

Plastics Europe's Eco-Profile Programme aims to publish European-average environmental impact data for plastic resins and their precursors on a cradle-to-gate basis, from raw material extraction to the factory gate. The datasets are developed and independently verified by LCA experts using up-to-date background data and information from member companies. The data are freely available on the Plastics Europe and ECVM websites[46] and shared with the major Life Cycle Inventory (LCI) database owners such as ecoinvent. The most recent update of the **eco-profile**[47] for VCM and PVC production was published in June 2023 and included in ecoinvent 3.11 in November 2024. Revisions to the PVC and polyolefins eco-profiles are currently underway to align oil and gas background data with ecoinvent 3.11, including updated methane emissions data from International Energy Agency's satellite sources, with publication expected in 2026.

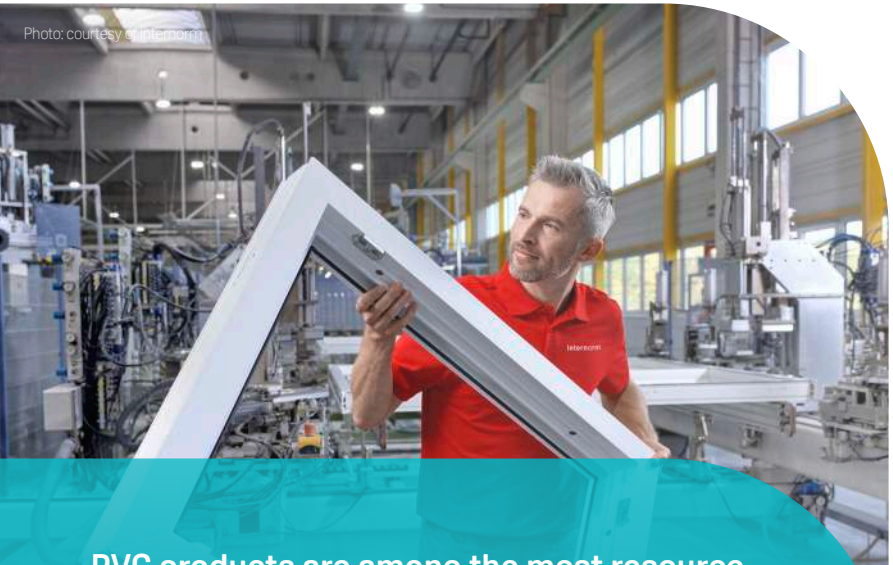


Photo: courtesy of Intermonti

PVC products are among the most resource-efficient products, thanks to their very long durability. PVC window frames are highly durable and weather resistant and can last more than 50 years, before being recycled into new windows frames, and PVC pipes have proven to function as intended for more than 100 years.

TEPPFA commissioned the LCA consultancy Ecoinnovazione (www.ecoinnovazione.it) to develop two **Life Cycle Inventory (LCI) datasets** for rPVC products in 2024 – one for micronized powder and one for flakes – using EU average data. These datasets, which aimed to assess the environmental footprint of rPVC in Europe, were released in July 2025 after undergoing external peer-review. The datasets are compliant with ILCD Entry Level Requirements[48] and with the ISO 14040/14044 Life Cycle Assessment (LCA) standards, and downloadable at www.teppfa.eu/sustainability/environmental-footprint/epd.

A joint Plastics Recyclers Europe (PRE) and VinylPlus project is **assessing potential risks to workers from microplastics and additives** at PVC recycling sites. Preliminary data of air monitoring of workers at six recycling plants showed dust, lead, cadmium and organotin exposures below relevant EU occupational limits. A final report is expected in the first half of 2026.

46. https://pvc.org/sustainability/eco-profiles-epds and https://plasticseurope.org/sustainability/circularity/life-cycle-thinking/eco-profiles-set
47. See p. 32 of VinylPlus Progress Report 2024
48. https://eplca.jrc.ec.europa.eu/LCDN/developerILCD.html

Pathway 3

BUILDING COALITIONS AND PARTNERSHIPS
for Sustainability

ENSURING TRANSPARENCY AND ACCOUNTABILITY

Each year, VinylPlus publishes an independently verified and audited report detailing the progress made towards each target. The progress report is proactively distributed to all relevant stakeholders.

The Progress Report 2026 was independently verified by SGS[49] and tonnages of recycled PVC waste and expenditures were audited and certified by PKF BOFIDI.[50]

49. www.sgs.com
50. www.pkf.com/pkf-firms/europe-middle-east-and-india/belgium/pkf-bofidi-brussels

MONITORING COMMITTEE

An independent body supervises the implementation of the Commitment to guarantee maximum transparency, accountability and participation, providing guidance and guidelines. (See page 11 for a list of members).

Photo: VinylPlus®

CONTRIBUTING TO SUSTAINABLE DEVELOPMENT THROUGH CERTIFIED AND TRACEABLE PRODUCTS

VinylPlus Sustainability Certifications

The **VinylPlus® Product Label**[51] is a sustainability scheme for PVC products in the building and construction (B&C) sector, developed in cooperation with BRE[52] and The Natural Step. Accredited at the European level by Accredia[53], the label has gained significant recognition. It is acknowledged as a Responsible Sourcing Certification Scheme within BREEAM[54] and by Italian authorities in the national CAM (Minimum Environmental Criteria). It is also recognized as one of the most valued certification schemes included in the multi-material label developed by the Belgian Construction Certification Association (BCCA).

The **VinylPlus® Supplier Certificates (VSCs)**[55] are sustainability schemes for additive producers and compounders that are partners of VinylPlus. The VSCs not only give these companies the chance to demonstrate their sustainability performance but can also help their converter customers shorten audit times and gain quicker access to the VinylPlus® Product Label. To date, five additive producers and five compounders have obtained the VinylPlus® Supplier Certificates.

In 2025, VinylPlus started a comprehensive revision of its sustainability certifications – which is expected to be completed by 2027 – to strengthen their role in tracking and documenting sustainability

51. Also see https://productlabel.vinylplus.eu
52. BRE: Building Research Establishment, UK-based certification experts on responsible sourcing for B&C products (www.bre.co.uk)
53. www.accredia.it/en/documents/circolare-informativa-dc-n-07-2023-disposizioni-in-merito-allaccreditamento-per-lo-schema-vinylplus-product-label-v-1-4
54. BREEAM is the world-leading sustainability assessment method for the built environment and infrastructure (www.breeam.com)

PVC products carrying the VinylPlus® Product Label are eligible for Green Public Procurement and Renovation Wave, and offer cost-effective, energy-efficient, hygienic and easy to install and maintain solutions, from window replacements to durable flooring that suits all types of surfaces.

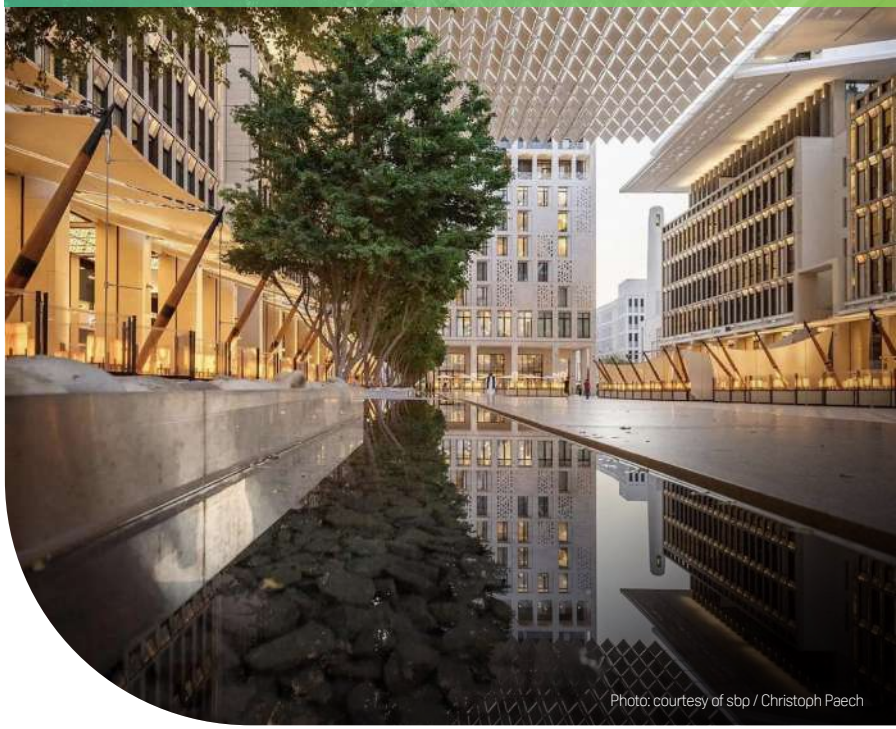
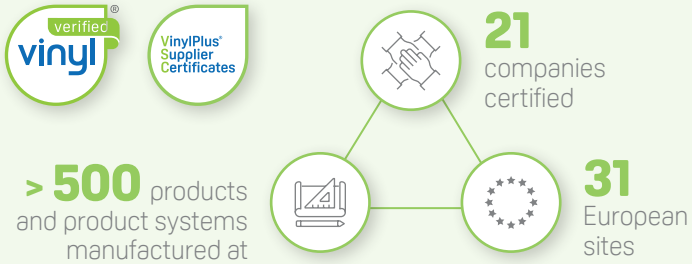


Photo: courtesy of sbp / Christoph Paech

THE VINYLPLUS SUSTAINABILITY CERTIFICATIONS COMMUNITY CONTINUES TO EXPAND



performance across PVC products and supply chains, while encouraging continuous improvement and innovation in line with the VinylPlus 2030 Commitment. The revision, overseen by an External Advisory Board established in December 2025, seeks to enhance user-friendliness, broaden coverage across the entire PVC value chain, and ensure continued alignment with recognized standards such as BES 6001, as well as with the Additive Sustainability Footprint,® BREEAM and DGNB[56] requirements. It also reflects recent industry developments, including CSRD, the EU Taxonomy, bio-attributed additives, Operation Clean Sweep® and the Digital Product Passport.[57]

From April 2025, Kiwa (www.kiwa.com), a global leader in testing, inspection, and certification, supports the daily management and auditing of the Product Label and Supplier certifications, while VinylPlus retains overall management and responsibility for the schemes.

55. Also see https://productlabel.vinylplus.eu/vinylplus-supplier-certificates
56. DGNB: Deutsche Gesellschaft für Nachhaltiges Bauen (the German Sustainable Building Council – www.dgnb.de/en)
57. For the VinylPlus® Digital Passport Programme see p. 31-32 of VinylPlus Progress Report 2025

ENGAGING STAKEHOLDERS IN THE SUSTAINABLE TRANSFORMATION OF THE PVC INDUSTRY

The 13th **VinylPlus Sustainability Forum (VSF2025)**, held in Paris on 21-22 May under the theme *'For a Future-Proof Value Chain'*, brought together over 200 delegates from 23 countries, including policymakers, public agencies, recyclers, retailers and PVC value-chain representatives. The event served as a platform for collaboration, innovation and the exchange of ideas, focusing on aligning circularity, competitiveness and societal purpose to ensure a resilient future for the European PVC industry and to build a PVC value chain that is adaptable, credible and agile in a rapidly changing world. Continuing to enhance circularity was confirmed as a key priority.

France's effective Extended Producer Responsibility (EPR) schemes and eco-design initiatives in waste recycling were highlighted, alongside the call for new EPR systems to complement rather than undermine well-established circular business models such as VinylPlus.

Photo: VinylPlus®

THE VINYLPLUS SUSTAINABILITY CERTIFICATIONS AWARD CEREMONY

The VSF2025 wrapped up with the VinylPlus Sustainability Certifications Award Ceremony, which recognized companies contributing to sustainable development through certified PVC products.

*Europe leads the way in circular innovation, but high production costs and dumping practices are eroding our competitiveness. If we want our industry to remain viable, we need both a **regulatory framework** and an **investment framework** that reward innovation and growth.*

JOHAN VAN OVERTVELDT
Member of the European Parliament, Chair of Committee on Budgets and Member of Committee on Economic and Monetary Affairs

Strengthening competitiveness is equally essential. Stimulating demand is critical to attracting investment in innovation, research and development, and sustainability certification across Europe. Finally, reinforcing societal purpose ensures alignment with tangible societal needs. PVC applications play a key role in supporting climate adaptation, affordable housing and healthcare, underpinned by cross-sector collaboration and responsible value chain engagement.

National VSFs were organised in Germany and the UK by the national associate members in 2025. Around 80 participants attended the **5th VinylPlus Sustainability Forum Germany**, held in Bonn in September, to discuss how to further reduce the carbon footprint across the entire PVC value chain. Experts from industry and academia outlined the pathways through which the sector can achieve long-term climate neutrality. It was also emphasised that certification schemes, together with the systematic collection and aggregated reporting of sustainability data, strengthen the credibility and market acceptance of sustainable products.

Photo: courtesy of VinylPlus Deutschland

The **VinylPlus UK Seminar 2025**, held online in December, provided valuable insights and the latest advances in the PVC industry to senior and middle management professionals, researchers and students in the plastics industry. Topics explored included an industry outlook, regulatory updates from the UK and Europe, Recovinyl® activities and the VinylPlus research and advocacy programme.

The PVC industry's progress under the VinylPlus 2030 Commitment and its innovation in circularity and sustainability were showcased at the **K-Fair 2025** by VinylPlus Deutschland, in cooperation with exhibiting members and VinylPlus Partners. A targeted media campaign reached out to thousands of stakeholders daily in both print and digital formats, significantly increasing awareness of VinylPlus as a leading sustainability initiative. It strengthened the perception of the European PVC as a forward-looking, responsible material and reinforced the industry's role in supporting the transition to a circular economy.

The media field trip organised by VinylPlus Deutschland in May 2025 helped stimulate stakeholder engagement beyond the PVC sector. Focusing on vinyl record production with recycled and bio-based PVC, the event at a leading record manufacturer provided a strong platform to discuss recyclate use and carbon footprint reduction. A joint press release and extensive social media coverage generated high visibility, particularly in sustainability, music and industry media and led to invitations to speak at external conferences such as Making Vinyl, further amplifying VinylPlus sustainability message's reach-out.

Also in Germany, VinylPlus Deutschland[58] continued its successful **PVC Recyclers meet PVC Converters** event series in 2025 in partnership with IVK Europe[59] and Rewindo.[60] The project aims to raise awareness of existing PVC recycling activities and stimulate demand for recycled PVC products by reaching out to demolition experts, recyclers and converters from Germany and across Europe. Two on-site meetings were organised involving around 60 participants, mainly from the building and construction sector – one at the PreZero GmbH plant in Westeregeln and the other at the profine GmbH plant in Pirmasens. The events were excellent occasions for the exchange of information and views on the opportunities and limitations of mechanical recycling, including regulatory aspects; the challenges related to difficult-to-recycle waste streams; the need for other recovery options that replace waste incineration (with energy recovery) and contribute to recycling targets; and the future role of advanced recycling technologies, including chemical recycling.

58. www.vinylplus.de
59. IVK Europe: Industrieverband Kunstoffbahnen e.V. (Plastic Sheets and Films Association – www.ivk-europe.com)
60. Rewindo: The German recycling initiative for PVC windows, roller shutters and related products (www.rewindo.de)

Photo: VinylPlus®

K-Fair 2025
Charlotte Röber (VinylPlus), Eric Romers (INEOS Inovyn) and Rudy Miller (Vynova Group) discussing how PVC enables a circular and climate-efficient built environment at the K-Fair's Plastics Europe 'Circular Thursday'.

Photo: VinylPlus®

Avlante's Future of PVC 2025 Conference

VinylPlus engaging in open dialogue with stakeholders, by showcasing PVC's pivotal role in sustainable solutions.

AMI's Chemical Recycling 2025 Conference

In June 2025, Vincent Stone, VinylPlus Technical and Environmental Affairs Senior Manager, presented Europe's large-scale efforts to recycle non-mechanically recyclable PVC waste, highlighting the upscaling of dissolution, pyrolysis, and gasification technologies.

Photo: courtesy of AMI

Photo: VinylPlus®

AMI's PVC Formulation 2025

At the 2025 conference, held in Düsseldorf, in September, VinylPlus reinforced its role as the European PVC industry's sustainability driver by showcasing strategic progress towards circularity and innovation. During the event, VinylPlus also launched its dedicated healthcare platform aimed at accelerating circular solutions for medical PVC.

XXII Plastic Pipes Conference & Exhibition

At Plastic Pipes XXII, the leading event for PVC and plastic pipes, held in Warsaw, in September, VinylPlus presented three papers on *'Advanced Recycling Options for Legacy Additive-Containing PVC Pipe Waste'; 'Plastic Pipes in Sustainable Infrastructure – Dispelling Common Misconceptions'; and 'Advancing Climate Efficiency in Pipeline Renovation with No-Dig Technology'.*

Photo: VinylPlus®

As an observer organisation to the United Nations Environment Programme (UNEP), VinylPlus participated in the **Fifth sessions of the Intergovernmental Negotiating Committee** (**INC-5.2**, in Geneva, Switzerland) to develop an international legally binding instrument on plastic pollution, including in the marine environment. This participation represented an occasion to enhance the strong cooperation with the other regional PVC associations represented in the **Global Vinyl Council (GVC)**, facilitate exchanges with other stakeholders and offer valuable insights into the PVC sector to negotiators and observers.

Photo: courtesy of Zelian

PARTNERING WITH STAKEHOLDERS

To enhance the PVC industry's contribution to the SDGs, VinylPlus is continuing to engage with civil society, including younger generations, local communities, institutions and the private sector through partnerships, joint projects and initiatives.

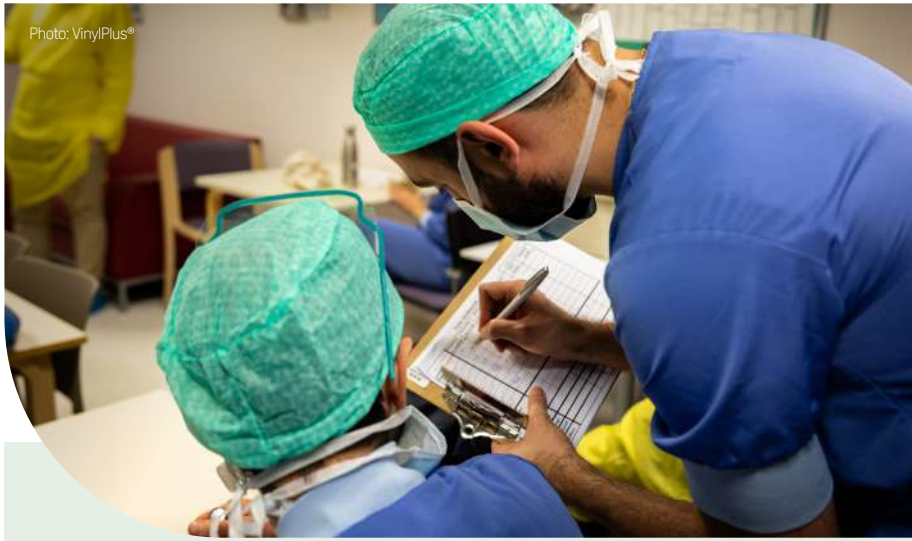


Photo: VinylPlus®

vinyl plus healthcare

By promoting **multi-stakeholder partnership projects** and encouraging collaboration across the healthcare value chain to support the responsible use of materials and recycling, VinylPlus is addressing one of the most significant challenges in healthcare sustainability: diverting high-quality plastic waste from incineration while maintaining safety and efficiency in hospital environments.

AFFORDABLE & SUSTAINABLE BUILDING: YES, PVC CAN!

1. Most cost-effective and most used plastic in B&C with infinite design options
2. Proven long lasting safe and lightweight performance in indoor/outdoor applications
3. Low maintenance cost for PVC windows and doors, pipes, flooring, façade, roofing, terraces, cables…
4. PVC thermal insulation saves energy costs once installed. Start saving on day 1!
5. Low CO_2 footprint to start with: 50% fossil feedstock only
6. 100% recyclable and already mechanically recycled at scale for decades
7. Complementary recycling technologies in development…

Photo: courtesy of Camille Gharbi / Ateliers A+

AFFORDABLE HOUSING HAS BEEN AND WILL REMAIN A TOP PRIORITY FOR VINYLPLUS IN 2026

Housing is not just a commodity, but a fundamental right and a cornerstone of human dignity.

With 70% of PVC products used in building and construction, and over 80% of these produced in Europe, the PVC value chain is deeply embedded in the EU's industrial fabric.

On 16 December 2025, the European Commission published the European Affordable Housing Plan, which brings together three key pillars: the European Affordable Housing Initiative, the New European Bauhaus, and the Strategy for Housing Construction.

VinylPlus stands ready to support European authorities in all housing and construction related initiatives.

Position Paper

To download the **Position Paper**
SCAN THE QR CODE

The **Waste Recycling Project (WREP)**, promoted by VinylPlus Italia,[61] was launched in 2016 to develop standardised and traceable procedures for the collection and treatment of post-consumer PVC, in collaboration with municipal multiutilities, supporting improved recycling efficiency and the transition to a circular economy in Italy. The project demonstrated that collaboration among the PVC value chain, multiutility companies and construction associations can generate a virtuous cycle and that recovering PVC from bulky municipal waste is both economically viable and environmentally beneficial. Estimates made, based on the PVC collected during the operational phase, showed that, if applied in all the Italian municipal waste collection centres, the WREP approach would allow the recycling of more than 10,000 tonnes of post-consumer PVC per year. The project also confirmed that targeted training for plant operators is a key success factor, enabling effective identification and separation of PVC materials.

In 2025, WREP's scope was expanded to include material flows from building renovation and demolition, enabling the analysis of waste-management practices and improved understanding of material flows. As training and capacity-building have proven to be central elements of the WREP project, in 2025 engagement began with building schools to promote training on PVC collection, sorting and recycling for the younger generation of professionals in the construction sector. The project also strengthened its contribution to national policy discussions on the potential introduction of Extended Producer Responsibility (EPR) schemes through enhanced stakeholder engagement. Key activities focused on collaboration with construction associations, PVC industry players, recyclers, and public authorities. A Memorandum of Understanding was signed with ANCE Reggio Emilia (National Association of Building Constructors), supported by a joint press release and dedicated trainings for ANCE members. WREP was also presented at major events, including the World Resources Forum 2025 and Ecomondo 2025.

61. www.vinylplusitalia.it

The PVC industry encourages the EU to establish a seamless continuum from product design through to waste management under the Waste Framework Directive, with Extended Producer Responsibility (EPR) acting as the operational bridge. Such a coherent framework would help ensure that valuable materials, like PVC, are effectively recovered and kept within the circular economy, rather than lost at end of life.

Photo: courtesy of Renolit

Engaging with Institutions and Local Communities

VinylPlus Italia's project on **Sustainable Sporting Events** builds on the initiative launched in 2024 and aims to deepen engagement with institutions and Olympic organisations to promote PVC as a material of choice for the Winter Games and other major sustainable sporting events. In 2025, activities concentrated on reinforcing VinylPlus Italia's role as a facilitator, supporting the Italian PVC value chain in meeting sustainability requirements for public and private procurement while fostering cooperation across the supply chain, from producers to recyclers.

The project focused in particular on high-visibility PVC applications, including temporary installations and visual elements. Key actions involved providing organisers and institutions with robust information on PVC sustainability and circularity, identifying scalable solutions for incorporating secondary raw materials derived from recycled PVC, and assessing the recyclability of complex end-of-life PVC products.

Tests conducted by GEES Recycling on difficult-to-recycle coated PVC confirmed that its recycling process for composite material is technically replicable and scalable and could support the development of a model for the sustainable management of PVC used in large-scale events. The project also aims to establish a stable circular market for post-event recycled materials, with potential applications in urban furniture, reusable event furnishings and installations for retail and exhibition spaces. PVC is increasingly recognized as one of the materials of choice for delivering sustainable sporting events.

In 2025, **VinylPlus Pipes** (former PVC4Pipes) launched an **interactive online map** showcasing the vital role PVC pipes play in building resilient, climate-adapted infrastructure across Europe. Covering drinking water, wastewater, storm water management, energy and industrial applications, the map demonstrates how PVC solutions underpin essential services and strengthen climate resilience. Developed as an educational and communication tool for policymakers, utilities, NGOs and the wider public, it was supported by a targeted digital campaign and will continue to drive future communications on water resilience.

Online Map

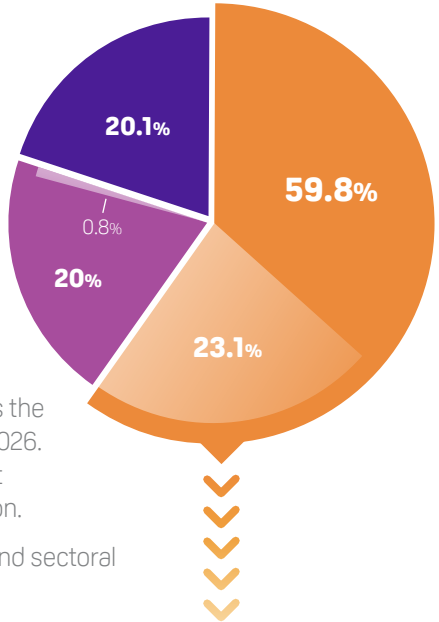
To see the **Interactive Online Map**
SCAN THE QR CODE

FINANCIAL REPORT

In 2025, industry expenses decreased by 20% compared to 2024. This year saw significant pressure on industry competitiveness, including the closure of resin plants.

Overhead expenses were reduced by 12% and communication costs by 7%. However, the main decrease was in projects (24%). This is mainly explained by the AgPR flooring recycling activity being purchased by a single company, and therefore no longer being reported, as well as the postponement of ongoing advanced recycling projects to 2026. This means that the commitment to project support did not significantly decrease despite the difficult economic situation.

Total expenditure for VinylPlus in 2025 – including national and sectoral co-funding – amounted to €4.6 million.



TOTAL EXPENDITURE IN 2025
€4.6 MILLION

- **Waste management and technical projects**, including national and sectoral co-funding, which amouted to 23.1% of total industry funding
- **Communication, certification & standardisation**, including national and sectoral co-funding, which amounted to 0.8% of total industry funding
- **Overheads and Commitment development**

WASTE MANAGEMENT AND TECHNICAL PROJECTS	TOTAL EXPENDITURE IN 2024	TOTAL EXPENDITURE IN 2025
Figures in €1,000s		
Flooring related projects	519	109
EPPA (windows and related profiles)	740	793
ESWA/Roofcollect®	10	5
Recovinyl®	609	600
Studies, start-up, pull concept & help desk	612	550
TEPPFA* (pipes and fittings)	556	477
VinylPlus Healthcare (medical applications recycling)	156	178
Advanced recycling	268	1
Digital Product Passport development	113	-1
Detection/sorting technologies	28	40
TOTAL PROJECTS	**3,610**	**2,751**

** Expenses allocation takes into account collected polymer*

RECYCLED PVC TONNAGES

TYPE OF PVC (WASTE ORIGIN)	TONNAGE RECYCLED IN 2024			TONNAGE RECYCLED IN 2025		
	Total tonne	Post-consumer	Pre-consumer	Total tonne	Post-consumer	Pre-consumer
Windows & Profiles	396,677	163,687	232,990	416,889	180,724	236,165
Flooring	117,284	2,781	114,503	119,873	4,209	115,665
Cables	92,478	83,737	8,741	104,633	96,778	7,855
Flexibles	54,432	18,523	35,909	53,812	19,750	34,062
Pipes	33,458	4,859	28,599	41,001	10,050	30,951
Rigid film	16,942	4,525	12,418	19,308	3,195	16,113
Other rigid	13,367	1,582	11,785	10,456	708	9,748
TOTAL	**724,638**	**279,693**	**444,944**	**765,972**	**315,413**	**450,559**

The table above summarises the tonnages of PVC recycled in the EU-27 plus Norway, Switzerland and the UK, within the operations of Recovinyl Aisbl in the framework of VinylPlus, in the period 1 January 2025 to 31 December 2025.

The table on the right summarises the uptake of recycled PVC by applications in 2025.

The complete Report of Factual Findings regarding the Agreed-Upon Procedures (AUP) Engagement can be found on the VinylPlus website.

RECYCLED PVC UPTAKE IN 2025 *	
Applications	**Total tonne**
Windows and profiles	217,546
Floor covering	121,461
Traffic management	87,174
Pipes	48,096
Building & Construction – Other **	32,522
Coils and mandrels	892
Packaging	374
Horticultural and stable equipment	45
TOTAL	**508,109**

* These figures do not fully reflect the total use of recycled PVC in Europe. While Recovinyl represents a significant share of recyclers, it does not yet cover a representative portion of converters using recycled PVC. As a result, actual usage in Europe is higher than what is shown. Our network continues to grow, and we remain committed to closing the gap and expanding our network of converters.

** Including roof covering.

VERIFICATION STATEMENTS

VinylPlus expenditures in 2025, as well as the tonnages of recycled PVC waste, were audited and certified by PKF BOFIDI, while the Progress Report 2026 was independently verified by SGS.

To read the verification statements, scan the QR codes.

Expenditures

Tonnages

Progress Report

PKF BOFIDI Certification of Expenditure

Independent Accountant's Report on Applying Agreed-Upon Procedures.

PKF BOFIDI Report on Tonnages Recycled

Agreed-Upon Procedures Report on Tonnages of PVC Recycled in the EU-27, Norway, Switzerland, and the UK in 2025.

SGS Verification Statement

SGS Independent Verification Statement about the VinylPlus Progress Report 2026.

Photo: courtesy of PAO Peoples Architecture

Photo: courtesy of Seraina Wirz / Anish Kapoor

VINYLPLUS FOUNDING MEMBERS AND PARTNERS

VinylPlus involves 200 partners across Europe, from resins and additives producers to plastics converters, and a network of 150 recyclers.

Since 2000, the European PVC industry has been strongly committed to implementing a long-term sustainability framework for the entire PVC value chain and to improving PVC products' sustainability and circularity, as well as their contribution to a sustainable society.

Photo: courtesy of Rafael Carrier/ Mutabile Arquitetura

VINYLPLUS FOUNDING AND CURRENT MEMBERS

ECVM

The European Council of Vinyl Manufacturers represents seven leading European producers of PVC resin and its monomer VCM, which account for around 85% of the PVC resin and VCM manufactured in Europe. These businesses operate around 46 different plants spread over 28 sites and employ approximately 8,000 people (incl. required upstream products like chlorine production).
www.pvc.org

EuPC

European Plastics Converters is an association representing more than 50,000 companies in Europe, which produce over 50 million tonnes of plastic products every year from both virgin and recycled polymers. They employ more than 1.6 million people, generating turnover in excess of €260 billion per year.
www.plasticsconverters.eu

ESPA

The European Stabiliser Producers Association represents eight companies that produce more than 95% of the stabilisers produced in the European market. They provide direct employment to more than 2,000 people in Europe.
www.stabilisers.eu

European Plasticisers

European Plasticisers is a Sector Group of Cefic representing 11 major European plasticiser manufacturers, producing approximately 90% of the plasticisers manufactured in Europe. Over €6 billion has been invested in innovative, safe and sustainable alternative plasticisers over the last 25 years.
www.plasticisers.org

EPPA

The European Trade Association of PVC Window System Suppliers, which represents the PVC profile industry across Europe, became a full member of VinylPlus in 2023. Representing 22 window system producers and national associations, EPPA currently covers over 90% of the European production of PVC window profiles.
www.eppa-profiles.eu

200 companies

3 national associate members

150 recycler partners

VINYLPLUS PARTNERS

In 2025, the contributors were:

Converters, recyclers and other partners:

A. Kolckmann GmbH (Germany)
Aliaxis Group (Belgium)
Alphacan Srl (Italy)
Altro (UK)
aluplast Austria GmbH (Austria)
aluplast GmbH (Germany)
aluplast Italia Srl (Italy)
aluplast Sp. z o.o. (Poland)
alwitra GmbH (Germany)
Amtico International (UK)
APA SpA (Italy)
Ateco Srl (Italy)
Beaulieu International Group (Belgium)
BM S.L. (Spain)
BMI Group (Germany)
Bonlex Europe Srl (Italy)
BT Nyloplast (Germany)
CF Kunststofprofielen (Netherlands)
CGT Alkor (France)
CIFRA (France)
Copaco Screenweavers (Belgium)
Crown General (Belgium)
Danosa (Spain)
Deceuninck Germany GmbH (Germany)
Deceuninck Ltd (UK)
Deceuninck NV (Belgium)
Deceuninck SAS (France)
Dekura GmbH (Germany)
DHM (UK)
Dow Belgium BV (Belgium)
DYKA BV (Netherlands)
DYKA Plastics NV (Belgium)
DYKA Polska Sp. z o.o. (Poland)
DYKA Reseaux SAS (France)
DYKA SAS (France)
DYKA Tube SAS (France) *
Elbtal Plastics GmbH & Co. KG (Germany)
Epwin Window Systems (UK)
Ergis SA (Poland)
Eurocompound Srl (Italy)
FDT FlachdachTechnologie GmbH & Co. KG (Germany)
Finproject SpA (Italy)
Finstral AG (Italy)
FIP (Italy)
Fleck (Germany) *
Forbo Flooring BV (Netherlands)
Forbo Flooring GmbH (Germany)
Forbo Novilon BV (Netherlands)
Forbo Sarlino SAS (France)
Forbo-Giubiasco SA (Switzerland)
Funke Kunststoffe GmbH (Germany)
Gealan Fenster-Systeme GmbH (Germany)
Georg Fischer Deka GmbH (Germany)
Gerflor Mipolam GmbH (Germany)
Gerflor SAS (France)
Gerflor SpA (Italy)
Gerflor Tarare (France)
Gernord Ltd (Ireland)
Girpi (France)
Gislaved Folie AB (Sweden)
Hamos GmbH (Germany)
Helioscreen (Belgium)
H-fasader AS (Norway)
Holland Colours NV (Netherlands)
Horizont Group GmbH (Germany) *
Hundhausen Kunststofftechnik GmbH (Germany)
I.C.P. SpA (Italy)
Industrias REHAU SA (Spain)
Industrie Generali SpA (Italy)
Industrie Plastiche Lombarde SpA (Italy)
Inoutic/Deceuninck Sp. z o.o. (Poland)
Internorm Bauelemente GmbH (Austria)
Inverplast Srl (Italy)
IVC BVBA (Belgium)
Jimten (Spain)
Kisuma Chemicals BV (Netherlands)
KRONOS International Inc (Germany)
KURO Kunststoffe GmbH (Germany)
Liveo Research (Germany)
Lubrizol Advanced Materials Europe BVBA (Belgium)
Manufacturas JBA (Spain)
Marley Deutschland (Germany)
Marley Hungária (Hungary)
Mehler Texnologies GmbH (Germany)
Mermet Suncreen (France)
Michael Girstenbrei Recycling GmbH (Germany)
MKF-Ergis GmbH (Germany)
MKF-Ergis Sp. z o.o. (Poland)
Molecor (Spain)
Mondorevive SpA (Italy)
Nicoll (France)
Nicoll Italy (Italy)
Nissen Plast GmbH (Germany)
Nordisk Wavin AS (Denmark)
Norsk Wavin AS (Norway)
NYLOPLAST EUROPE BV (Netherlands)
Objectflor Art und Design Belags GmbH (Germany)
Omya International AG (Switzerland)
PCW GmbH (Germany)
Perlen Packaging (Switzerland)
Pipelife Austria (Austria)
Pipelife Belgium NV (Belgium)
Pipelife Czech s.r.o (Czech Republic)
Pipelife Hungária Kft. (Hungary)
Pipelife Nederland BV (Netherlands)

* Companies that joined VinylPlus in 2025

Pipelife Norge AS (Norway)
Pipelife Polska SA (Poland)
Pipelife Sverige AB (Sweden)
Poliplast (Poland)
Poloplast GmbH & Co. KG (Austria)
Polyflor (UK)
Polymer-Chemie GmbH (Germany)
profine GmbH – International Profile Group (Germany)
profine Italia Srl (Italy)
PROJECT FLOORS GmbH (Germany)
Qi Sistemi Srl (Italy)
Redi (Italy)
REHAU AG & Co (Germany)
REHAU GmbH (Austria)
REHAU Ltd (UK)
REHAU SA (France)
REHAU SpA (Italy)
REHAU Sp. z o.o. (Poland)
RENOLIT Belgium NV (Belgium)
RENOLIT Cramlington Ltd (UK)
RENOLIT Hispania SA (Spain)
RENOLIT Ibérica SA (Spain)
RENOLIT Milano Srl (Italy)
RENOLIT Nederland BV (Netherlands)
RENOLIT Ondex SAS (France)
RENOLIT SE (Germany)
Riflex Film (Sweden)
Riuvert (Spain)
Saint Clair Textiles (France)
Salamander Industrie Produkte GmbH (Germany)
Sattler PRO-TEX GmbH (Austria)
Schüco Polymer Technologies KG (Germany)
Screen Protectors SL (Spain)
Serge Ferrari SAS (France)
Sika Services AG (Switzerland)
Sika Trocal GmbH (Germany)
SIMONA AG (Germany)
Sioen Industries (Belgium)
SKZ-Testing GmbH (Germany)
Soprema Srl (Italy)
Sovere SpA (Italy)
STIR Compounds Srl (Italy)
Stöckel GmbH (Germany)
Tarkett AB (Sweden)
Tarkett France (France)
Tarkett GDL SA (Luxembourg)
Tarkett Holding GmbH (Germany)
Tarkett Limited (UK)
Tarkett Polska Sp. z o.o. (Poland)
Teraplast SA (Romania)
Titanstuc SpA (San Marino)
TMG Automotive (Portugal)
TPV Compound SpA (Italy)
Veka AG (Germany)
Veka Ibérica (Spain)
Veka Plc (UK)
Veka Polska (Poland)
Veka SAS (France)
Verseidag-Indutex GmbH (Germany)
Vescom BV (Netherlands)
Vinilchimica Srl (Italy)
Vi.Pa. Srl (Italy)
Vulcaflex SpA (Italy)
Wavin Baltic (Lithuania)
Wavin Belgium BV (Belgium)
Wavin BV (Netherlands)
Wavin France SAS (France)
Wavin GmbH (Germany)
Wavin Hungary (Hungary)
Wavin Ireland Ltd (Ireland)
Wavin Metalplast (Poland)
Wavin Nederland BV (Netherlands)
Wavin Plastics Ltd (UK)
WEMAS Baseplates GmbH (Germany)
Westlake Compounds Italy Srl (Italy)

PVC resin producers:

Ercros (Spain)
Kem One (France, Spain)
INEOS Inovyn (Belgium, France, Germany, Norway, Spain, Sweden, UK)
Shin-Etsu (Netherlands, Portugal)
VESTOLIT GmbH (Germany)
Westlake Vinnolit GmbH & Co. KG (Germany)
Vynova Group (Belgium, France, Germany, UK)

PVC stabiliser producers:

Akdeniz Chemson Kimya San. ve Tic. A.Ş.
Asúa Products S.A.
Baerlocher GmbH
Galata Chemicals GmbH
IKA GmbH & Co. KG
PMC Group Inc.
Reagens SpA
Valtris Specialty Chemicals Ltd

PVC plasticiser producers:

BASF SE
DEZA a.s.
Eastman
Evonik Oxeno GmbH & Co. KG
ExxonMobil Chemical Europe Inc.
LANXESS Deutschland GmbH
Perstorp Oxo AB
Polynt Group
Proviron
Valtris Specialty Chemicals Ltd
Varteco

Associate members:

British Plastics Federation (BPF) VinylPlus UK
VinylPlus Deutschland e.V. (Germany)
VinylPlus Italia (Italy)

* Companies that joined VinylPlus in 2025

PVC: A SMART, ADVANCED MATERIAL FOR A RESILIENT, SUSTAINABLE SOCIETY

Polyvinyl chloride (PVC) – one of the most versatile and widely used polymers in the world – ensures a significant contribution to European competitiveness, sustainability and strategic autonomy.

PVC plays a critical role in sectors essential to economic resilience and societal wellbeing, including construction, water management, mobility, energy networks, telecommunications, healthcare, sports and agriculture. Its versatility enables high-performance applications ranging from durable window frames and piping systems to cables, cards, medical devices and emergency shelters and equipment.

PVC is intrinsically resource efficient. Composed of 57% chlorine from common salt, 5% hydrogen, and just 38% carbon, PVC requires significantly fewer fossil resources than many other fossil-based materials. PVC can also be produced using bio-based and recycled sources of carbon.

Unlike other materials, PVC is not only recyclable but effectively collected and recycled, retaining its core properties through multiple life cycles. As part of its commitment to sustainability, the European PVC industry has been developing circularity over the past twenty-five years, achieving one of the highest recycling rate among all polymers.

Widely used in applications such as window frames, flooring, cables and piping systems, PVC delivers high-performance, cost-effective, and low-maintenance solutions that meet the technical demands of modern housing. Its insulation properties also contribute significantly to the energy efficiency of buildings. PVC products also provide high standards of hygiene and safety, including resistance to fire and chemical exposure, which are essential in healthcare, water infrastructure and construction applications.

Its inherent durability reduces the frequency and costs of maintenance, which supports lower life-cycle costs for users overall. The low price and low maintenance of PVC products make them very accessible to all, meeting the inclusivity goal of a just transition.

PVC also underpins Europe's strategic industrial autonomy. Approximately 80% of PVC products manufactured in Europe are consumed within Europe, and PVC remains the only major polymer with a fully integrated European value chain, from raw material production to conversion and recycling. The PVC value chain accounts for around 30% of Europe's annual chlorine production, with the chloro-alkali production sitting at the forefront of Europe's critical chemical industry.

PVC: A JOURNEY FROM MANUFACTURING TO RECYCLING

A CLOSER LOOK AT THE POSITIVE ENVIRONMENTAL IMPACT AND STRATEGIC IMPORTANCE OF PVC

MANUFACTURING

Chloralkali Process

The production of:

- Caustic Soda
- Hydrogen
- Chlorine

PVC Manufacturing

PVC is produced across Europe

- **30% of Europe's chlorine** goes into PVC production, with **60% of PVC being derived from chlorine** in common salt, making it a low-carbon plastic.
- EU regulations and industry guidelines **ensure safe production** by controlling worker exposure, minimising emissions, and ensuring safe transport.
- PVC is **inert, non-toxic,** and has undergone **over 20 years of innovation** to remove substances of concern, aligning it with **EU environmental goals.**

The PVC Industry represents around **6,100 companies and 179,000 employees**. The total turnover of the PVC Industry is around **45 billion euros**.

APPLICATIONS

PVC Contributes to Society

Clean Energy & Decarbonisation
- Safe hydrogen distribution
- Wind turbine blades and cable profiles
- Biogas pipes and tank covers
- PVC solar roofing membranes for solar panels

Healthcare
- Oxygen masks
- Medical tubing
- Blood bags

Building & Construction
- Windows
- Floor, wall and ceiling coverings
- Pipes
- Cables

PVC is the only material allowing blood to be stored up to **49 days.**

70% of PVC is used for durable, affordable and recyclable building products.

CIRCULARITY

PVC End of Life & Circularity

- Recycling into pipes, windows, flooring, road safety etc. **(35%)**
- Energy recovery **(46%)**
- Landfill **(19%)**

VinylPlus 2030: Leading the Way in PVC Recycling

Goal: Recycle **1 million tonnes** of PVC annually into new products by 2030.

How: Combining highly effective mechanical recycling with cutting-edge technologies like advanced sorting, additive extraction, and chemical recycling to maximise sustainability.

PVC can be recycled **multiple times.**

Since 2000, **10.3M tonnes of PVC** has been **recycled, saving 20.6M tonnes of CO_2.**

Avenue de Cortenbergh 71
B-1000 Brussels, Belgium
Tel. +32 (0)2 329 51 05

helpdesk@vinylplus.eu
www.vinylplus.eu

@VinylPlus_EU
VinylPlus
VinylPlus
VinylPlus

© VinylPlus® – June 2026

Cover photos: courtesy of Idom (Levante Stadium); Meike Hansen (Speed Skating Stadium); Aitor Ortiz / Redaelli Tecna / Taiyo Europe (Valencia Stadium)