November 2025

VinylPlus Recommendations to deliver a Circular Economy in Europe

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 the separate collection at source, and identification of recyclable waste streams, mandatory** (above a certain surface area) to optimize 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 harmonized and digitalized 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

1. **EoW CRITERIA:** Establish **EU-wide harmonized 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 harmonized and digitalized manner) (also applies to recyclates which have not met their End of Waste (EoW) status)
3. **FAIR COMPETITION:** **Harmonize trade and market surveillance and reinforce trade defence, especially regarding imported recyclates** (to protect fair competition and Europe's economic resilience)

1. **DESIGN:** Insert **recycled content targets in product-specific standards and/or legislation** (take account of available pre-consumer and post-consumer quantities, differences between short- and long-life products, and recycling technologies in the EEA+UK and prioritize 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:** **Harmonize trade and market surveillance and reinforce trade defence, especially regarding imported resins and transformed products** (to protect fair competition and Europe's economic resilience)

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Delivering circular PVC in Europe, for Europe

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1. Background and Introduction

The EU has already built a dense body of legislation on waste, products, chemicals, and climate. The Circular Economy Act must ensure coherence across these, rather than adding uncoordinated layers. This position paper provides targeted recommendations that build on the experience of VinylPlus.

VinylPlus is the European PVC industry voluntary commitment to sustainable development. We represent the entire PVC value chain, from monomer production to recycling. As such, we cover the entire life-cycle of PVC, from primary raw material, to product, waste and secondary raw material or recyclate, across the EEA and the UK. The latest circularity achievements of the value chain can be found in the 2025 Progress Report[1].

The European PVC value chain offers unique solutions to many critical applications, including healthcare and building and construction sector. PVC products deliver hygiene, safety (including fire and chemical exposure protection) and environmental performance (durability and recycling). It also contributes to the strategic industrial autonomy of Europe, as 80% of PVC products produced in Europe are consumed in Europe and PVC also captures 30% of Europe's annual chlorine production, with the chloro-alkali production sitting at the forefront of Europe's critical chemical industry.

Europe's transition to a circular economy demands that the regulatory toolbox be rethought, not layered with new rules. The resulting Circular Economy Act must avoid perpetuating known structural shortcomings (e.g. fragmentation, perverse incentives, weak enforcement). Many legislative tools (Extended Producer Responsibility (EPR), End of Waste (EoW) criteria, recycled content targets, taxation, taxonomy, classification rules, etc.) interact and may conflict unless Europe imagines a resource-focused vision, delivered by a fully integrated and coherent design of (legislative) actions.

It is paradoxical that an industrial, professional or consumer product deemed "safe" (under chemicals and product legislation) becomes classified as "hazardous waste" at its end of life, just because the product was manufactured several decades ago using additives which were classified and restricted in the meantime (so-called legacy additives), or because the waste was not separately collected at the point of source. This only illustrates one of the multiple reasons Europe's waste legislation needs to be revised to deliver circularity.

Below we offer targeted recommendations on key instruments, drawing on Zero Waste Europe's policy work (particularly on EPR, emissions pricing, system transparency), EXPRA's "30 Years of optimum EPRs" and on VinylPlus' and its partners' experience in delivering sustainability across the PVC value chain. Our recommendations are built upon experience with PVC, but should generally support the Circular Economy.

This document also reinstates VinylPlus' contributions made to the consultation on the Simplification of administrative burdens in environmental legislation (deadline 10 September 2025), and on the Green-listing certain waste for the purposes of shipments to recovery between Member States (deadline 31 October 2025), for completeness.

[1] https://www.vinylplus.eu/wp-content/uploads/2025/05/Progress-Report-2025-05-26_web.pdf

We stand ready to provide further specific examples supporting our recommendations to deliver Circular Economy in Europe, as described in Table 1:

Table 1. Overview of VinylPlus Recommendations to deliver a Circular Economy in Europe, for Europe

TOPIC	RECOMMENDATION	RATIONALE	MORE INFO
WASTE CLASSIFICATION	Revise Technical Guidance on waste classification to ensure waste classification follows an End of Life (EoL) product classification logic.	Waste classification still relies on mixture-toxicity rules designed for chemicals, not for end-of-life (EoL) products. More than 80% of PVC products are long-life durables that, at EoL, are often classified as hazardous because of legacy additives, even though they were safe and functional in use. This approach leaves roughly one-third of List of Waste (LoW) entries for PVC marked as hazardous, overstating actual waste management needs and inviting divergent national classifications of identical wastes, fragmenting the market.	Section 2.1.1
WASTE COLLECTION	Make pre-demolition/renovation audits and the separate collection at source, and identification of recyclable waste streams, mandatory.	Identifying and separating specific recyclable waste streams optimises both the technical and financial efficiency of recycling. Around 70% of PVC products are long-life uses in construction and infrastructure; during renovations and demolitions they are often mixed with other (plastic) wastes, driving up recycling costs and weakening the business case. This fragmentation is a direct brake on the Circular Economy.	Section 2.2.2
WASTE TRANSPORT	Allow wastes destined to recycling in Europe to be transported in line with Annex III of the Waste Shipment Regulation.	Waste that is prepared to a clear specification and destined for recycling is far less likely to be subject to illegal management. Cross-border shipments of PVC waste within the EEA and the UK are often delayed for weeks due to differing interpretations of classification and transport rules, another sign of a fragmented market. During these delays, recyclate must compete with cheaper primary PVC, undermining the recycling business case and slowing progress toward circularity.	Section 2.1.3
BEST RECOVERY OPERATION	Establish EU-wide mandatory minimum levy on incineration and landfill (of recyclable wastes) and include waste incineration activities in EU ETS.	Incineration and landfilling of recyclable waste should be discouraged through EU wide levies. Where disposal costs are low, PVC waste is easily diverted to incineration or landfill despite available recycling capacity, another sign of a fragmented market. Applying levies and other requirements to less sustainable options will make recycling more attractive, strengthen the business case for recyclers, and accelerate circularity.	Section 2.4.2
EoW CRITERIA	Establish EU-wide harmonized recyclate-specific End of Waste criteria.	Today's end of waste criteria are too general, inconsistently applied, or simply not fit for many recycling outputs; they do little to facilitate the cross-border movement of recyclates. The EU should develop and harmonise recyclate-specific end of waste criteria at EU level. This would underpin a Single Market for recyclates; paired with streamlined waste-shipment rules, it would enable PVC wastes and recyclates to circulate across the Single Market and become genuinely circular.	Section 2.1.2
PRODUCT DESIGN	Insert recycled content targets in product-specific legislation.	Despite many voluntary and mandatory collection schemes, the business case for polymer recycling remains weak. Mandatory, product-specific recycled-content targets are the most direct way to counter the lower cost and higher demand for virgin polymers, strengthen the recycling business case, and advance the Circular Economy. For these targets to work, they must: (i) be embedded in product-specific legislation to reflect	Section 2.4.1

TOPIC	RECOMMENDATION	RATIONALE	MORE INFO
		product requirements; (ii) be calibrated to available supply—the quantities of recyclable pre-consumer and post-consumer waste actually available in the EEA and UK, considering current and emerging recycling technologies; and (i) be met with recyclates produced in the EEA and UK.	
EXTENDED PRODUCER RESPONSIBILITY	Establish EU-wide mandatory minimum EPR requirements.	To unlock circularity across the Single Market, the EU needs EU-wide, product-smart EPR requirements. EU EPR law should combine a harmonised core of minimum requirements applicable across the Union with a flexible edge that lets Member States and regions tailor implementation where geography or legacy systems justify it. The harmonised core should ensure EPR schemes work for long-life products and that fee modulation rewards proven durability, long service life, high collection and recycling, underpinned by LCAs that account for full service life and multi-cycle recyclability. Embedding these requirements at EU level will help deliver a truly Circular Single Market.	Section 2.2
INCENTIVES	Reward EU made / recycled content.	Beyond mandatory recycled-content targets in product legislation, additional incentives are needed to close the remaining economic gap between primary and secondary polymer production. EU Ecolabel and Green Public Procurement rules should recognise and favour EEA- and UK-made recycled content, and products containing recycled content should also benefit from targeted financial and fiscal advantages. Together, these measures would narrow the cost gap between primary and recycled polymers, strengthen the business case for recycling, and accelerate the Circular Economy.	Section 2.4.2
TRACEABILITY	Implement Digital Product Passports.	Products should be managed in the most sustainable way once they reach their EoL. Recycled content, whether from mechanical or chemical polymer recycling, must be traceable. The relevant waste management measures and the traceability of recycled contents can be delivered via Digital Product Passports (DPPs) embedded in EU product-specific legislation (e.g., the Construction Products Regulation, which could cover around 70% of PVC products). Together, these measures will help deliver a truly Circular Single Market.	Section 2.4.2
FAIR COMPETITION	Harmonize trade and market surveillance and reinforce trade defence.	Without effective import controls and Single Market surveillance, circularity goals risk being met on paper rather than in practice, producing a negative net effect on sustainability, as well as on Europe's strategic autonomy and economic resilience. Robust controls on imports that claim recycled content are also essential to ensure compliance with EU legislation and to deter free-riding and greenwashing. Recycled content targets should ideally be met with feedstock produced in the EEA and UK, not only to cut the overall environmental footprint but also to strengthen the business case for European recyclers. This is key to deliver a competitive and resilient Circular Single Market.	Section 2.4

2. Opportunities for European policy to enable circularity

2.1. European waste legislation

2.1.1. Simplification of administrative burdens in environmental legislation

1. Implementing a visionary and integrated approach to European environmental excellence

Because of our unique value chain approach, we address a continuum of environmental requirements applicable to PVC and PVC product production sites, their emissions, their products and their wastes. As such, VinylPlus intends to contribute to around 10 consultations related to environmental requirements between April and November 2025. These include consultations and calls for evidence on: the Circular Economy Act, the green-listing certain waste, the revised Framework for 'Safe and Sustainable by Design (SSbD)', the simplification of administrative burdens in environmental legislation, the futureproof of Product legislation, two consultations on the DPP, the EU rules for calculating, verifying and reporting on recycled plastic content, and the Industrial Decarbonisation Accelerator Act.

All ongoing consultations are in one way or the other interconnected but are published as completely discrete initiatives. The approach appears very fragmented, siloed and inefficient. Stakeholders struggle to keep up with, understand, and participate meaningfully in the various initiatives. There is a high risk of discouraging stakeholder participation and missing instrumental contributions.

As part of their efforts to simplify the administrative burden in environmental legislation (and its related consultations), we invite the Commission to implement a more visionary and integrated approach to define Europe's future, its environmental excellence, and the necessary legislative framework.

2. Applying the precautionary principle where it matters and managing cross-references between CLP and environmental legislation

Compared to other European legislation, environmental legislation is particularly rooted in the precautionary principle and tightly dependent on the Classification, Labelling and Packaging (CLP) regulation. The precautionary principle has been successful at protecting human health and the environment, which is one of the pillars of sustainability. The excessive use or misuse of the principle at every stage of legislation has, however, weakened the economic pillar of sustainability, because it has led to decisions being made on the basis of overly theoretical and often completely unrealistic scenarios. Many of the resulting requirements not only cause significant administrative burden and weaken the conditions for a competitive transition but also fail to make a meaningful contribution to effective environmental protection.

Chemical classifications under CLP are the result of using particularly sensitive test animals (which often have more fragile metabolisms than humans), so-called 'maximum tolerated doses' (the highest dose that can be administered to an animal that would not cause its death), and a number of multiplying or division factors to take account of additional unknowns. This describes a very robust approach to inform a given chemical's classification. If precaution has already been applied during classification, this should no longer be necessary when specific measures are devised on the basis of these classifications. For example, an Emission Limit value under the Industrial Emissions Directive, a quality standard under the Water

Framework Directive, or a REACH restriction threshold, do not require additional safety factors and precautionary considerations because they build on an already conservative CLP classification. Unfortunately, along the way, environmental legislation incorporates additional precautions and 'ifs' which build up a scenario that is beyond worst-case, very unrealistic, and almost improbable. The resulting legislation requirements are tainted by thresholds and associated monitoring, reporting and other requirements which are completely dissociated from the original environmental protection goal. Although this originally meant well, the interpretation and associated implementation has proven to be excessive and causing lots of unnecessary regulatory requirements on the European industry.

As part of their efforts to simplify the administrative burden in environmental legislation, we invite the Commission to map all incremental uses of the precautionary principle and cross-references across the legislative net which may lead to unreasonable requirements and obstacles to circularity and competitiveness.

3. Making waste classification more realistic and practical before considering any digitalization of waste legislation

Digitalisation is one of the solutions to better centralize, integrate and simplify compliance, surveillance and enforcement of environmental legislation. However, it cannot resolve structural problems. Therefore, before digitalizing a process, it is worth looking at whether the process itself cannot be simplified also. Among all environmental legislation, waste legislation is one worth looking at more particularly.

Waste legislation starts where a material is 1) identified as waste, 2) classified as hazardous or not hazardous, 3) transported for management purposes, and finally 4) recycled, landfilled or incinerated. Simplification of steps 3) and 4) could be achieved by bringing more realism to step 2). Rather than basing the classification of the waste on its composition, the classification, which is aimed at protecting the environment and human health during steps 3) and 4), should be based on the actual likelihood of that waste to pose a risk. This approach works for products, which are not classified as hazardous under CLP even when they contain hazardous chemicals in one or more of their parts. They will contain a label to inform on the composition and the best end of life management, but not be classified as hazardous per se because they are supposed to be safe for their intended use. Why not following a similar approach for waste, which is just a product having reached its end of life? Ideally, waste classification and shipment legislation should not consider wastes as standard mixtures but as EoL products. Their classification should therefore align with that of the original product they were before reaching the end of their life.

Although the current legislation on the classification of wastes contains a provision which allows wastes to be tested to demonstrate the limited or no release of a given hazardous chemical to claim their non-hazardousness, this option is simply not practical due to the enormous effort involved. It is probably never used in practice, and therefore insufficient. Because of the high variability in the composition of wastes, sample preparation to produce a representative sample would be a challenge, and an analysis would be required on several batches to be robust. Also, analytic solutions that can measure all types of matrix materials and detect and quantify all relevant chemicals are limited in terms of instruments and laboratories, and therefore, expensive. The solution provided in legislation would be useable if it only needed to apply to a subset of wastes for which pre-existing chemical principles (e.g., a plastic matrix will by nature contain and retain a given chemical) cannot be applied. Revising the legislation to recognize the relevance of higher thresholds, different classification approaches, and matrix effect of certain materials would make the legislation much more realistic and practical to implement.

We invite the Commission to consider simplifying the current waste classification approach to simplify waste shipment and enhance circularity, while retaining the desired environmental protection. Digitalizing a system which is built on a better scoped system would also inevitably be easier and more efficient.

2.1.2. End of Waste Criteria

Because the waste status, especially when combined with a hazardous classification, is a main blocker to transporting materials for recycling, Article 6(1) of the Waste Framework Directive provides criteria to liberate the material from all requirements applicable to waste, once it has been transformed into an almost pure recyclate and has reached an "End of Waste" (EoW) status.

Clear EoW criteria and mass balance accounting rules are needed to provide regulatory certainty to recyclers and the related investors. Although the type of recovery operation is not specified in Article 6(1), the EoW criteria seem to be originally designed for mechanically recycled waste. Specific EoW criteria have been developed for specific materials and the EoW status is reached when the material is ready for direct use (without any further transformation) in the production of new e.g., glass, aluminium or copper. An end of waste status should also be thought for secondary raw materials produced via chemical recycling. Granting such an EoW status to these materials, such as pyrolysis oil, once they are generated would facilitate their transport to where they can be used as fuel or as a raw material to make other chemicals or polymers. Mass balance accounting will in turn ensure that outputs from the chemical recycling are considered when calculating recycled contents and related circularity indicators.

As such, they are very strict because they only apply to very homogeneous and pure materials, implying a full transformation of the waste into a final recyclate. When applying these 'strict' EoW criteria, a PVC material reaching an end of waste status would be e.g., micronized rigid PVC granulates which would need to comply with product legislation, including CLP classification or REACH restrictions.

Such strict EoW criteria only alleviate transport requirements between the recycler and the final product manufacturer. This has limited impact compared to the wider transport taking place earlier in the chain, from the origin of the waste to its uptake by recyclers, which may be more complex for plastics than for glass or metals. Indeed, plastic wastes are typically sent to various detection, sorting and pre-treatment plants before they can actually be mechanically recycled into secondary raw materials ready for extrusion. If the aim is to alleviate transport requirements and delays for plastic waste, one solution could be for EoW criteria to be defined for 'earlier' forms of waste, for example after sorting, cleaning or shredding. At this stage, only a few additional steps are necessary before producing recyclates of higher commercial value.

Table 2 below compares hypothetical "earlier" EoW criteria (applied to intermediate prepared waste streams) versus existing "strict" EoW criteria (applicable to close to final recyclates, already in place for glass, steel, aluminium and copper).

The comparison in the table illustrates that "strict" EoW criteria which exist for glass, steel, aluminium and copper would, in practice, only apply to materials that have already undergone almost the full recycling process, resulting in a homogeneous output that can be directly reintroduced into extrusion (in the case of

plastic). This scenario offers clarity for regulators and facilitates traceability, but its impact on circularity is limited: it intervenes very late in the value chain, long after the main logistical and administrative bottlenecks of waste transport have already taken place.

Table 2. Comparison between current 'strict' EoW criteria and hypothetical 'earlier' EoW criteria.

	Scenario 1 **'Strict' EoW Criteria**	**Scenario 2** **'Earlier' EoW Criteria**
Compliance with Waste Framework Directive, existing transpositions and specific EoW criteria	Yes	No
Product-specific	No, only needs to be material (e.g., glass, metal, plastic) specific	Yes, would need to be specific plastic product-specific (e.g., PVC flooring, PVC pipe, etc.)
Waste used as input	Specific plastic waste	Specific plastic waste
Minimum waste treatment requirements	• Sorting • Cleaning • Shredding • Decontamination • Recycling	• Sorting • Cleaning • Shredding
Remaining transformation steps allowed before use of the EoW material	None (can be added directly to the extrusion process)	• Decontamination • Recycling Before the material can be added to the extrusion process
Allowed contamination or hazard of the EoW material	None allowed (or around < 2% as per existing specific EoW criteria)	Allowed, since decontamination and recycling still need to take place
Compliance with CLP classification and REACH Restrictions	Yes	Yes (but challenging as the transformed/end of waste material would be a very complex mixture)
Inspection by authorities	Easy (material is homogeneous and does not look like waste anymore)	Difficult (material is heterogeneous and may look like waste)
Traceability into 'recycled content'	Easy, since directly supplied from recycler to converter	More difficult, since several steps remaining before transformation into final recyclate supplied to converter

By contrast, "earlier" EoW criteria could apply after sorting, cleaning and shredding, when materials are already more homogeneous but still require further treatment. This approach would be more directly relevant for plastics, where intermediate streams are commonly moved between facilities before final recycling. It would, however, raise challenges for enforcement, since such materials may still resemble "waste" and contain residual contamination. Such "earlier" EoW criteria would: (i) trigger the need for (many!) product-specific EoW criteria, (ii) require a change to the Directive, all national transpositions, and existing specific EoW criteria; (iii) make compliance of the resulting end of waste material with chemical

and product legislation close to impossible, and (iv) render traceability of recycled content less straightforward, to name just a few. Such 'earlier' EoW criteria would therefore not align with Article 6(1) in the end, and probably cause additional challenges along the way.

We invite the Commission to promote harmonization of EoW criteria at EU level while also revising the waste classification and shipment system to achieve more concrete changes effectively unfettering the movement of wastes to recyclers, and creating a Single Market for wastes.

2.1.3. Green-listing certain waste for the purposes of shipments to recovery

There is potential to further increase recycling rates for end-of-life PVC products beyond what is already achieved as a result of the voluntary commitment to sustainability under VinylPlus (Figure 1).

Typical waste entries used to transport post-consumer PVC wastes are provided in Annex 1 of this document. In the EU, most PVC waste falls under the amber list of the Waste Shipment Regulation (WSR) due to the presence of legacy additives (which were not classified and legitimately used by the time the PVC products were manufactured 10, 20 or more years ago), regardless of its actual risk profile. At national level, practices vary: some Member States treat post-consumer PVC as non-hazardous unless contamination is proven, while others assume it is hazardous by default, particularly when the presence of legacy additives is suspected. The frequent hazardous waste status of post-consumer PVC wastes, as well as the lack of aligned interpretation across Member States increases the cost and reduces the pace at which such PVC wastes are transported to their recycling destination.

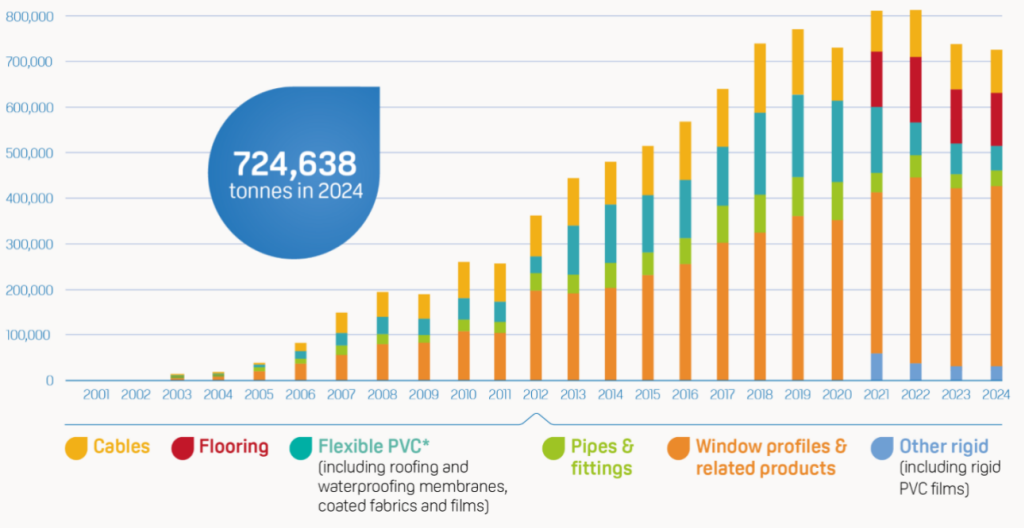

Figure 1. Amounts of end-of-life PVC products recycled in 2024[2].

1. Current waste classification and shipment system is outdated and unfit

When waste legislation was first developed in the 1970s-1990s, hazardous waste was primarily viewed as a toxic liability. Article 4(2)(b)-(d) of the Basel Convention established a principle of proximity according to which the waste should be disposed of or recovered as close as possible to the place where it is generated,

[2] https://www.vinylplus.eu/wp-content/uploads/2025/05/Progress-Report-2025-05-26_web.pdf

in order to avoid unnecessary transport across long distances and borders, which increased environmental risks, health hazards, and the likelihood of illegal trafficking.

The prevailing assumption was that hazardous waste could only be safely disposed of through landfilling or incineration, while recycling was reserved for clean, homogeneous, non-hazardous streams. This logic led to hazardous (amber-listed) waste being subject to the strictest controls under Annex IV of Regulation 2024/1157 on shipments of waste (Waste Shipment Regulation or WSR), and non-hazardous (green-listed) waste subject to lighter requirements under Annex III of the WSR.

As a first effort to unlock circularity, in its most recent revision published in 2024, all *pre-consumer plastic waste almost exclusively consisting of PVC*, was added to Part I of Annex III of the WSR (under the wrong heading of "fluorinated polymers" though). While this addressed a first barrier of PVC circularity, a third of the waste entries used to transport post-consumer PVC wastes continue being subject to the more complex, burdensome and expensive Annex IV requirements under the WSR.

Although we recognize the need to apply stricter requirements when transporting hazardous wastes, we question the relevance of some of these waste classifications. The current waste classification system treats end-of-life products in a similar way to *intentionally manufactured chemical substances and mixtures*, using classification endpoints and rules aligned with the Regulation 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP). Not only are most post-consumer wastes composed of end-of-life *articles*, but these wastes are also *not intentionally "manufactured"* (i.e., their composition, especially in the absence of separate collection, is not fully "controlled"). The CLP hazard-based approach leads to numerous wastes being classified as "hazardous waste" taking account of the original chemical composition of the product, and assuming contamination during collection, rather than its actual risk profile during or at end of life.

Previous studies[3] have indeed demonstrated that when (legacy) additives are trapped in the PVC matrix, no or little migration would occur. Therefore, even when such wastes contain legacy additives of concern, they do not represent any actual risk.

The distinction between intrinsic hazard and actual risk is already recognised in Article 23 (Annex I, Section 1.3.4) of the CLP Regulation, which allows for materials which "*do not present a hazard to human health by inhalation, ingestion or contact with skin or to the aquatic environment in the form in which they are placed on the market*", to be exempted from labelling obligations, although they are classified as hazardous. If the waste classification system overall cannot be revised and follow an article-based classification (not a chemical mixture one), then the Commission Technical guidance on the classification of waste (2018/C 124/01) should be revised to include a pragmatic solution similar to Article 23 of CLP. Such revision could, based on a theoretical classification of the waste, provide recognition of the limited risk this classification effectively predicts, and allow that the actual risk, not the hazard classification, informs the relevant waste management requirements applicable to the transport and handling of wastes.

2. Hazardous wastes destined for recycling deserve lighter transport requirements

In 2025, advances in detection, sorting, decontamination and chemical recycling technologies now make it possible to recover valuable resources even from waste streams classified as hazardous, such as post-

[3] Mercea, P. V.; Losher, C.; Petrasch, M.; and Tosa, V. 2017. Migration of Stabilizers and Plasticizer From Recycled Polyvinylchloride. Journal of Vinyl & Additive Technology. DOI 10.1002/vnl.21609. https://4spepublications.onlinelibrary.wiley.com/doi/abs/10.1002/vnl.21609
Vangheluwe, M.; Eliat, M.; and Oorts, K. 2016. Risk assessment of Lead migration during use of recycled PVC. ARCHE consulting. Report for VinylPlus aisbl.

consumer PVC wastes containing legacy additives. Hazardous wastes that can be recycled should no longer be treated as a burden to be eliminated, but as a potential resource pool, provided risks are managed responsibly. To deliver a Circular Economy and the strategic autonomy of the EU, waste legislation should act beyond the distinction of hazardous and non-hazardous waste, and focus on distinguishing (hazardous) wastes which can be recycled from the (hazardous) wastes which cannot.

Delivering circularity requires recyclable wastes to move more efficiently across Europe. If revising the classification system is not possible in the short term, two options can be explored: (i) treat hazardous wastes destined for recycling like non-wastes using harmonized End of Waste criteria, or (ii) treat wastes destined for recycling like green-listed wastes.

VinylPlus explored the possibility of implementing a modified version of the End of Waste criteria laid down in Article 6(1) of the Waste Framework Directive (WFD) to waste prepared for recycling. The idea was to relieve wastes from their waste status and related waste transport requirements earlier in their life cycle (rather than when they have become a high-purity recyclate ready to be fed into a production process). Such "earlier" End of Waste criteria would trigger its own lot of legal and practical difficulties and is not a viable solution for post-consumer PVC wastes specifically (cf. Annex 2 of this document). VinylPlus however supports harmonization of End of Waste criteria at EU level, would such criteria be developed and proposed for specific plastic wastes as part of the Circular Economy Act toolbox.

The second option is to allow wastes *destined for recycling in Europe* to benefit from the lighter WSR Annex III transport requirements. Implementing such criteria would follow the intention behind the existing B3010 *Solid plastic waste* entry of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal which applies to "*plastic or mixed plastic materials, provided they are not mixed with other wastes and are prepared to a specification*". This 'intention' already supported the green-listing of *pre-consumer plastic waste almost exclusively consisting of PVC* in the 2024 revision of the WSR, which has significantly facilitated the transport and recycling of such wastes. The intention behind B3010 could be further extended to post-consumer PVC wastes which would be "*prepared to a specification*", or in other words, *destined for recycling in Europe*.

In Austria, the Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology (BMK) is preparing to amend the Waste Catalogue Ordinance in order to assign new non-hazardous key numbers for PVC windows and PVC pipes that go into recycling. This aligns with our ask for lightened transport requirements for waste destined for recycling, but also constitutes another example of where Member States have to exert their sovereignty and propose specific national rules, which should exist at the European, Single Market, level.

For this revised waste transport approach to be enforceable, the terms "*prepared to a specification*" or "*waste destined for recycling in Europe*" should be explicitly and legally defined. Drawing on the End of Waste criteria set out in Article 6(1) of the WFD, VinylPlus considers these existing criteria directly adaptable to an earlier stage of the resource's lifecycle. By adapting the End of Waste criteria to an earlier stage in the material's lifecycle, a coherent and continuous regulatory approach could be achieved, ensuring that consistent principles apply both before and after materials reach End of Waste status, closing one of the gaps currently existing between waste and product legislation. The right-hand column of Table 3 illustrates how such an approach could be implemented in practice.

Table 3. Possible criteria for hazardous post-consumer waste to be subject to WSR Annex III requirements (instead of WSR Annex IV)

Existing End of Waste criteria (Article 6(1) of Waste Framework Directive)	**Possible "*Prepared to a specification*" criteria (to be eligible for WSR Annex III requirements)**
(a) the substance or object is to be used for specific purposes;	(a) the waste is destined for recovery operations consisting of recycling in the Union
(b) a market or demand exists for such a substance or object;	(b) a market or demand exists in the Union for the waste
(c) the substance or object fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products; and	(c) the waste has undergone preparation ensuring that it meets the technical requirements for the intended recycling operation, including, where appropriate, separate collection, sorting or physical homogenisation
(d) the use of the substance or object will not lead to overall adverse environmental or human health impacts.	(d) the recycling of the waste will not lead to overall adverse environment or human health impacts

To ensure enforceability and discourage abuse, the criteria could furthermore:

- E.g., criterion (a): explicitly address the timing and the commitment of the recycling operation in the transport documentation, to ensure it effectively leads to recycling.
- In criterion (c): specifically define the minimum preparation to avoid minimal "treatment" (e.g., "sorting" used interchangeably with "unloading") to provide predictable conditions for recyclers.

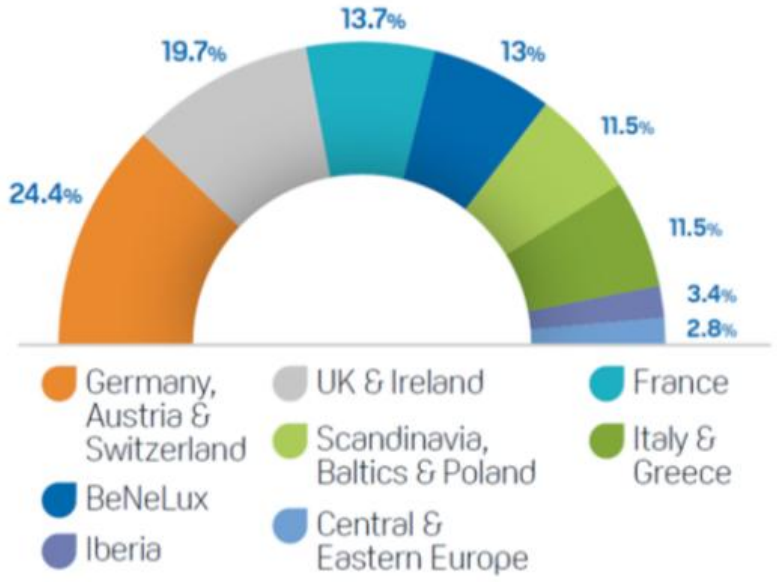

Figure 2. Recycled PVC waste per region in 2024[4]

In defining the geographical scope of the revised rules, it will be important to ensure clarity that post-consumer waste destined for recycling in Europe includes wastes generated in the EU, Norway, the United Kingdom and Switzerland. Allowing such shipments to circulate under Annex III of the WSR would provide EU recyclers with predictable access to valuable feedstock from their closest neighbours. This approach would reflect the proximity principle, by prioritising the treatment of wastes within the European region where they are generated. Figure 2 shows how some of these regions are actively supporting recycling of PVC products today.

[4] https://www.vinylplus.eu/wp-content/uploads/2025/05/Progress-Report-2025-05-26_web.pdf

At global level, a better use of entry B3010 and the OECD-style mutual recognition framework to ensure consistent application and oversight across jurisdictions could also grant Europe access to additional strategic resources and become a true circularity hub for plastics such as PVC.

3. Fostering transport of post-consumer PVC wastes to European recyclers

Under the Waste Shipment Regulation (WSR), significant volumes of post-consumer PVC wastes are classified as *hazardous (amber-listed)* due to the (suspected) presence of legacy additives, even when they pose little or no actual risk during handling or recycling. This outdated classification, and its inconsistent application across Member States, slows shipments, increases costs, and discourages recycling compared to virgin production.

Modern detection, sorting and recycling technologies now allow safe and efficient recovery of PVC resources, even from streams historically deemed hazardous. To deliver on the Circular Economy and strategic autonomy objectives, EU waste law should recognise these advances and enable recyclable wastes to move more efficiently within Europe.

If hazardous wastes destined for recycling were transported under the lighter requirements of Annex III of the Waste Shipment Regulation, rather than the full Annex IV procedure, the process would become significantly simpler. Instead of a prior written notification, multiple consents from all competent authorities concerned, and a detailed notification dossier including contracts and financial guarantees, shipments would only need to be accompanied by the simplified Annex VII document. This would reduce delays and administrative costs, provide greater predictability for recyclers, and remove a disproportionate burden that currently discourages the recycling of lower-value waste streams compared to the use of virgin materials, or cheaper recovery (incineration) or disposal (landfill) operations.

Further, digitalisation of waste shipment procedures would immediately streamline the movement of materials for recycling. Replacing paper notifications and Annex VII documents with fully electronic forms on a single EU-wide platform would reduce delays, errors and duplications, while ensuring that all competent authorities access the same information simultaneously. Real-time tracking of shipments would strengthen enforcement and reduce risks of illegal diversion, making heavy upfront procedures less necessary. Standardised digital formats would also limit divergent national interpretations and provide more predictable conditions for recyclers. Such measures could deliver immediate and tangible improvements to the free movement of secondary resources in Europe.

Finally, to deliver a Single Market for primary and secondary materials, the Waste Framework Directive and the Waste Shipment Regulation must be implemented in a harmonized and coordinated manner across Member States, under the Guidance of the European Commission.

VinylPlus calls on the Commission foster the transport of post-consumer PVC wastes in Europe by:

1. *Revising the Technical Guidance on the classification of waste so that **end of life articles are classified according to their actual risk profile** at end of life, not solely on their chemical composition.*

2. *Using the foreseen Delegated Regulation to the WSR to ensure implementation of the following improvements:*
    - ***Any post-consumer PVC wastes "prepared to specification" or "destined for recycling in Europe" can be transported under the lighter Annex III ("green-listed") requirements of the***

***Waste Shipment Regulation**. As part of this, define "prepared to specification" and "destined for recycling in Europe" in EU law, using criteria mirroring Article 6(1) of the Waste Framework Directive, to provide legal certainty and limit divergent national interpretations, and include Norway, the United Kingdom and Switzerland in the geographical scope of the definition.*

- ***Harmonization and digitalization of waste shipment procedures across Member States** through a single EU-wide electronic system, with real-time tracking and harmonised data formats, to reduce delays, duplications and administrative costs.*

By implementing the above, the EU can unlock significant additional recycling capacity for PVC and other valuable polymers, turning today's regulatory bottleneck into a driver of circularity, innovation, and competitiveness.

2.2. Extended Producer Responsibility (EPR)

2.2.1. Framework of minimum EPR requirements

VinylPlus fully supports EXPRA's Key recommendations for the Circular Economy Act[5], informed by their report "30 Years of optimum EPR: How to make the best out of it"[6]. EXPRA's recommendations are key to retain and further improve what is already functioning well in EPR.

VinylPlus also supports Zero Waste Europe's study to address 'the EPR Paradox'[7], which proposes a two-pillar approach to transform EPR from a waste management to a resource management supporting tool. Zero Waste Europe's proposal reframes EPR to evolve from a technical environmental policy, to become a full-fledged driver of circular economy.

EU EPR law should combine a harmonised core of minimum requirements applicable across the Union with a flexible edge that lets Member States and regions tailor implementation where geography or legacy systems justify it. The harmonised core should ensure EPR schemes also work for long-life products, such as construction products.

In addition to the improvements proposed by EXPRA and Zero Waste Europe, for harmonized EPR to become a reality across the EU, the following elements should be specifically defined as mandatory requirements in an EU-wide framework:

Governance and scope:

- Minimum definitions of producer responsibility, roles of actors, and product scope
- Obligations for producer registration, financial responsibility, and data reporting
- Transparency requirements for EPR governance, including fee structures, decision-making, and use of funds
- Mandatory third-party auditing and public disclosure of performance indicators (collection, recycling, reuse rates)

[5] PVC - EXPRA-Key-Recommendations-for-the-Circular-Economy-Act-f.pdf - Tous les documents
[6] 30-YEARS-OF-OPTIMUM-EPR-HOW-TO-MAKE-THE-BEST-OUT-OF-IT-4.pdf
[7] Designing Extended Producer Responsibility to deliver on EU's competitiveness and strategic autonomy agenda - Zero Waste Europe

Eco-modulation (cf. below section):

- EU-wide principles for eco-modulation, i.e. criteria linked to measurable and verifiable product characteristics (durability, recyclability, recycled content, design-for-disassembly)
- Science-based, material-neutral assessment methods (e.g. harmonised LCA or recyclability assessment standards)
- Obligation to publish methodologies and allow for independent review

Traceability and data:

- Harmonised reporting and data formats, ensuring interoperability between Member States and EPR systems (using e.g., Digital Product Passports)
- Harmonisation of End-of-Waste and recyclate quality standards, enabling cross-border movement of materials for recycling

In addition, the following elements should be adaptable to local market structures, infrastructure maturity, and product diversity, and therefore left to the discretion of Member States and local authorities, provided they meet EU minimum performance objectives:

Scheme design and operation:

- Choice of EPR implementation model (individual producer responsibility vs collective system, take-back scheme, etc.)
- Operational modalities for collection and sorting (who organises, contracts, and finances it, and link to national pre-demolition audit schemes)
- Level of financial contribution and adjustment to reflect national cost structures
- Incentive mechanisms (bonuses/penalties, rebates for selective dismantling, etc.) within agreed EU principles

Material or product differentiation:

- Product grouping logic (e.g. by service life, material type, or recyclability class)
- Technology neutrality (Member States or sectors can choose mechanical, chemical, or physical recycling pathways that deliver equivalent outcomes)
- National targets or milestones beyond EU minimums (e.g. higher recycled-content targets or reuse quotas)

We invite the Commission to establish a harmonised framework of minimum EPR requirements defining the EU baseline for any EPR scheme, while some elements should remain flexible, allowing Member States and sectors to adapt to local market realities, infrastructure maturity, and specific product characteristics. Such a tiered approach would guarantee both consistency and subsidiarity: ensuring that all EPR systems contribute effectively to the Circular Economy while recognising the diversity of Europe's construction sector and materials.

2.2.2. EPR for long-life products (e.g., construction products)

Europe's construction and demolition sector represents the largest single material flow on the continent, and also 70% of PVC products (of which 80% are produced in Europe). Products such as windows, doors, flooring, roofing membranes, cladding, pipes, gutters and fittings, and cables are long-life, high-value components whose materials can be recovered and reused for decades if design, data, and waste policy are properly aligned. They cannot be eco-designed or managed at the end of their use life in the same way as short-life packaging products and wastes.

For construction products, EPR would be supported by the following three requirements:

- Mandatory pre-demolition/renovation audits;
- Mandatory separate collection of recyclable waste, per waste stream (i.e. keeping PVC separate from other plastics at source); and
- Mandatory identification of recyclable waste streams through the original product's DPP and chain-of-custody to recyclers meeting EU quality specifications.

Market pull mechanisms complete the loop. Public procurement, social housing, and renovation programmes should be required to give preference to construction products fulfilling the ecodesign requirements and waste management obligations at end of life. Fair competition must extend to imports and online sales: customs should require a valid EU producer ID and DPP compliance for construction products entering the market. The VinylPlus® Product Label for PVC building and construction products is third-party verified sustainability certification scheme which could support this.

2.2.3. Eco-modulation of EPR fees

Europe's built environment contains— and one of its biggest untapped resources. Construction and demolition waste represents around 35% of all waste generated in the EU. Yet despite decades of effort, much of its potential is still lost through mixed demolition, poor traceability, and fragmented national systems.

The European Commission's 2016 EU Construction and Demolition Waste Management Protocol provided the blueprint to access and use the largest material stock on the continent embedded in construction and demolition waste. It was visionary, but only voluntary, the uptake has been uneven and as a result, circular construction remains a patchwork, not a Single Market.

The time has come to transform the Protocol into a directly applicable European Regulation, to ensure every Member State applies the same high-quality standards for construction and demolition waste. Like the EU Batteries Regulation, which turned voluntary guidelines into binding lifecycle rules, a C&D Waste Regulation would bring clarity, data consistency, and investment certainty to one of Europe's most resource-intensive sectors. It would establish the missing bridge between product design under the CPR and ESPR, waste management under the WFD, and financing through EPR schemes, and implement all solutions identified under "waste management stage" above.

The French EPR eco-modulation decree (2025) excludes packaging and containers made with recycled PVC from financial bonuses. This does not appear to consider established recycling infrastructure in Europe that

delivers recycling rates comparable to (or sometimes exceeding!) those of other polymers. It also sends a negative precedent that could spill into other PVC sectors (e.g. construction). It furthermore distorts the Single Market by discouraging investment in PVC recycling capacity; and above all, it does not align with material neutrality, a cornerstone of EU circular-economy policy. This exclusion is misguided because it contradicts scientific evidence: modern PVC is safe and its recyclability has been proven for decades in VinylPlus and other industry schemes.

The PVC value chain provides one of the strongest evidence bases in Europe for safe, traceable, and circular PVC management. Recovinyl provides third-party verified data on all recycled PVC volumes in Europe, ensuring traceability from waste collection through certified recyclers to final product use, offering a transparency and reliability level rarely matched in other polymer sectors. And a Monitoring Committee comprising NGOs, academia, and public authorities oversees VinylPlus' overall work.

In contrast, national exclusions or restrictions on PVC in eco-modulation are often based on outdated or unverified assumptions dating back decades, before large-scale recycling systems or modern detection and sorting technologies existed. Acting on the basis of legacy perceptions undermines EU credibility and contradicts the Green Deal principle of science-based policymaking. PVC is demonstrably safe, traceable, and recyclable at scale. Recognising this verified evidence base is essential for eco-modulation that is truly material-neutral.

We invite the Commission to define criteria to determine eco-modulation of EPR fees which are:

- *Aligned at EU level to preserve the Single Market and give investment certainty, while allowing national/local organisational specificities. This should be defined in the EU Framework described in the previous section, to ensure consistency, enforceability and cross-border predictability.*
- *Evidence-based, material-neutral and technology-neutral and reward products specifically delivering documented environmental outcomes, including durability, long service life, and documented collection and recycling.*

Copying the blanket EPR approach implemented in France in a trend to harmonize EPR or eco-modulation across the EU would penalise high-performance, long-life products and distort investment in circular value chains.

2.3. Trans-regional circularity hubs

Circularity hubs can play a role in coordinating material recovery, but they should be regarded only as an intermediate and enabling solution, not as a permanent or exclusive structure. If such hubs are "established" by law, or financed through public projects and regional funds, they risk locking in specific technologies, ownership models, or geographic locations, thereby discouraging private investment in competing or complementary circularity solutions. A rigid, grant-driven hub concept could unintentionally stifle innovation, market entry, and scale-up of specialised recycling routes, particularly in mature sectors such as PVC, where advanced take-back and recycling networks already exist.

EU policy should therefore strike a balance between facilitating coordination and preserving market

dynamism. The objective must be to organise collection and recycling efficiently with existing infrastructures while still allowing the network to evolve as technologies, business models, and material streams change. In practice, this means favouring performance-based criteria (collection rates, recycling yields, quality standards, carbon savings, societal value of product in which the recyclate is used, etc.) over prescriptive designations of where or by whom recycling must occur. Circularity hubs should act as open platforms for data, logistics, and collaboration, not as exclusive or state-owned processing centres.

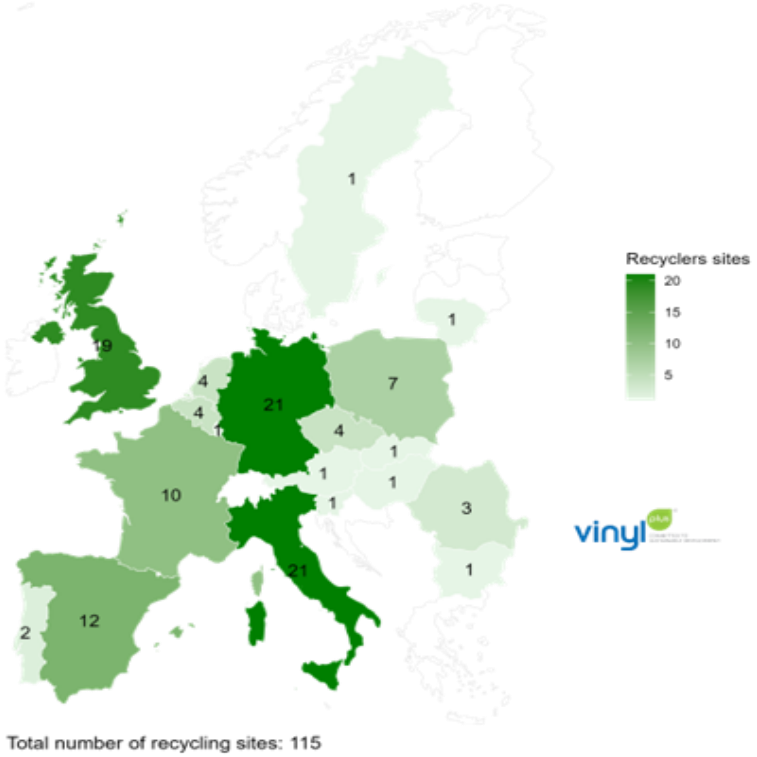

Figure 3. Mechanical PVC Recycling sites across the EU, UK and Switzerland (AMI, 2024[8])

For PVC, this distinction is particularly relevant: the largest recycling hubs are already industry-developed and market-driven, operating under the VinylPlus and Recovinyl frameworks (Figure 3). These hubs demonstrate that private, performance-driven investment, combined with transparent auditing and traceability, can deliver high recycling rates and stable circular markets without needing legally fixed locations or exclusive "hub" designations.

We invite the Commission to ensure that trans-regional circularity hubs are proposed to steer investment and innovation in collection and recycling of post-consumer wastes and complement existing (market-driven) developments.

[8] AMI Insight report, purchasable from: Polymer Demand Market Insights and Data Analytics Europe

2.4. Minimum recycled content and other (financial) incentives for circularity

2.4.1. Minimum recycled content

The circular economy in Europe will only succeed when recycling becomes economically rational and regulatory signals create real market pull. Today, much of EU waste policy still focuses on supply-side measures, improving collection, sorting, and recycling capacities. VinylPlus has, on a voluntary basis, mobilized resources to develop recycling capacity in Europe, to contribute to the circularity of PVC. But without a guaranteed demand for recycled materials, these voluntary- or regulatory-driven investments remain fragile.

Recycled-content obligations are among the most effective instruments to create stable, long-term demand for secondary raw materials. Experience shows that they deliver best results when they are defined within product-specific legislation (e.g. Article 22a of the CPR), and taking into account product standardisation such as hygienic requirements for drinking water and safety requirements such as in pressure pipes for gas distribution. Proper targets are also calibrated according to the quantities of recyclable waste that are actually available in Europe, considering both current and emerging recycling technologies.

For e.g., construction materials, recycled-content targets must also reflect the long service life of products and the changing composition of materials over time. When older products are dismantled decades after installation, their formulations may no longer comply with the latest quality, safety, or chemical standards. Additives that were once accepted and safely used can later become restricted or undesirable as scientific understanding of hazards evolves. These legacy substances must therefore be carefully managed in recycling processes, so that recycled materials remain safe and compliant while contributing to Europe's circular economy goals.

To be effective, recycled-content targets should follow realistic, ramp-up trajectories, for example, gradually increasing thresholds over a 5–10-year horizon. This approach gives industry time to invest in collection, processing, and redesign while providing a clear policy signal. Derogations should be granted only where recycled content would compromise product safety or performance, and should be reviewed periodically to prevent permanent exemptions.

For some applications or closed-loop recycling targets, recycled-content targets may need to account for the use of pre-consumer waste or manufacturing scraps. Such materials which have not been used by any final consumer represent real circular flows and should count toward recycled-content targets especially where no post-consumer wastes are available in sufficient volume and/or quality.

Crucially, imported products must also comply. Recycled-content obligations that apply only to EU producers would create unfair competition and encourage "recycled" imports with unverifiable claims, a problem already observed in PET under the SUP Directive. Therefore, customs and market surveillance authorities must require equivalent auditing and certification for imported goods placed on the EU market.

To stimulate continued investment in chemical recycling technologies, calculation and attribution rules

enabling chemical recycling and following a fuel use exempt mass-balance accounting should be formally accepted in EU legislation, as it enables producers to allocate recycled-content credits across complex manufacturing systems without undermining traceability or credibility. A stepwise approach could for example be considered, starting with a less strict accounting rule, for a limited period of time, subject to revision when technologies and the market for chemically recycled feedstock is more mature.

Finally, recycled-content policy should be closely connected to Europe's emerging Critical Raw Materials and Critical Chemicals strategies. The same urgency the EU applies to securing access to critical minerals should also drive a new focus on "urban mining" to recover critical chemicals, including chlorine, from existing products and waste streams during recovery operations. As PVC consists of roughly 47% carbon and 53% chlorine, it effectively is a chlorine capture and storage system. As recycled-content approaches evolve, they should therefore look beyond the simple substitution of virgin polymers. They must also encompass feedstock recycling pathways (such as pyrolysis oils) and the recovery of constituent chemicals, including chlorine and other critical substances, ensuring that Europe's circular economy contributes not only to waste reduction but also to strategic raw-material security.

We invite the Commission to insert recycled content targets in relevant product-specific legislation so that these targets take account of product-specific performance requirements and the available quantities of recyclable waste and recycling technologies in Europe, as well as prioritize European recyclates. Once these targets become mandatory, it is crucial to improve trade and market surveillance, for example through the implementation of specific CN numbers, to prevent and address non-compliance.

2.4.2. Other (financial) incentives for circularity

Recycled content targets and mass balance accounting rules alone are not enough. Europe also needs a coherent package of economic instruments that makes the use of secondary materials financially attractive and the disposal of recoverable materials less so. Taxes, levies, and incentives must all reinforce the same signal.

In addition to recycled content targets in product-specific legislation, Ecolabels and (Green) Public Procurement are particularly instrumental in exerting a "pull-through" effect, directing (public) demand towards environmentally friendly solutions, and therefore influencing the overall industrial network. With the Public Procurement Directives undergoing review, there is a direct opportunity to promote more circular and EU Made products. The Italian Public Procurement Code (Legislative Decree 36/2023) and in particular the Minimum Environmental Criteria (CAM) required for the construction sector[9], already include minimum recycled content targets (allowing both pre-consumer and post-consumer wastes) and other environmental criteria.

Aligning with the upcoming Affordable Housing ambitions, it is critical to embed all three pillars of sustainability in purchasing choices: environmental (e.g., circular, low-carbon), economic (affordable, EU Made), and social (e.g., affordable, safe).

[9] CAM Edilizia, available here: https://gpp.mase.gov.it/sites/default/files/2024-08/allegato-tecnico-CAM-edilizia-07-06-2022-rev-correttivo.pdf

In addition to the implementation of recycled content targets in product-specific legislation and the recognition of circularity, affordability, safety and EU Made in Ecolabels and (Green) Public Procurement rules, we invite the Commission to also consider these (financial) incentives to turn today's waste in tomorrow's resource:

- *Implement EU-wide minimum landfill and incineration levy (on non-recyclable wastes) to internalise environmental costs and make recycling comparatively cheaper;*
- *Include waste incineration in the EU ETS to add a carbon price signal that discourages linear disposal;*
- *Require LCAs used in EU Ecolabel, ESPR, and GPP to account for full service-life, durability, actual recyclability, and multiple recycling cycles, rewarding long-life, high-recyclability materials (e.g., PVC with verified multi-cycle performance);*
- *Offer reduced VAT rates, rebates, or tax credits for products using EU-made recycled materials and verifiable circular design features (e.g., certified recycled content);*
- *Align tax instruments with EPR fee modulation, EU Ecolabel, and Green Public Procurement (GPP) to favour circular options;*
- *Earmark levy and carbon revenues for recycling infrastructure, innovation, and digital traceability systems;*
- *Integrate digital traceability (real-time, standardised data) to lower transaction costs and increase confidence in recycled content claims;*
- *Harmonised verification for imports to ensure a level playing field and prevent carbon/circularity leakage; and*
- *Coordinate policy architecture so fiscal tools, mandates, verification, and procurement criteria reinforce each other, closing the price gap between virgin and recycled materials and rewarding investment in circular design and recycling.*

3. Conclusions

Europe has built an extensive body of environmental, product, waste, and chemical legislation. The challenge today is not to add new layers, but to make the system coherent, predictable, and effective. The forthcoming Circular Economy Act offers a unique opportunity to align these instruments into a single, resource-focused vision, one that turns Europe's circular ambitions into an industrial and environmental reality.

VinylPlus brings 20 years of hands-on experience across the full PVC value chain and provides one of Europe's most transparent and verified circularity systems. Our experience shows that fragmentation, unfit classification, and over-conservative implementation are among the biggest barriers to circularity. A safe, compliant product should not become a "hazardous waste" simply because it was made decades ago under different standards. Pragmatism and coherence must therefore become the guiding principles of the EU's next phase of circular policy.

VinylPlus' recommendations to deliver a Circular Economy for Europe, in Europe point towards the need to rethink the regulatory toolbox along three main lines:

Integrated product design and end-of-life policy:
The EU should create a seamless continuum from product design to waste management under the Waste Framework Directive (WFD), with Extended Producer Responsibility (EPR) as the operational bridge, to ensure that valuable materials, especially PVC, are recovered, not lost.

Realistic and enabling framework conditions:
Simplified and risk-based waste classification and shipment, and performance-oriented circularity hubs would remove administrative bottlenecks without compromising safety. At the same time, recycled-content obligations should be product-specific, recognising the availability of recyclate, the longevity of materials, and evolving safety standards. Linking circularity to the EU's Critical Raw Materials and Chemicals strategies, and recognising PVC's role as a chlorine and carbon sink, will enhance Europe's strategic autonomy.

Smart, material-neutral incentives:
Eco-modulation, recycled-content targets, and fiscal incentives must reward actual environmental performance (durability, proven recyclability) and be based on science and verified data, not outdated perceptions. For PVC, the evidence base audited by Recovinyl demonstrates safe and traceable recycling at scale; ignoring this reality undermines both market fairness and the Single Market itself.

In short, Europe does not need more regulation, it needs better, 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. VinylPlus and the European PVC industry stand ready to contribute practical expertise and proven solutions to help make this vision a reality.

Annex 1 – Overview of Waste Entries used to transport post-consumer PVC wastes (with hazardous waste entries marked in orange) extracted from the European Waste Catalogue

Group entry	Specific entry	Type of PVC wastes
02 Agriculture, horticulture, food processing	**02 01 04 –** Waste plastics (except packaging)	E.g., agricultural PVC films, pipes, or irrigation components
07 Organic chemical processes	**07 02 13 –** Waste plastic	E.g., off-spec production or scrap from PVC production sites
12 Metal/plastic shaping & treatment	**12 01 05 –** Plastics shavings and turnings	E.g., PVC components that are machined or fabricated (profiles, sheets, fittings)
15 Packaging and related wastes	**15 01 02 –** Plastic packaging	E.g., PVC bottles, blister packs, films
	15 01 10* – Packaging containing residues of or contaminated by hazardous substances	E.g., PVC containers used for chemicals / pharmaceuticals
16 Wastes not otherwise specified	**16 01 19 –** Plastic (from end-of-life vehicles)	E.g., PVC cable insulation, dashboards, upholstery, flooring
	16 03 04 – Inorganic wastes other than those mentioned in 16 03 03	
17 Construction & demolition wastes	**17 02 03 –** Plastic	E.g., PVC pipes, windows, flooring, wall coverings
	17 02 04* – Glass, plastic and wood containing or contaminated with hazardous substances	E.g., PVC wastes when legacy additives are present
	17 04 10* – Cable containing oil, coal tar and other hazardous substances	E.g., PVC cables
	17 04 11 – Cable other than those mentioned in 17 04 10	E.g., PVC cables
	17 06 03* – Other insulation materials consisting of or containing hazardous substances	E.g., PVC-based foams with restricted additives
	17 06 04 – Insulation materials other than those mentioned in 17 06 01 and 17 06 03	PVC foams
	17 09 03* – Other C&D wastes containing hazardous substances	E.g., Mixed demolition fractions with legacy containing PVC
	17 09 04 – Mixed C&D wastes other than those mentioned above	
18 – Healthcare wastes	**18 01 02 –** Body parts and organs including blood bags and blood preserves	E.g., PVC Blood bags (DEHP-plasticised)
	18 01 03* – Infectious healthcare waste	E.g., PVC IV bags, tubing, gloves, catheters
	18 01 04 – Non-infectious healthcare waste (e.g. dressings, disposable clothing, diapers)	E.g., PVC gloves, protective sheets
19 – Wastes from waste management facilities	**19 12 04 –** Plastics and rubber	E.g., Mixed plastics with PVC fractions

Group entry	Specific entry	Type of PVC wastes
	19 12 11* – Other wastes from mechanical treatment containing hazardous substances	E.g., Mixed fines and residues with PVC fractions
	19 12 12 – Other wastes from mechanical treatment other than 19 12 11	E.g., Mixed plastics with PVC fractions
20 – Municipal wastes	**20 01 39 –** Plastics	E.g., Collected plastics fraction (e.g., bottles, trays, blisters)
	20 03 01 – Mixed municipal waste	E.g., Packaging, household items, flooring scraps, etc.