

Impact of the Lead Restriction Process on the PVC Profiles Industry

- **In the controlled loop recycling of PVC profiles from windows and doors is the only environmentally sound option** to ensure valuable materials remain available for recycling. Recycling should be supported over landfilling and incineration.
- EPPA and EuroWindoor **call for the implementation of a landfill ban** for valuable resources such as old **PVC window profiles**.
- EPPA and EuroWindoor strongly support the **collection of PVC windows and doors separate from other construction waste** to ensure closed PVC material loops. Today, this is already a reality for PVC windows.
- EPPA and EuroWindoor **support a restriction of all lead compounds** for all new and imported PVC window profiles and believes a transition period of 24 months is excessive.
- EPPA and EuroWindoor **support explicit information supply on lead containing rigid PVC applications**. To this end, the European legislator has enacted an information duty under REACH. Additionally, construction products are CE marked likewise holding information on dangerous substances. Lately, the legislator has set up the SCIP database, tripling the information duty for window producers. Accordingly, all lead related information is conveyed multiple times, explicitly including the end consumers as the receiver of information.
- EPPA and EuroWindoor **support increased traceability of PVC materials & products throughout their lifetime** with controls and verification that adhere to independent European standards such as prEN 17410.
- EPPA and EuroWindoor support a **derogation for articles made from recovered lead containing PVC, up to a threshold value of 2%**. This derogation should apply for **15 years** and be reviewed at the earliest after 10 years.
- EPPA and EuroWindoor support the **assessment of the sustainability of window and door profiles** with the help of independent, third party-verified window sustainability assessments via **Environmental Product Declarations (EPDs)** such as with the **EPPA Life Cycle Assessment**.

Therefore, EPPA and EuroWindoor call for restricting the placing of lead on the market, including a derogation for separately collected and controlled-loop recycled PVC profiles from and for windows and doors as described in prEN 17410.

Executive Summary

- Today there are around **650 million PVC windows installed across Europe**, of which roughly **80% are lead stabilized**. With the increased renovation rate expected, millions of PVC window will be available for recycling per year. Increased recycling rates will lead to more construction materials being integrated into the circular economy. Thus, it is **vital recyclers are allowed to recycle old PVC profiles for the next 15 years**.
- In the European Union, the PVC profile industry has been **recycling PVC profiles for over 20 years** and is the **only PVC application**, which is **recycled within a controlled** (window to construction applications) **or a closed loop** (window/door to window/door). This is the result of hundreds of millions of Euros of investment in collection, **mechanical recycling and extrusion technology** over the last two decades.
- Today it is already well established and common practice that PVC profiles from windows and doors are separately collected and hence **do not dilute lead beyond windows/doors or add to the overall lead content on the market**. If extraction of lead *was* possible in the future, it could be performed on 100% of PVC profiles on the market. Regardless if 100% or 50% of European PVC profiles from windows and doors contain lead.
- **Mechanical recycling will remain the go to technology for recycling PVC** for the next decades. Extraction technologies¹, not to be confused with chemical recycling, may further enhance the already well working and sophisticated mechanical PVC recycling process in the future.
- Recycled PVC from PVC profiles will be re-used in new windows by making use of the **co-extrusion technology**. This sophisticated production technology has been specifically developed to be able to use rPVC in the production of high-quality windows. It also ensures that no consumer will ever directly be in contact with rPVC-U during the use phase of the window².
- **In the absence of a derogation for PVC profiles, recycling of profiles would decline rapidly as it would be economically unsustainable for the companies** because of the limited availability of non-lead window profiles and technical difficulties to recognize and sort out lead containing profiles. **ECHA estimates that this would lead to a price increase of 5.3-9.2%** for average PVC profiles (compared to current prices) as more virgin material would have to be sourced due to the lack of recycled material.³

¹ During extraction the polymer remains intact (the metals are removed by fixing them to some added particles which can be filtered off). In contrast, chemical recycling would entail destroying the polymer to get small molecules (and at the same time, the elements, such as metals, are freed from the polymer matrix so that they could be collected separately).

² This is a production requirement based on EN 12608. More information on the technology can be found here:

<https://bit.ly/33HDRxx>

³ <https://echa.europa.eu/documents/10162/cb491b19-b74a-d9d0-3289-a6bcdd50d063>

- **PVC is a long-lasting plastic which can be re-used at least 7 times in windows** due to its chemical composition and recyclability. **Recycling decreases the necessity to source natural resources such as oil.**
- Today, the profile industry uses almost half of its own (=PVC profile) recycle (and around one third of the total PVC recycle available). This represented an average of 18% recycle in 2018 and 23% in 2019 recycle in new products in the European market today. Thus, EPPA is well on track for its aim is to increase recycle average by one percentage point each year until 2025.⁴
- The **alternative to recycling is burning or landfilling PVC**, which would result in the wasting of a material that could otherwise be recycled and reused. Wasting materials, necessitates manufacturing with virgin PVC, virgin wood or virgin aluminum, all of which requires more energy and produces more emissions than recycled products.
- **For each kilo of PVC recycled, two kilos of CO₂ are saved⁵.** Crippling the recycling industry will harm the EU's decarbonisation efforts in addition to putting resource efficiency and circularity objectives at risk.
- ECHA has confirmed that the **recycling** of end-of-life PVC products with legacy lead additives **is the best waste management option from both an environmental and human health point of view.**
- The majority of the **profiles industry voluntarily stopped using lead additives in 2003 in virgin products** – 12 years ahead of the remaining PVC industry. **PVC profiles do not generate any risk to consumers**, even when recycled PVC containing lead is used.
- In addition to ECHA's final opinion on the restriction, EPPA has carried out **Life Cycle Assessments** for its window profiles, which clearly show that **recycling is the most environmentally sound end of life option** compared to landfill and incineration. Furthermore, it has been **proven many times over by independent studies** on emissions from PVC windows, that they do not emit any volatile organic substances.
- **Any new EU legislation should look to support an increase in the recycling of construction products such as PVC windows and doors** that have been shown to be safe and are already used in a closed loop. Overall sustainability and circularity should be the true aspiration of the EU.
- No derogation would set a **precedent for all construction products' recyclability.** The lead derogation for PVC is to be considered as a 'case study' for the circularity of construction products and long-life products in general.

⁴ Industry has been evaluating an upward correction of these recycling targets. However, due to the legal uncertainty of the possibilities to recycle lead containing PVC profiles in the future this decision has been postponed.

⁵ For more information see our EPDs here: <https://www.eppa-profiles.eu/copy-of-sustainable-development>

About EPPA

*The European PVC Profiles and related Building Products Association EPPA represents the **manufacturers of PVC window systems and related building products in Europe**. About **25,000 employees** process about **1, 4 million tonnes of PVC** creating a turnover of **€4 billion** with profile systems and building products. Based in Brussels, EPPA provides a common platform for bundling national activities in the fields of PVC window technology, recycling, environment and public affairs.*

About EuroWindoor AISBL

*EuroWindoor AISBL was founded as an international non-profit Association, in order to represent the interests of the European window, door and facade (curtain walling) sector. Our **18 national associations** speak for European window, door and facade manufacturers that are in direct contact with consumers, and thereby having large insights on consumers' demands and expectations. We are at the forefront interacting with dealers, installers and consumers buying windows and doors, and the companies behind the associations cover selling all over Europe.*