Position Paper on the "Renovation Wave" and the Revision of the Construction Product Regulation

14 October 2020

Replacing windows is an easy and cost-effective energy efficiency renovation

- EPPA and its members welcome the European Union's "Renovation Wave" aiming to improve the quality and renovation rate of European building stock to increase its energy efficiency.
- Windows are an essential part of building renovation, replacing an old window with a new PVC double or triple-glazed window is the single most cost-effective energy renovation measure for buildings. Replacing an old window from the 1980s with a new PVC window can increase energy savings up to 70-75%. Thus, window replacement could easily save more than 15% of the whole heating needs of the existing European building stock.[1]
- Increasing the renovation rate of buildings from 1.2% to 2 % per year will mean that many windows will be replaced. Today there are around 650 million PVC windows installed across Europe. With the increased renovation rate expected, millions of PVC window will be available for recycling per year. If use of lead containing recyclate is forbidden, these windows will go to landfill.
- 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 windows for the next 15 years.
- One tonne of PVC recyclate saves around 2, tonnes of CO2 compared to the use of virgin material. It thereby emits 88% less CO2 than the use of virgin material. This is an important contribution to a resource efficient product and production policy. European System Houses have recycled about 2 million tonnes of PVC profiles or 111 million PVC windows between 2000 and 2019, representing more than 4 million tonnes of CO2 emissions saved.

PVC windows are already circular construction products

- In line with the aims of the European Commission to create more circularity in the construction and plastic sectors, PVC windows are already today recycled in a closed loop.

[1] Study on "Heating energy savings in residential buildings due to window replacement" by Ingenieurbüro Prof. Dr. Hauser GmbH 1

Avenue de Cortenbergh 71, B-1000 Brussels
Phone +32 27 39 63 81
Fax +32 27 32 42 18
www.eppa-profiles.eu

- The PVC profile industry is the only window material which keeps the material in a controlled (window to construction applications) or even closed loop (window to window) system. Window profiles are the only PVC application and one of the few plastic applications that have achieved this.
- European standards play a key role in this context: controlled loop recycling of windows is done according to a dedicated standard for PVC windows (EN 17410). Furthermore, EPPA has third-party verified Environmental Product Declarations (EPD) for its profiles in line with EN 15804, the EPD standard which provides information to calculate the performance of the buildings when integrating products, window frames in EPPA's case.
- In 2011, the European PVC Industry's voluntary initiative VinylPlus, committed to recycle 1 million tonnes of PVC by 2030. While, contributing with a share of 45% towards reaching the PVC industry's target, EPPA Members have also committed to increasing the share of recyclate content in window profiles by at least 1 percentage pointon average each year[1], in European production, by 2025. EPPA and its members are well on track to achieve its target: with an average content of 18% recyclate in 2018 and 23% in 2019. The industry's commitment is the result of several 100 million Euros investments over the last 20 years in technologies and process and suppliers' relationships, when the PVC profile industry decided to invest into closed loop recycling and co-extrusion.
- The Industry actively promotes and educates on recycling. It actively communicates that recycled materials are valuable materials that further society's sustainability.
- EPPA and its members have well-established collection-for-recycling-schemes for windows in Germany and are establishing schemes in France and Poland. The industry invests to collect its products in the major European markets.
- In 2019, about 363.000 tonnes PVC from old windows were recycled and partly used for producing new window profiles with the support of co-extrusion technology.
- Co-extrusion is a technique that allows for the use of a maximum percentage of 50-55% of recycled PVC in window frames[2] instead of relying on 100% on virgin PVC. Thereby, the outer layer is always made of virgin PVC, and the core is made from recycled PVC.
- Thus, EPPA supports a restriction of all lead compounds for all new and imported PVC products, but EPPA asks that the 15-year-long derogation for windows made from recovered lead containing PVC, up to a threshold value of 2% is maintained due to the long life cycle of windows.

[1] 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.
[2] For more details on recyclate content in window profiles please see: https://bit.ly/33HDRxx

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Recycling PVC profiles is the most environmentally friendly, safe and circular approach

- From an overall environmental impact point of view, recycling PVC from windows is preferable over incineration or landfill because valuable resources are kept within the circular approach.
- PVC can be recycled up to 7 times (i.e. giving it an approximate lifespan of 280 years) while preserving its properties. By keeping PVC in a closed loop, industry can continue to use the material, which decreases the need to produce virgin plastics that ultimately requires new raw materials, and more energy to produce.
- A sensitivity analysis carried out for profile production shows that CO2 emission and thus the global warming potential (GWP) is significantly reduced by windows with a content of recyclate due to the reduction of raw material use. A 40% recyclate content in new window profiles saves emissions of 12 kg CO2-eq. per window unit during the production phase

Revision of the Construction product Regulation and the PVC window profiles industry

- Currently, windows and window profiles are regulated by a variety of EU legislation, the recast of the Construction Product Regulation can provide legal certainty to the industry through a single piece of legislation.
- Industry asks that the upcoming Revision of the Construction Product Regulation continues to support industry efforts. In particular EPPA and its members advocate for:
    - provisions regarding independent, third party-verified window sustainability assessments via Environmental Product Declarations (EPDs) such as with the EPPA Life Cycle Assessment[3] within the CE-marking;
    - the establishment of an EU harmonized definitions and technological requirements via European Standards rather than fragmentation of the Single Market through national legislation;
    - the urgent un-blocking of the work on harmonized standards in line with the CPR the Construction Products Regulation;
    - support the recycling (of PVC windows) as preferred treatment at end of life to ensure that valuable materials stay in the closed loop;

3: EPPA Life Cycle Assessment
2: hEN14351-1
3: EN12608
4: prEN17410
5: prEN17508

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  - no mandatory recycled content as industry is already committed to achieve 25% recycled contend by 2025 on average on the European market, any increased availability of recyclate will be taken up by the market.

- EPPA supports the use of harmonized standards in the context of REACH and Circular Plastic Alliance, in particular the use of references to EN12608[3] (voluntary standard for PVC window profiles), prEN17410[4] (the controlled loop standard for windows), and prEN17508[5] (the standards material definitions for PVC profiles).
- EPPA maintains that the collection of PVC windows is one of the most pressing issue for PVC recyclers, EU rules should support of the profile industry's effort to increase circularity by endorsing separate collection;

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.*

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