The future in mind

Sustainably building and renovating with PVC-U windows

VEKA

The Quality Profile

Living and residing responsibly

How we build and live in our homes has a lot to do with responsibility. In our day-to-day lives, it is easy to forget what a great impact our decisions in this area have on our environment and the future.

And it isn't just a question of what we heat our homes with, how high we set the thermostat or how well the building is insulated. The very materials that we use in building and renovating also play a decisive role in the impact of our homes on our environment. For the choices we make in this regard, it is essential to have the entire life cycle of a building component or material in view.

PVC-U windows are 100% recyclable

Windows and, of course, exterior doors made from PVC-U are exemplary in this respect. The PVC-U that the window frames are made of can be completely recycled at least seven times, practically without a loss in quality. Assuming a window service life of 30 to 40 years, this works out to a material life cycle of more than 200 years for the PVC-U. But this is only possible so long as old windows are systematically recycled and don't end up in waste incinerators or – illegally – in landfills. Therefore, when replacing old windows, make sure your contractor takes advantage of existing systems for window recycling, for example those of VEKA Umwelttechnik.

Circular economy = using old buildings as raw material for new construction.

The use of 1 kg of recycled material saves 2 kg of CO_2 in the production of new windows.

The PVC-U material cycle

The material basis for PVC-U windows is hard PVC-U, one of the most widespread and best-researched plastics. PVC-U is a thermoplastic, meaning that it is deformable under heat. In addition to high stability and longevity, it offers the great advantage of excellent recyclability and suitability for reuse in new windows. And this is already happening on a large scale: since 2000, around 2 million tonnes of PVC-U profiles have been recycled. This has saved more than 4 million tonnes of CO2 Europe-wide

A material that is just as robust recycled as new

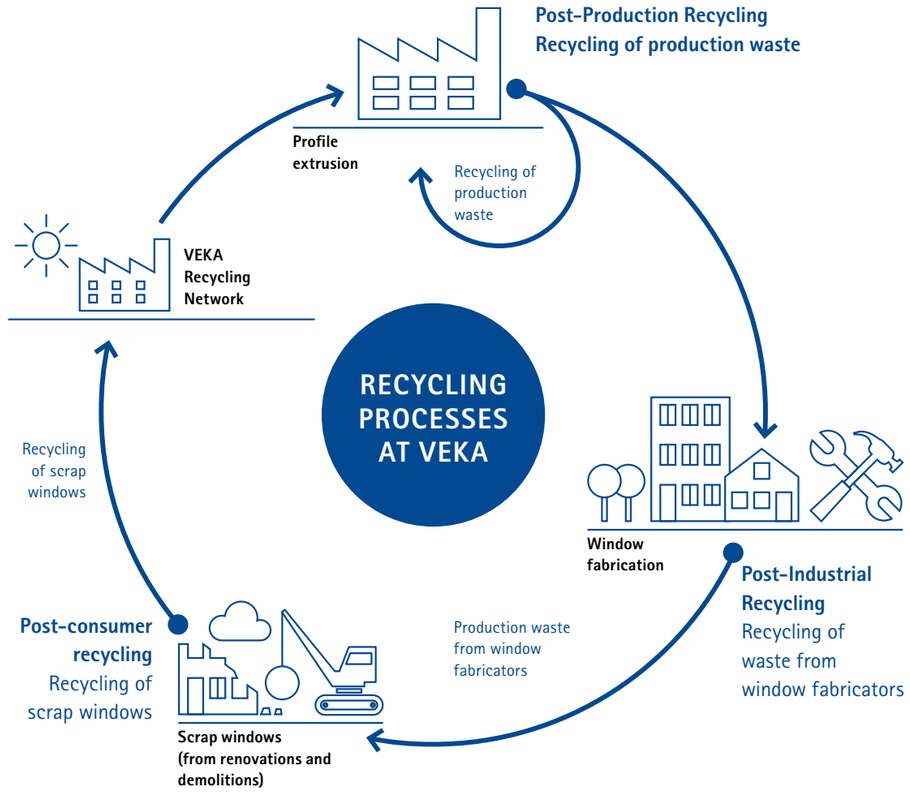
VEKA is the global leader in PVC-U window systems. On average, the profiles produced by the Group across Europe contain almost 30% recycled PVC-U from old windows. Depending on requirements, especially in the framework of public subsidy programmes, profiles are available with a share of recycled material ranging to above 55%. The recyclate isn't used in their visible exterior walls, but rather in their interior. The strength and load-bearing values of the recycled material are at least as high as those of new PVC-U.

Sustainably conceived from start to finish

VEKA takes sustainability into account in all areas of operations. As a family-run company, we have always planned and conducted business in a future-friendly way with coming generations firmly in mind. In accordance with the 'Design for Recycling' guidelines, our products are developed right from the start so that they contain the optimal ratio of recycled material to freshly produced PVC-U. At the same time, our solutions are conceived so that the products can be recycled without difficulty at the end of their service life. In addition, profiles destined for the domestic market are produced primarily in Germany, in order to preserve jobs in this country and reduce CO_2 emissions through short transport routes.

Replace and recycle – the future of the PVC-U window

The PVC-U window plays a key role in achieving a sustainable circular economy and meeting climate protection targets. VEKA therefore placed a serious emphasis on recycling early on. In 1993, the Group founded VEKA Umwelttechnik in the federal state of Thuringia and established Europe's largest recycling facility for old windows and doors. Over 25 million PVC-U windows have been recycled here to date. Through the use of recycled material, a total of 780,000 tonnes of CO_2 are avoided annually – roughly equivalent to the emissions produced by a city of over 85,000. Moreover, an installed modern PVC-U window also leads to huge CO2 savings by substantially reducing the need for heating energy compared to old windows and thereby minimising emissions.



Window recycling at VEKA Umwelttechnik

Old PVC-U windows are collected and brought to the recycling plant. The windows are mechanically broken down and the PVC-U, gaskets, metal, glass and foam are separated and fed back into the materials cycle. The PVC-U component is melted down and processed into new PVC-U granulate, which can then be used in the production of new windows, virtually without a loss in quality.

VEKA has recycled over 25 million PVC-U windows.

Saving energy with PVC-U windows

When it comes to saving energy, the question is no longer simply how much we are prepared to pay for our energy consumption.

Of ever greater importance is the question of what level of CO_2 emissions we can, or are permitted to, burden our environment and ourselves with. How the various specific climate protection targets can best be achieved is a matter of contentious debate. However, experts from the spheres of politics and science agree that the modernisation of buildings Europe-wide is a critical component in reaching these goals. Across the EU currently, existing buildings contain around 600 million PVC-U windows, the majority of which are in urgent need of replacement. In addition, older buildings are often poorly insulated, wasting large amounts of precious heating energy and causing unnecessary CO_2 emissions into the atmosphere.

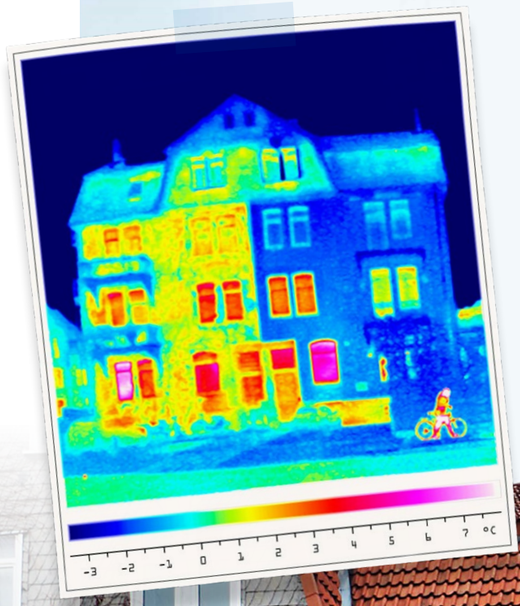
Windows of the next generation

PVC-U windows are an ideal solution for renovation for multiple reasons: they are sustainably produced using recycled material, reduce energy demands in buildings and, thanks to their recyclability, don't burden following generations. In short, PVC-U windows are resource-efficient and future-friendly.

VEKA energy saving calculator
Calculate here online how much you can save in CO_2 and heating costs by replacing your windows!

Subsidy information online
For new construction and modernisation alike, subsidies are available to reduce the cost of energy-saving windows. Get individualised information here:

When modernising, look to windows for the greatest savings potential.



Best order for energetic refurbishment: windows first, heating last.

Efficient PVC-U windows improve the climate outlook

Although windows generally make up no more than 10% of the building envelope of a typical single-family house, outdated windows are responsible for up to 45% of heating energy loss on average. Expressed in positive terms: replacing your windows is the fastest and most efficient renovation measure for improving the carbon footprint of your building.

Renovation should always begin with the windows

Modern PVC-U windows made from VEKA profiles offer an impressive savings potential of up to 75% compared to old windows. Window replacement should thus always be carried out before all other energy-related renovation measures, such as facade insulation. Because modernisation for improved energy performance often allows the installation of a new heating system of significantly smaller dimensions than its predecessor, replacing the heating system should be the final step in the process. In new construction as well, particular attention should be devoted to boosting the sustainability of your building with high-quality PVC-U windows.

VEKA quality is sustainable

Another measure of a product's sustainability is the length of its service life and its performance capacity over this life cycle. VEKA is the only manufacturer in Germany that produces window profiles exclusively to the highest quality standard: Class A according to DIN EN 12608. Their exterior walls are up to 20% stronger, and are therefore more stable, more robust and better suited to professional installation. Even with heavy triple glazing, this guarantees the profiles' reliable functionality and insulation performance over an especially long period of time.

The industry is reducing its ecological footprint

VEKA is active in organisations like the European trade association EPPA and the recycling network Rewindo, through which it works to further reduce the ecological footprint of the PVC-U window industry. In addition to this, VEKA is a member of the European PVC-U industry's sustainability initiative, VinylPlus®. Through numerous measures, the sustainability of products such as PVC-U windows is being steadily optimised and independently audited and certified according to strict criteria.

vinyl plus

VEKA is part of the VinylPlus® initiative, which is dedicated to sustainable recycling methods and responsible practices in the areas of resources and energy. The VinylPlus® product label is the sustainability seal for building products made from PVC-U. Recommended order of energy-efficient refurbishment: windows first, heating last

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VEKA sets standards in recycling

In 1993, the PVC-U window recycling pioneer VEKA founded VEKA Umwelttechnik in the German federal state of Thuringia and established Europe's largest recycling plant. VEKA is also a founding member of the nationwide recycling network Rewindo, which works to ensure that old PVC-U windows are reused in a closed material cycle.

100% quality: Class A profiles in acc. with DIN EN 12608 only from VEKA

If you'd like to learn more about sustainability at VEKA, please visit our website:
www.veka.de/unternehmen/csr/

vinyl plus® EPPA Rewindo

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