

RECOVINYL

Case
Study:

Dekura

RECOVINYL PLAYS MAJOR ROLE IN UK'S FIRST CLOSED - LOOP RECYCLING OF PVC-U WINDOWS

Closed loop recycling of PVC-U windows has become a reality in the UK, marking a major step forward in PVC-U processing technology and sustainability. Dekura, a fully-accredited Recovynyl PVC-U recycler and an Epwin Group company, played a fundamental role in the delivery of the first commercial installation of PVC-U windows made from profile manufactured solely from recycled material.

A trial installation of windows made from 100% recycled material by Profile 22, Dekura's sister company was completed in 18 properties in Corris Avenue, North Manchester, in March 2009.

Foiled with a thin virgin woodgrain-effect skin (2%), the new replacement windows achieve a total recycled content of 98% - a first for the window industry and the social housing sector. Installation was carried out by Wrekin Windows, also part of Epwin Group.

The pioneering trial followed Dekura's appointment by lead contractor Manchester Working and social housing provider Northwards Housing to recycle almost 600 PVC-U windows and curtain walling from the eight-storey Liverton Court tower block in 2008.

Reprocessed using sophisticated technologies by Dekura and then re-used in new component products by social housing specialist window systems company, Profile 22, tonnes of waste material that would have previously been destined for landfill were recovered.

More thermally efficient, more secure and better-looking than the old single-glazed PVC-U windows they replaced, the new and genuinely-sustainable windows will keep the residents of Corris Avenue comfortable for many more years to come.

Commenting on the success of the project, John Bruder, operations manager Manchester Working says: "There is a new onus on social housing providers to effectively manage the waste they generate on site, with a real emphasis on recovery and re-use. Dekura supported our waste management plan and from the Liverton Court project, and subsequent liaison with all parties involved, we were able to develop what has turned out to be a ground-breaking scheme."

Tony Moore, general manager Dekura adds: "Installing windows manufactured from fully-recycled profile has closed the loop on the recycling process. This marks a significant stride forward in PVC-U technology and sustainability."

Roger Morton, Director of Axion Consulting, Recovynyl's UK agent comments: "By demonstrating the truly sustainable and practical aspects of PVC-U recycling, we have shown that this highly recyclable building material can effectively be re-used in new, high-grade applications. This not only protects the environment, but also prevents valuable resources going to waste."



Epwin recycled PVC-U window

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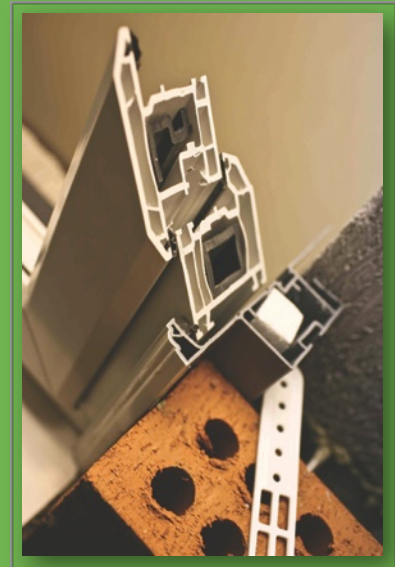
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Axion - Innovation in recycling

PVC-U RECYCLING FACTS:

- In 2009, almost 34,000 tonnes of PVC-U was recycled in the UK – nearly 53% of this being windows and profiles.
- Dekura is the UK's largest PVC-U recycler; collecting and recovering for re-use thousands of tonnes of PVC-U per year.
- Advanced recycling equipment is used to separate, shred and granulate post-consumer PVC-U waste and factory off-cuts to make a recyclable material ready for extrusion.
- As well as windows, recycled PVC-U can be used in other new construction products, such as fenestration reinforcement bars, cladding and fencing.



PVC-U frames and reinforcements are 100% recyclable.

REASONS TO RECYCLE

Collecting and mechanically recycling one tonne of recovered PVC, which can directly substitute virgin polymer in a new application, will generate about 120 kg CO₂ per tonne of PVC recycled. Latest eco-profile data for virgin PVC from Plastics Europe, shows producing one tonne of virgin PVC from its primary raw materials (salt and oil) will generate about 1,900 kg of CO₂ emissions. Using recycled PVC chip saves 94% in CO₂ emissions compared to production of virgin PVC polymer. Most recycled PVC can be re-used as a clean chip to substitute virgin polymer so there are fewer melting costs. This helps to reduce the carbon impact of the recycled material compared to virgin.

- Reduced environmental impact; diverts waste from landfill
- Preserves natural resources for re-use in the UK; reduced use of virgin material
- New products contain up to 100% recycled content
- Cuts disposal costs for installers
- New revenue stream for installers and an incentive to recycle
- Traceability - almost 34,000 tonnes of waste PVC-U was recycled through the Recovynl scheme in 2009



Low maintenance recycled PVC windows replace timber frames