



In addition to having a proven track record of long-term performance, one of the benefits of selecting PVC single-ply roofing is that it can be recycled into new roof membrane or other roofing or non-roofing products at the end of its service life.

Specifiers and Consultants - Why recommend recycling the original PVC roof?

- Reduce the project's disposal costs and landfill impact by diverting end-of-life roofing material from local landfills.
 - Lower your client's building's carbon footprint, supporting their corporate carbon reduction goals.
 - Advance circularity and recycling commitments by returning PVC roofing material into new roofing or other products, such as flooring.
 - Enhance your firm's image and reputation with a positive environmental story and sustainability message.
 - Strengthen your client's sustainability story with a tangible, project-level environmental action.
 - Support your client's green building certifications, which can enhance their asset value and marketability when credits are awarded.
 - Help your client demonstrate leadership to tenants, customers, employees, and stakeholders who increasingly expect visible sustainability action.
 - Receive recognition for your recycling efforts along with your client and roofing contractor, if offered by membrane manufacturer, in the form of a project certificate.
 - Gain positive visibility for you and your client and roofing contractor, with your approval, to have your project possibly featured by CFFA.
- See example project profiles at: <https://vinylroofs.org/sustainability/post-consumer-recycling/#project-profiles>.

Background

Recycling PVC roof membrane dates back to the late 1990's. The Vinyl Roofing Division (VRD) of the Coated Fabrics and Film Association (CFFA) started collecting recycling data for both pre- and post-consumer PVC roof membrane in 2014. By the end of 2024, the CFFA VRD members surpassed an accumulated amount of over 200 million pounds of pre- and post-consumer membrane since data collection began. This translates to millions of square feet recycled per year.



The CFFA Zero Production Waste Initiative



The CFFA Post-Consumer Waste Initiative

For more information on CFFA's Pathway to Zero initiative, visit <https://vinylroofs.org/sustainability/pre-consumer-recycling/>, and to learn about CFFA's Pathway to Circularity initiative, visit <https://vinylroofs.org/sustainability/post-consumer-recycling/>.

Types of Roofs to Recycle

Mechanically fastened or induction welded PVC single-ply roof membranes are ideal candidates for recycling as they can simply be removed (skinned) and transported to various recyclers to be recycled or repurposed. This eliminates the need for landfilling of the membrane and reduces dumpster and roof disposal costs.



As much as 75% of the commercial low slope roofing market is reroofing, so the opportunity to recycle end-of-life roofing materials is significant. When the original roof is removed, why not recycle as much as possible? In a tear-off situation, the existing PVC roof membrane is already being removed, so all that is needed is to have the contractor bundle and package the existing membrane to ship it to a recycler. On a reroofing project where it is intended to leave the existing roof system in place and simply install a new membrane over the existing membrane, it may make sense to remove or skin the original PVC roof membrane to give additional reroofing options for the next cycle renovation.

Sources for More Information

If you have any questions on the recycling process or want to know if your roof is a candidate to be recycled, please contact your PVC roofing manufacturer of choice or visit the website of the CFFA VRD at <https://vinylroofs.org/sustainability/post-consumer-recycling/>.

Evaluating if Recycling Fits Your Project

Everyone involved with a reroofing project plays a role in the recycling process. Specifiers and consultants normally determine what roofing membrane technology is specified and installed for the new roof and can have a direct impact on what happens with the original roof being removed. To advance sustainability within the industry, include recycling language in your specification and include a line item on your bid form to break out the price to recycle the existing mechanically fastened or induction welded PVC roof membrane. Guide specification language for recycling the existing PVC roof as well as a recommended bid line item are available at <https://vinylroofs.org/sustainability/post-consumer-recycling/#specs>. Bundling and packaging the membrane for recycling typically adds only a small incremental cost to the overall reroofing project. Asking for the price for recycling to be listed separately allows your property owner customer to make an informed decision.

Potential to Contribute to Your Circularity Goals

Specifying or recommending PVC/vinyl roofing can help in several ways. By specifying today's roofs with tomorrow in mind, benefits accrue because the vinyl roofing industry already has proven take back and recycling programs in place. It is expected that recycling construction waste will become even more important in the future, and landfilling will become more difficult and costly. Specifying a mechanically attached or induction welded PVC membrane when appropriate should give you and your property owner customers comfort knowing that decades from now, the PVC roof you selected can be recycled.

The vinyl roofing industry is also the only commercial roofing technology for which the CO₂-equivalent avoidance for recycling the membrane has been determined and presented at industry trade conferences. Recycling a PVC roof can help to meet your customer's sustainability objectives while reducing the burden on landfills. The recycled PVC membrane can be converted into other useful construction products, including new roofing, flooring, and expansion joints.

Recycling Impact

According to a National Institute of Standards and Technology (NIST) determination based on industry recycling data and life-cycle assessments, recycling end-of-life PVC roof membranes results in net avoided carbon emissions of 0.62 to 0.80 lbs. CO₂-equivalent per square foot compared to a business-as-usual case landfilling scenario.

If a 50,000 square foot project PVC roof membrane is recycled, between 31,000 pounds and 37,000 pounds of CO₂-equivalent can be avoided.

This is equivalent to greenhouse gas emissions from:

3.3 
gasoline-powered passenger
vehicles driven for one YEAR!



35,808 miles driven by an average
gasoline-powered vehicle. (This is equivalent to driving
across the United States approximately 14 times!)

If a 100,000 square foot project PVC roof membrane is recycled, between 62,000 pounds and 75,000 pounds of CO₂-equivalent can be avoided.

This is equivalent to greenhouse gas emissions from:

6.6 
gasoline-powered passenger
vehicles driven for one YEAR!



71,616 miles driven by an average
gasoline-powered vehicle. (This is equivalent to driving
around the earth 2.8 times!)

Note: Determined using US EPA's Greenhouse Gas Equivalencies Calculator available at:
<https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator> for low range CO₂-eq avoided.

