

VIABILITY™

VINYL INSTITUTE
RECYCLING GRANT PROGRAM

CASE STUDY

AWARD: \$87,500 (November 2023)

The Vinyl Institute launched VIABILITY in January of 2023, a first-of-its-kind, industry-wide recycling grant program aimed at accelerating post-consumer PVC recycling nationwide. The grant program makes available up to \$1 million in funds per year over three years from four PVC resin manufacturers in the U.S. (Formosa, Oxy, Shintech, and Westlake.)



GREEN EAGLE

Green Eagle is a PVC profile and composite materials manufacturer located in Georgetown, South Carolina. The company manufactures vinyl construction products including decking, screening systems and screen doors. Since its inception, Green Eagle has reused scrap materials in its PVC applications, leading to both cost benefits and increased circularity. The company developed a new shipping pallet manufactured with post-consumer PVC and post-production carbon fiber composite materials that resulted in unprecedented strength within the extruded PVC pallet profiles. The product design and manufacturing process allow for the use of traditionally more difficult to recycle PVC products as material feedstock. With this new PVC pallet in mind, Green Eagle applied and was selected as a recipient of a VIABILITY recycling grant in November of 2023, and received \$87,500 in funding

WHY VIABILITY

Green Eagle learned about the VIABILITY program through the plastics trade press and applied for funding to assist with the purchase of tooling necessary for a first production run and customer testing of their unique pallets. The company's recycled PVC pallets offer an alternative to the traditional wood pallets, which account for approximately 40 percent of the harvested hardwood in the United States every year. The expansion of Green Eagle's PVC pallets operation presents the opportunity to recycle more post-consumer PVC while also reducing the amount of foresting required for traditional wood pallets. Further, Green Eagle's research shows that these PVC pallets can be reused approximately 50 times compared to the typical single-use wood pallets.



CASE STUDY



VIABILITY IN ACTION

Green Eagle was able to purchase the machine tooling necessary to expand their PVC pallet operation in part due to the VIABILITY grant funding, and in turn was able to acquire a patent for this technique within 6 months. The company also partnered with the US Department of Defense (DOD), who successfully conducted a variety of rigorous DOD tests to validate the strength and durability of the new PVC pallets.

LOOKING FORWARD

As the PVC pallet operation expands, Green Eagle will look for new sources of post-consumer PVC, which will help keep up with production demands and increase landfill diversion. Green Eagle will look to capture a larger market share of the 500 million pallets used in the US every year. The company estimates that a one percent market share of pallets produced each year in the US would result in 75 million pounds of recycled PVC or 37,500 tons annually, which is approximately 1800 truck-loads of material. Green Eagle's success in the pallet market share will directly lead to more post-consumer PVC being recycled every year while also reducing our reliance on forestry for hardwoods.

CONCLUSION

Green Eagle's VIABILITY grant will help bring their groundbreaking PVC pallets to market. Green Eagle's recycling efforts show us that we can move towards a more sustainable economy while simultaneously improving the products on the market. Green Eagle's durable PVC pallets are a shining example of the possibilities on our horizon as we create a more circular industry.