

TENNESSEE GREEN STAR PARTNERSHIP MEMBER HIGHLIGHT



Florim USA, Inc.- Clarksville, TN



By: Vaughn Cassidy

Florim USA, Inc. is an award-winning porcelain tile manufacturer, a leader in the global ceramic sector, and committed to continued technological innovation in both tile manufacturing and sustainability. Located in Clarksville, Tennessee, Florim USA is the largest single-site porcelain tile manufacturer in the United States. At the foundation of Florim USA's industrial operations is concern for and preservation of the environment. By making a commitment to observing environmental regulations through certified environmental and quality management systems and constantly placing attention on ecologically friendly and sustainable production options, Florim USA incorporates environmental considerations in all of their actions.

Florim USA is a key industrial partner in Tennessee's circular economy through the Tennessee Materials Marketplace. Launched through a public private partnership between the Tennessee Department of Environment and Conservation and the United States Business Council for Sustainable Development, the marketplace is an online collaborative platform for industries and organizations to connect to exchange materials for recycling or reuse of material otherwise bound for disposal. Florim USA is currently the largest single industrial user of recycled glass in Tennessee due to its participation in the Tennessee Materials Marketplace.

"Successful implementation of the scrap glass project has resulted in the diversion of over 4 million pounds of post-consumer glass waste since we began in 2019," said Don Haynes, Environmental Manager for Florim USA. "You can look at it two different ways: landfill disposal was averted and, at the same time, 4 million pounds of virgin raw materials remain in the ground. The marketplace proved invaluable in connecting with this geographically remote recycler," Haynes said.

FEATURED THIS MONTH:

- Constructed 1990, purchased by Florim USA in 2000
- Employs more than 275
- Newest Green Star Partner - 2020

INTERESTING FACTS

- Largest single site for tile manufacturing in the USA
- Largest industrial recycler of post-consumer glass in Tennessee.
- Reused over 60 million pounds of their own material discards in 2019.



Arabescato Gold tile, Polished, 12x24
sitting in a recycled metallic sand.

The relationship with the recycled glass provider also produced another unique opportunity for reuse. Florim uses supersacks, large polypropylene industrial sacks that are loaded with aggregate product, and then recycles them through their glass provider. This provided a no-cost way to containerize the glass for transport from the provider. "The supersacks can't be used again after the glass provider fills them with glass since they must be slit open for emptying," said Julie Knotts, Environmental Specialist with Florim. "We are actively searching for a textile recycler interested in the slit supersacks. To date, we have reused approximately 3,000 supersacks and as a result saved the recycled glass provider approximately \$37,000."

The tile manufacturing process has the innate advantage of readily incorporating processed scrap. This scrap consists of material from all phases of the manufacturing process but results in two distinct types: fired and unfired. The unfired material is simply put back in the process while the fired material must be crushed to a size small enough for the milling process to manage. In 2019 Florim recycled into process in excess of 60 million pounds of internal scrap, far above standard industry levels. 100% of the water used to produce material before it is fired is captured in a series of trenches and sumps, pumped to the beginning of the process and used in the ball-mills where the raw materials are wet ground to a fine slurry. "This past year, our facility captured and reused in excess of 19 million gallons of water," said Haynes. "Water is a necessary and precious commodity and its diligent use is a priority at our company."

The internal recycling of materials in conjunction with the use of post-consumer glass and water conservation allows Florim USA to proudly declare a recycled content in excess of 50% for the majority of the product line. Beyond its environmental commitments, Florim USA is active in the industrial community in Clarksville. There are a total of 5 Tennessee Green Star Partners in Clarksville. Florim USA environmental staff regularly teach classes on sustainability for the Clarksville-Montgomery County Green Certification (CMCGC) program. Florim USA's successes are referenced in the class to demonstrate the potential of sustainability in the community. In 2019 Florim USA received the CMCGC award for Outstanding Efforts in Recycling. Florim USA has been an exceptional industrial partner for Clarksville, the Tennessee Materials Marketplace and now the Tennessee Green Star Partnership.



Enjoy the video on Florim USA, Inc. here:
<https://youtu.be/21h7ldk8Gqg>

"Florim USA's commitment to sustainability within the physical environment and the community is a core principle."

Michele Agazzi, Chief Manufacturing

The [Tennessee Green Star Partnership](#) is a voluntary environmental leadership program designed to recognize industries in the state that are committed to sustainable practices. If you are interested in joining Florim USA and other sustainable industries in Tennessee by becoming a member, please contact us.