



FOR IMMEDIATE RELEASE

CONTACT: Amanda Wall
571-482-5431
awall@mrc-us.org

Innovative Technology May Transform Recycled Mattress Foam into Sneaker Soles

Your next pair of sneakers could be made from your old mattress.

In research sponsored by the Mattress Recycling Council (MRC), Edge Global Innovation (EGI) has developed a process to transform polyurethane mattress foam into polymer pellets that can be used to produce a wide variety of molded products, including shoe soles, cell phone cases or rubber gaskets for various industrial uses.

Built on earlier research, EGI developed a process and machinery to reduce the volume of the foam by 90 percent. The process does not use catalysts or solvents, which minimizes the environmental impacts of the technology. The end product is a thin, flexible sheet of synthetic rubber.

This material is then ground and mixed with additives to create reformable pellets. The additives, including coloring, can be tailored to make a specific mixture needed for molding into new products like shoe soles. The research determined that the pellets could be composed of up to 75 percent recycled mattress foam. The balance would be virgin polymers and other additives.

In addition to recycled mattress foam, the process can use post-industrial scrap foam obtained directly from foam manufacturers.

“This is an exciting new development that can open the door for making many high-value products from recycled polyurethane foam,” said Mike O’Donnell, chief operating officer of MRC. “We look forward to seeing commercial adoption of this technology to improve the circularity of mattress foam.”

EGI, which has formed a subsidiary, Vitricycle, to manufacture and market the pellets, has patents pending in the U.S., the European Union and China.

“We see tremendous potential,” said Vahid Serajian, chief executive officer at Vitricycle. “By converting bulky, hard-to-recycle mattress foam into versatile pellets, we’re not only addressing a major environmental challenge but also creating new opportunities for sustainable manufacturing across industries. Our goal is to lead the way in transforming waste into valuable resources and contribute to a more circular economy”

With the low environmental impact of the conversion process, Vitricycle could also empower mattress recyclers to process foam on-site. Using the company’s proprietary machinery and know-how, the recycler could create a high-value product to sell into new secondary markets.

The complete [research paper](#) is posted on MattressRecyclingCouncil.org.

With the completion of the successful commercial pilot test, Vitricycle is now seeking full commercialization of the technology by offering to license its intellectual property, sell or lease its machinery and develop markets for the pellets. It is also seeking investors to assist in developing the technology and new markets.

About the Mattress Recycling Council

The Mattress Recycling Council (MRC) is a nonprofit organization that operates recycling programs in states that have passed mattress recycling laws: California, Connecticut, Rhode Island and Oregon. MRC was founded by the bedding industry and recycles nearly 2 million mattresses each year. For more information about MRC, go to MattressRecyclingCouncil.org.

About Edge Global Innovation

Edge Global Innovation (EGI) Holding’s mission is to nurture innovative ideas from their inception to commercialization through strategic management, financial investment, and cutting-edge research and development. The company started as a small consulting firm in Houston and has since evolved into a multidisciplinary holding company. EGI now operates in various engineering sectors, including polymer science, material recycling, human-motion robotics, and advanced numerical simulations.

Vitricycle, a subsidiary of Edge Global Innovation (EGI), specializes in the development of polyurethane foam recycling technologies with a focus on transforming post-consumer and post-industrial foam waste into high-value, sustainable polymer products. For more information about Vitricycle, go to www.vitricycle.com/

Editors: A high-resolution image of a shoe sole accompanies this press release.