



Marking a new era in industrial floor tapes

It didn't start as a Sustainability project.

Rather, it was an attempt by a 3M Industrial Adhesives team to develop a floor marking tape that could go down fast, stand up to heavy traffic, and come up easily when a facility's needs change.

But Sustainability came to the forefront when the material solution the team arrived at was Polylactic Acid, a plant-based material also known as PLA.

PLA is a thermoplastic polymer derived from renewable resources, like corn starch, in contrast to most plastics which are made from nonrenewable petroleum reserves. It is often used in food handling and packaging applications, and for implantable medical devices.

Now, it is also being used in 3M™ Ultra Durable Floor Marking Tape 971.

“When we started this process in early 2016, customers were not necessarily looking for Sustainability in their floor marking products. They were looking for a heavy-duty tape that could last longer in high traffic locations, yet be easy to remove when it was time for replacement.” says Dean Lovett, 3M Global Product Manager. “But when we discovered we could make a tape product that meets these customer demands, that uses fewer fossil fuels than traditional, petroleum-based vinyl tapes, we felt this was a technology that made sense for 3M.”

Besides being PLA renewable resource based, Ultra Durable Floor Marking Tape 971 has other environmental advantages.

Compared to chemical-based, liquid paint, another option often used for industrial floor marking, Ultra Durable Floor Marking Tape 971 doesn't require stringent disposal methods for any amount not used, or for solvents used to clean paint brushes and pans. And there's no time wasted waiting for paint to dry before resuming work in busy factory areas.

The clean removal adhesive used in the tape is solvent-free, an exception to the rule in floor marking tapes.

What's more, because of its durability, this tape retains its vivid color even when exposed to heavy abrasion, which means fewer changes and, thus, less trash accumulating in a dumpster.

Dr. Jaysree Seth, 3M Chief Science Advocate, Corporate Scientist, and one of the co-inventors of PLA based tape constructions, says, "As a company, 3M has always been at the forefront of material and process technologies that advance Sustainability. Ultra Durable Floor Marking Tape is another example of a product that has accomplished this without compromising other functional features that are important to the people who use it."

About the product's Sustainability attributes, Lovett adds, "When we talk to customers, we still lead with durability and clean removal, but when all things are equal, most customers today will choose the sustainable product. More and more, Sustainability is coming into the conversation in factories, warehouses, and distribution centers."

Since being launched in January 2018, 3M™ Ultra Durable Floor Marking Tape 971 is now being sold successfully in the U.S., Asia, and Western Europe. In the future, Lovett sees more potential for PLA-based products at 3M.

"From a science standpoint, it's different than other types of material technologies 3M typically use. As a result, there were some challenges in the development process, even some questioning of our own logic, but in the end we created a really good product that is right for the customer and right for the planet."

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