



# Rapidly renewable bio-based content in our safety flooring: What is it and where does it come from?

**For years, Altro has been committed to manufacturing flooring products that contain rapidly renewable bio-based content sourced from raw materials, in some ranges as much as 15%. But how are these materials sourced and implemented into the manufacturing process, and where do they come from?**

The bio-based content comes in the form of a plasticizer, which is made from the crop Maize, and when harvested becomes the crop we all know to be corn. Maize is the most produced crop globally with 1.1 billion tons produced each year topping wheat at number 2 with 760 million tons. It is also the most produced crop in the United States.

## How is it made?

Maize plastic can be manufactured by harvesting maize crops, grounding them up, and then letting them soak so key ingredients within the maize seed can be separated from one another. The next step is adding a key component, protein, to the ingredients that were just separated from the previous step and doing this will make a simple sugar.

When the sugar is met with certain bacteria, it causes the sugar to be fermented into lactic acid. This lactic acid consists of molecules that eventually be spun off into a resin called polylactic acid, which is what is

used in the manufacturing process to make eco-friendly products. These products look, act and perform just like petroleum-based plastics.

## Why do we use it?

Our bio-based content is incorporated into our safety and slip-resistant flooring as a plasticizer. A plasticizer is a substance, liquid or solid, that is added to a material to improve its flexibility making it easier to shape and mold. Plasticizers are first combined with PVC powder to create a liquid paste which can then be spread in several layers to build up the floor made up of a foam core, a decorative and a clear protective wear layer.

Because Altro uses starch-based plastics for plasticizers rather than petroleum, our products are more sustainable. Not only is the ingredient rapidly renewable, but it is also grown from plants and in turn uses less petroleum. Petroleum's inability to be bio-degradable is currently one of the most critical issues to the environment and thus there is a dire need to substitute petroleum-based plastics with other eco-friendly alternatives.

Altro specifically uses European grown maize crops not destined for food consumption in all of our safety flooring for both a lower carbon footprint on the ingredients and ultimately for social responsibility.