



Soy-Based Polymers on the Road Again



The highways and byways of America take a lot of abuse from heavy traffic and the elements, and as a result need constant attention to repair the asphalt and concrete that make up the roads. Now, these road repairs can happen with the help of soy, thanks to some new products from BioSpan Technologies, developed with funds from the soybean checkoff.

BioSpan has developed RePlay agricultural oil seal and preservation agent and Activate cold pavement milling restorer. These products join BioSpan's existing soy-based paving product lineup which include asphalt remover, paving forms release agent, bed release agent, corrosion protectant, and dedusting and bonding agent.

"The asphalt and road-treatment industry is a promising potential market for soy," says Todd Allen, USB New Uses chair and a soybean farmer from West Memphis, Ark. "As government agencies, like state departments of transportation, look for biobased products, soy can help fill that need with products like asphalt and road-treatments."

RePlay agricultural oil seal and preservation agent is formulated to save application time and labor, with a cure speed of about 15 to 30 minutes. The agent can be applied year-round because it is not temperature sensitive, and lasts four to five years.

RePlay features ASTM E 965 measure macro-texture, and natural rubber to maintain skid resistance. Stripes on the highway are not affected and the product can be applied at night. The agent penetrates into the top lift of the pavement reversing the oxidation. RePlay is applied with conventional spray equipment, and features no splattering, tracking or oil transfer.

"RePlay is applied as a liquid and introduces new polymers to strengthen and restore pavement," says Sheldon Chesky, president and CEO of BioSpan Technologies. "Its soy-based formulation penetrates 1 to 1 ½ inches into the pavement, creating a seal that repels moisture without changing skid resistance."

Activate is an asphalt millings restorer that contains advanced superpave polymers. It can be used year-round, in temperatures as low as -30 degrees Celsius. Ninety-five percent of the potholes treated with Activate do not need to be treated again for at least one year.

The product is made using a spray pump, where the millings are sprayed before leaving a hopper and then mixed with paddles. The cold paving from the millings has a 10- to 20-minute reaction time. Activate is then applied, and the lift can last five years or longer with no rutting.

BioSpan is also working on developing asphalt made from soybean oil.

For more information on BioSpan, visit biospantech.com. For more information on industrial uses for soy visit www.soynewuses.org