

Imagine if cracked, aged roads could be recycled in place.

PURIFY | PROTECT | ENHANCE

Customer success story.

End-use

Customer: New Mexico Department of Transportation

Product: Indulin® emulsifiers

End-use

Application: Asphalt road recycling

Ingevity: Purify | Protect | Enhance

Ingevity provides specialty chemicals, high-performance carbon materials and engineered polymers that purify, protect, and enhance the world around us. Through a team of talented and experienced people, Ingevity develops, manufactures, and brings to market products and processes that help customers solve complex problems. These products are used in a variety of demanding applications, including asphalt paving, oil exploration and production, agrochemicals, adhesives, lubricants, publication inks, coatings, elastomers, bio-plastics and automotive components that reduce gasoline vapor emissions. Headquartered in North Charleston, South Carolina, Ingevity operates from 25 locations around the world and employs approximately 1,750 people. The company is traded on the New York Stock Exchange (NYSE: NGVT). For more information visit www.ingevity.com.

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The Indulin family of emulsifiers enables asphalt pavement recycling that reuses 100% of the existing road materials. The process is done in place and without heat. Indulin chemistry facilitates the rejuvenating and replacement of cracked, weathered and potholed roads and highways. This means the process is better for the environment, creates longer-lasting roads, is faster, and less expensive. That's The Ingevity Effect.

Challenge

The New Mexico Department of Transportation (NMDOT) faces the Herculean challenge of managing a network of over 12,000 miles of paved and unpaved roads with limited funding. The DOT's network includes parts of U.S. Route 285, a heavily trafficked corridor used by large trucks hauling oil and natural gas, in addition to everyday commuters. When 11 miles of the highway near Roswell, New Mexico, were in drastic need of repair, NMDOT engineers needed a reliable, cost-effective and long-term paving solution.

"We must provide drivers with the safest, most durable pavements," explained James Gallegos, state materials engineer at NMDOT. "We were confident that Indulin would maximize the quality of the new base structure, which improves the longevity of the final road. We didn't have the hassle of hauling in new materials, which saved trucking time and benefited the environment. And we could return drivers to the road faster. This recycling project was a win all around."

Solution

The DOT confidently chose the cold recycling process for this project along U.S. Route 285 and - along with the asphalt contractors on the project - was awarded the Best of New Mexico Innovative Technology Award at the University of New Mexico's 2018 paving conference. The prize-winning road was re-opened to traffic almost 40% faster, was 50% less expensive, and saw an almost 90% reduction in greenhouse gas emissions.

Value components

- Indulin helps liquid asphalt bond to the aggregate in the asphalt mixture, which decreases the tendency for roads to ravel and improves durability against everyday wear and tear.
- Indulin enables asphalt mixtures to set more rapidly, meaning contractors can complete projects faster and roads can be re-opened to the driving public sooner.
- Indulin allows asphalt mixtures to compact better, improving the density and longevity of the finished road.

