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# Sripath: Leading a global change

 by Tom O'Keane — March 21, 2025 in [Industry News](#), [Latest News](#), [Sustainability](#) Reading Time: 7 mins read

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Sripath has continued its rich history of developing environmentally friendly mix additives, this time learning from best practice across several sectors to develop the PHALANX warm mix additive, an innovative design for hot asphalt and polymer modified bitumen (PMB) mixes.

Sripath has long excelled in innovative product development, technical expertise, customer-centricity, and global adaptability.

The company continues to seek opportunities to expand its product portfolio, exploring innovative concepts and incorporating exciting technologies to design, develop and launch new products.



Sripath's newest innovation, PHALANX "a superior warm mix additive", represents yet another revolution in sustainable roadway delivery.

PHALANX is an environmentally friendly warm mix additive, designed to improve compactability of both hot asphalt mixes (HMA) and polymer modified bitumen (PMB) mixes.

In developing PHALANX, Sripath's team focused on better understanding how warm mix additives work.

The team developed a unique, highly dosage efficient molecule that helps to significantly reduce both the mix production and paving temperatures. These reduced temperatures help lower energy consumption and reduce greenhouse emissions, making the process more environmentally friendly and cost effective.

Sripath realised that increased lubricity and reduced friction were key for efficient and optimal aggregate packing in the asphalt mix. To gain further insights, Sripath tapped into a network of experts from various industries, whose specialised skillsets were geared towards reducing friction and improving packing efficiency.

Vince Aurilio, Senior Technical Director – Sripath says this unique approach to product development opened the door to an exciting approach for product development.

"It all boils down to lubricity and friction. When we looked around, there are other industries that have a strong history of better understanding lubricity, friction, and particle packing," he says.

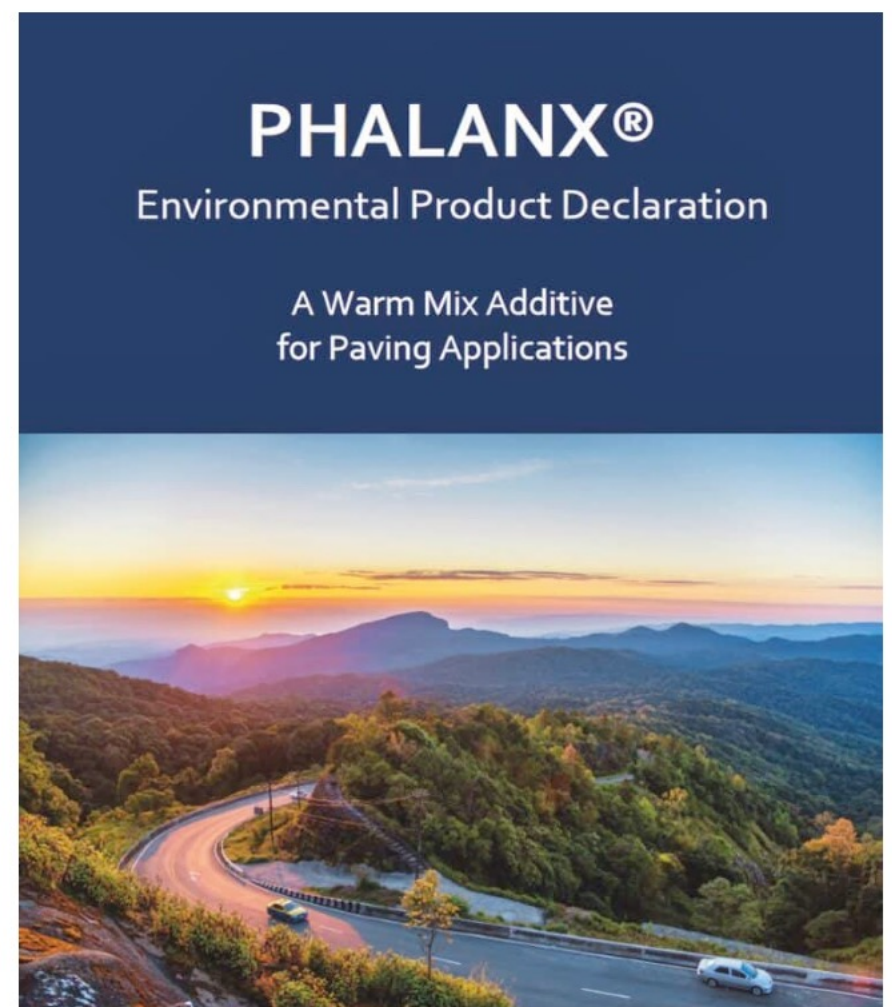
"For asphalt mixes, you want the stone aggregates to slip and slide past each other and pack very efficiently, with the least amount of energy. That's why we thought it best to borrow insights from other industries that knows how to best achieve this. This was the foundation of some pioneering work done at the University of Wisconsin."

Using such best practice, as well as research conducted at the University of Wisconsin in America and RMIT University in Australia, and by its renowned internal research and development team, Sripath was able to create a brand-new molecule that outperforms other warm mix additives.

"We started with the basics and asked the fundamental question, which was 'what was needed for warm mix?'. We simply didn't accept the status-quo. This allowed us to develop a new molecule that's far more effective and user friendly, delivers performance, is easy to incorporate in a plant environment, is safe to use, and makes the mix easy to pave," Aurilio says.

"It's a chain of events and thought processes that's led us to where we are with the product and the way in which we developed it."

Borrowing methodologies and techniques on how to test for this lubricity, Sripath developed a new molecule for PHALANX that's more effective and user-friendly compared to traditional warm mix additives.



Just like Sripath's other products, the PHALANX warm mix additive has an Environmental Product Declaration (EPD), outlining its sustainability properties.



## Performance characteristics

PHALANX's ability to improve HMA and PMB compactability, while reducing production and compaction temperatures, can be attributed to a number of factors.

As Ravi Rajagopalan, General Manager, Sripath Asia-Pac explains, PHALANX represents Sripath's ambition to create products that not only improve sustainability, but also deliver desired roadway performance and durability.

"The addition of PHALANX to our product portfolio underscores our commitment to offering products that enhance performance and are safe to use, while also supporting industry-wide sustainability efforts," he says.

"With sustainability continuing to gain importance in the Australian paving market, we are pleased to offer a specially designed warm mix additive that exceeds the performance of other WMAs, while helping customers meet their environmental goals. The PHALANX EPD (Environmental Product Declaration) can be downloaded from our website."

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With a suggested dosage of 0.25 to 0.50 per cent, PHALANX works effectively in most situations.

On top of offering superior compactability at lower compaction temperatures, PHALANX also improves wettability, enables greater aggregate coating and offers wider paving windows and longer haul distances.

These performance characteristics have already been showcased successfully in Australian conditions, with a PHALANX trial conducted in June 2024.

The two-day trial aimed to evaluate the implementation of PHALANX on a roadway in Queensland.

A control mix without PHALANX and trial mixes with 0.25 and 0.45 percent PHALANX were paved on a roadway 490 metres in length, 12 metres wide and 60 millimetres in depth.

The trial showed that with the addition of PHALANX, it was possible to reduce the production and paving temperatures by more than 25 degrees Celsius, even at 0.25 per cent PHALANX addition.

"The data from this trial demonstrated the performance of PHALANX and its dosage efficiency. The fact that there were no issues producing and applying at those lower temperatures means a lot," Rajagopalan says. "The data is very impressive.

"The field trials confirmed the results from the laboratory evaluation. PHALANX is a superior warm mix additive that helps to reduce both the mix production and road paving temperatures."



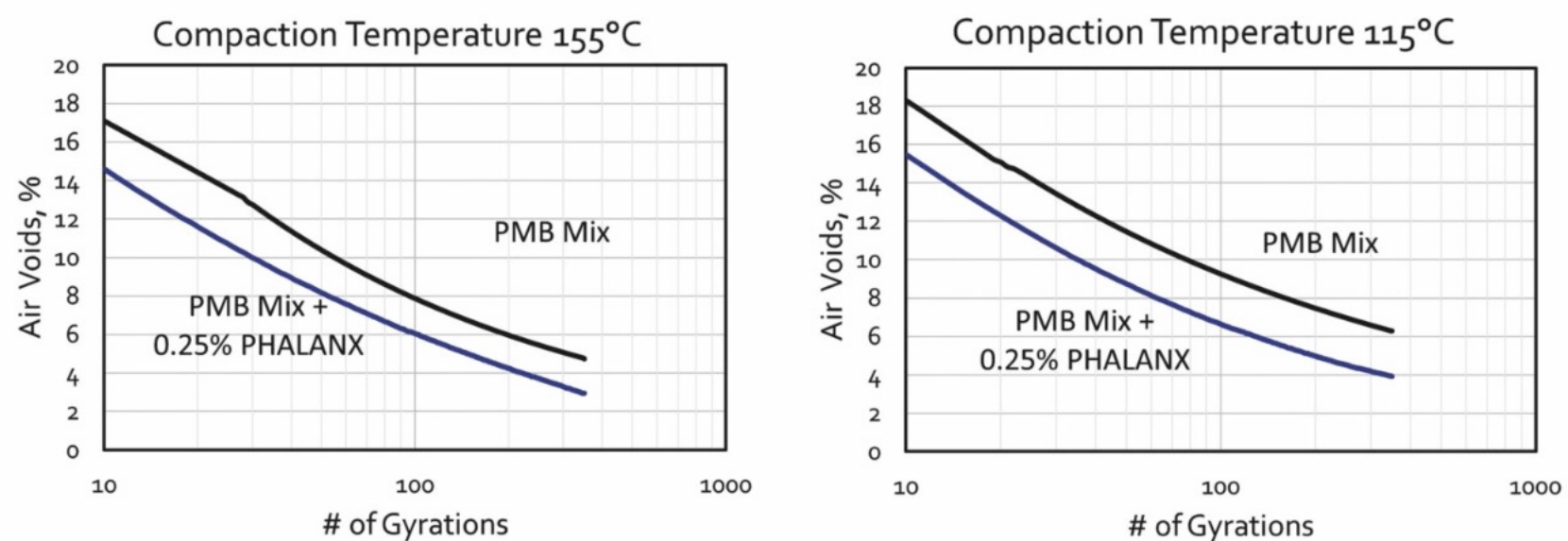
helps to reduce both the mix production and road paving temperatures.”

## Different approach

Trials such as this have not only allowed Sripath to evaluate PHALANX’s effectiveness, but they’ve also allowed the company to adopt a more robust product launch process. As Deepak Madan, Chief Operating Officer – Sripath explains.

“For this product, we conducted laboratory evaluations and trials simultaneously in select markets around the globe,” he says. “In other words, field trials and laboratory testing were conducted simultaneously in Australia, USA, and Europe. In Australia, Professor Filippo’s (Giustozzi) labs at RMIT helped to validate the product.

“This parallel approach in the US and Australia gave technical experts in both countries the chance to rigorously test PHALANX and gain deeper insights. Our thanks to Professor Filippo Giustozzi, of RMIT University and Professor Hussain Bahia, of the University of Wisconsin for their help in advancing our understanding of PHALANX.”



PHALANX performs well in a number of different temperatures, environments and applications.

Professor Filippo Giustozzi – RMIT University, says both organisations have a close relationship and rich history of collaboration.

“RMIT and Sripath Technologies have a long-standing research partnership, working together on joint research and testing to introduce innovations to the Australian market,” he says.

“The novel molecule behind PHALANX was developed by Sripath scientists; RMIT’s contribution focussed on determining the optimal dosage and understanding its interactions with commonly used Australian road materials, such as polymer-modified binders and various bitumen grades.

“One of the advantages of working with Sripath is their willingness to share global research data, which essentially allows for conducting worldwide research.”

PHALANX is slated for further trials as Sripath gears up to rollout the product across Australia and rest of the world. Sripath is also eagerly eyeing more growth across the Australian market.

“We’re really enjoying working with authorities and customers in Australia. There’s a healthy exchange of ideas, people are very receptive, and the industry has been very welcoming,” Rajagopalan says.

“Australia is certainly a high priority for us.”