



THE NEXTPAVE CHALLENGE

VALIDATING THE FUTURE OF RESILIENT INFRASTRUCTURE

A Collaboration of:
NCAT | NAPA | MnROAD

A COALITION FOR INNOVATION



THE MISSION

To identify, evaluate, and advance high-potential pavement technologies through a structured, transparent, and rigorous process.

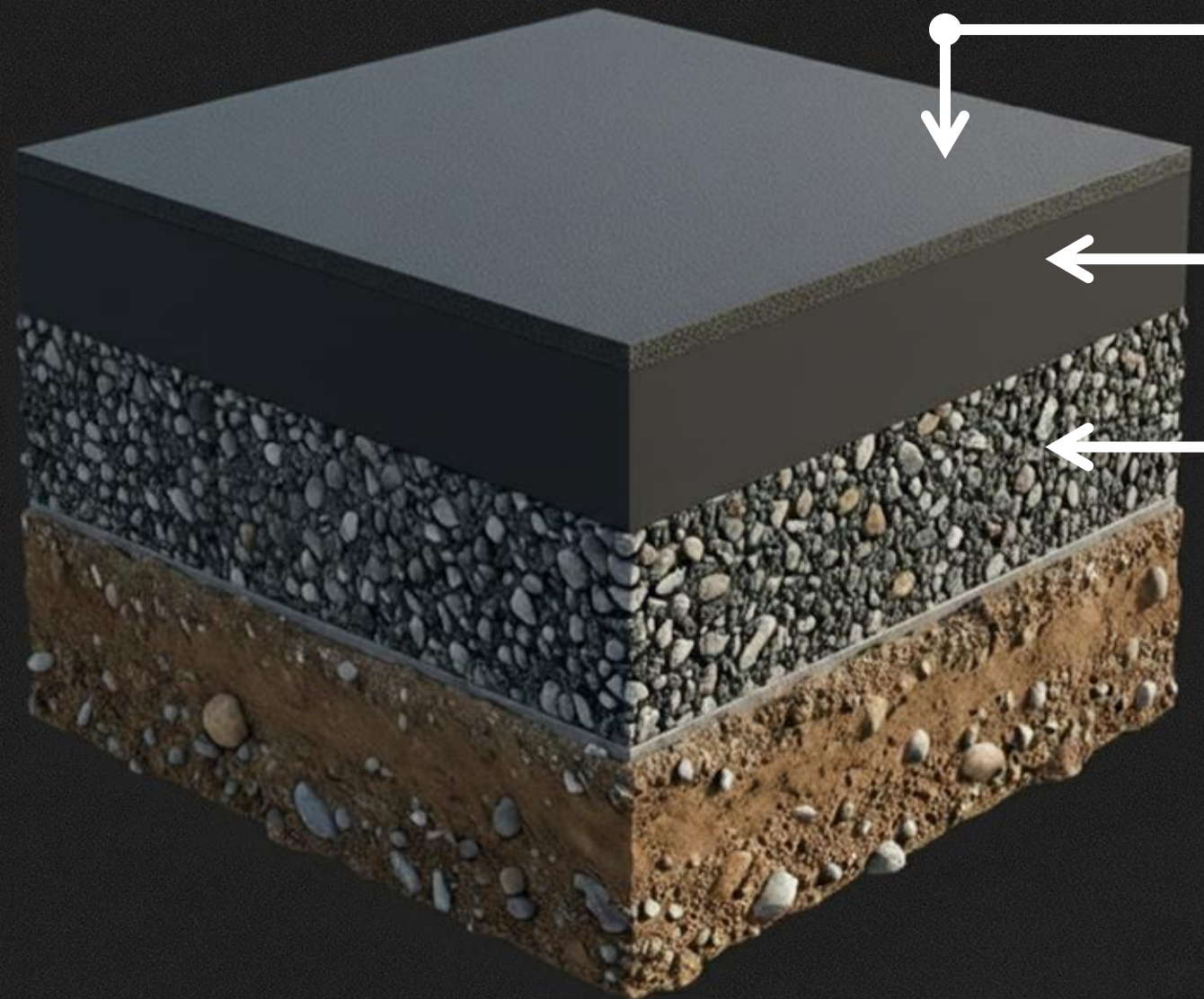
THE CONTEXT

With 94% of U.S. roads paved in asphalt, the industry demands solutions that drastically reduce life-cycle costs and enhance long-term performance.

THE GOAL

Accelerate the adoption of market-ready solutions for durability, sustainability, and resiliency.

INNOVATION AT EVERY LAYER



CATEGORY 1: ON THE ASPHALT

Surface rejuvenation, friction treatments, noise-reducing surfaces, and preservation.

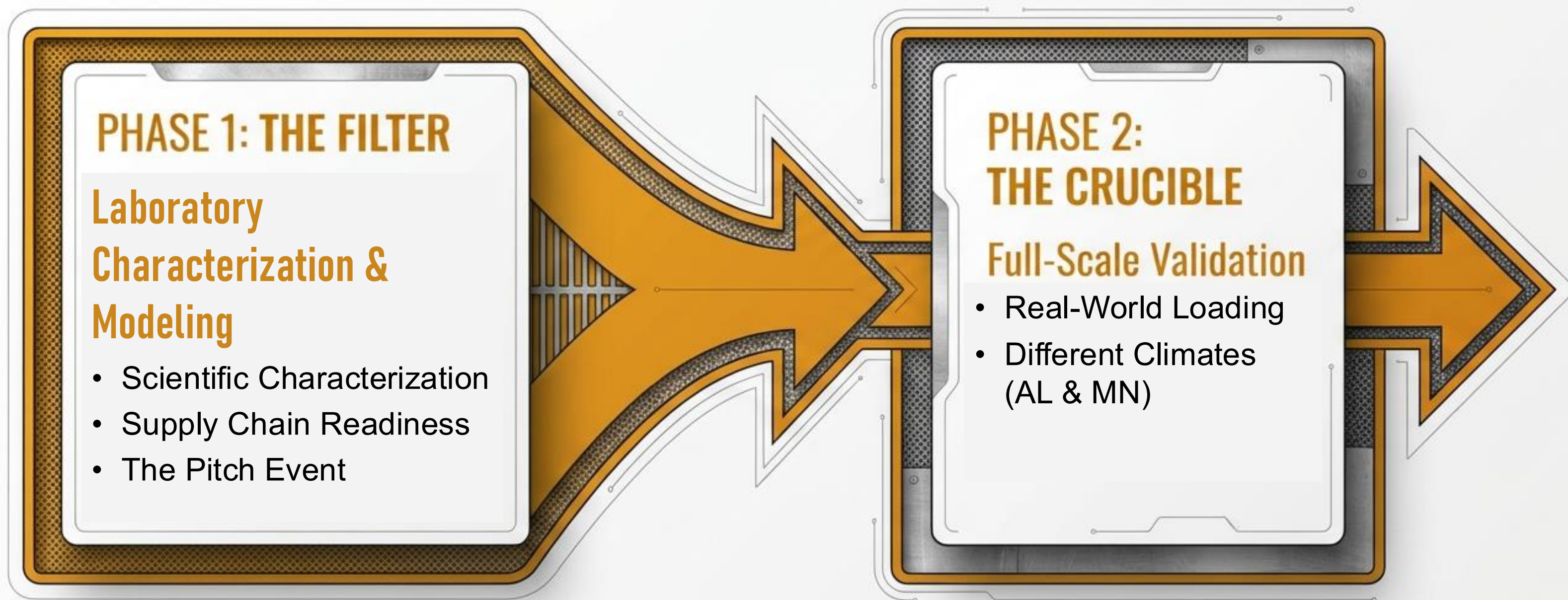
CATEGORY 2: IN THE ASPHALT

Mix additives, alternative binders, chemical additives, and recycled material facilitators.

CATEGORY 3: BELOW THE ASPHALT

Soil or base stabilization methods.

THE EVALUATION ECOSYSTEM



A rigorous, science-based pathway from the lab to full-scale national implementation.

PHASE 1: LAB, LOGIC, & SCALABILITY

The Gatekeeper Phase (\$25k Entry)



TESTING & MODELING

Laboratory characterization utilizing advanced pavement modeling (FlexPAVE™ & PerROAD).



SCALABILITY

Rigorous assessment of supply chain capacity to ensure technology can meet national infrastructure demand.



THE PITCH

Technology providers present to an independent panel of expert judges, supported by NCAT data.

Note: NDA participants are permitted for testing but cannot advance to Phase 2.

PHASE 2: THE ULTIMATE STRESS TEST



NCAT Test Track (2027)

- Accelerated Heavy Truck Loading
- Extreme Southern Heat

MnROAD Facility (2028)

- Freeze/Thaw Cycling
- Extreme Cold Weather Performance

Fully funded by a consortium of state highway agencies and private-sector sponsors seeking proven solutions.

THE PATH FORWARD



Accelerating the development of pavement systems that last longer, cost less, and serve the future.

On the
Asphalt



**Pavement
Technology, Inc.**
Real Science.
Real Results.

In the
Asphalt



Below
the
Asphalt





TECHNOLOGY INFORMATION

The following technology overview slides were provided by the individual technology developers.

Each organization is solely responsible for the accuracy and content of its slide. Inclusion in the NextPAVE Challenge does not constitute an endorsement, recommendation or validation by NCAT, Auburn University or the NextPAVE Challenge Steering Committee.



5–7 Years

Added pavement service life

50+ Years

Field performance documented

50M sq yds

Treated by CAM annually



Reclamite®

Maltene-Based Spray-on Rejuvenator

MRT

Maltene Replacement Technology

Restores asphaltene/maltene balance; penetrates up to 1" into the pavement

ROI

Maximum Life-Cycle Return on Investment

Best if applied within 1–2 years of new construction or overlay

APPLY

Sprayed like a Fog Seal

One pass, light coat of sand; traffic ~30 min

DOT

50+ Years on State & Local Roads

New pavements, state routes, county roads, city streets, chip seals & microsurfacing

DATA

Up to 63% Viscosity Drop

Springfield, MO study: 54% lower viscosity vs. untreated at 3 years post-treatment



**Pavement
Technology, Inc.**
Real Science.
Real Results.

5–10 Year

Pavement life extension

NOx & VOC

Pollutants removed

LEED & ISI

Sustainability credits

*U.S. Green Building Council & Sustainable
Infrastructure*



PlusTi™ A.R.A.-1 Ti®

Asphalt Rejuvenator / Sealer

America's First TiO₂-Enhanced Photocatalytic Rejuvenator/Sealer

MRT

Maltene Replacement Technology

Restores asphalt flexibility & extends pavement life 5–10 years

PCT

Photo Catalytic Technology

TiO₂ & sunlight remove nitrogen oxides (NOx) & volatile organic compounds (VOCs)

UHIE

Urban Heat Island Effect Mitigation

Solar-reflective surface reduces heat absorption & radiative forcing

H₂O

Stormwater & Microplastic Reduction

Super-hydrophilic surface supports stormwater management

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ePAVE is a two-component polymer modified Portland cement mortar applied to asphalt.

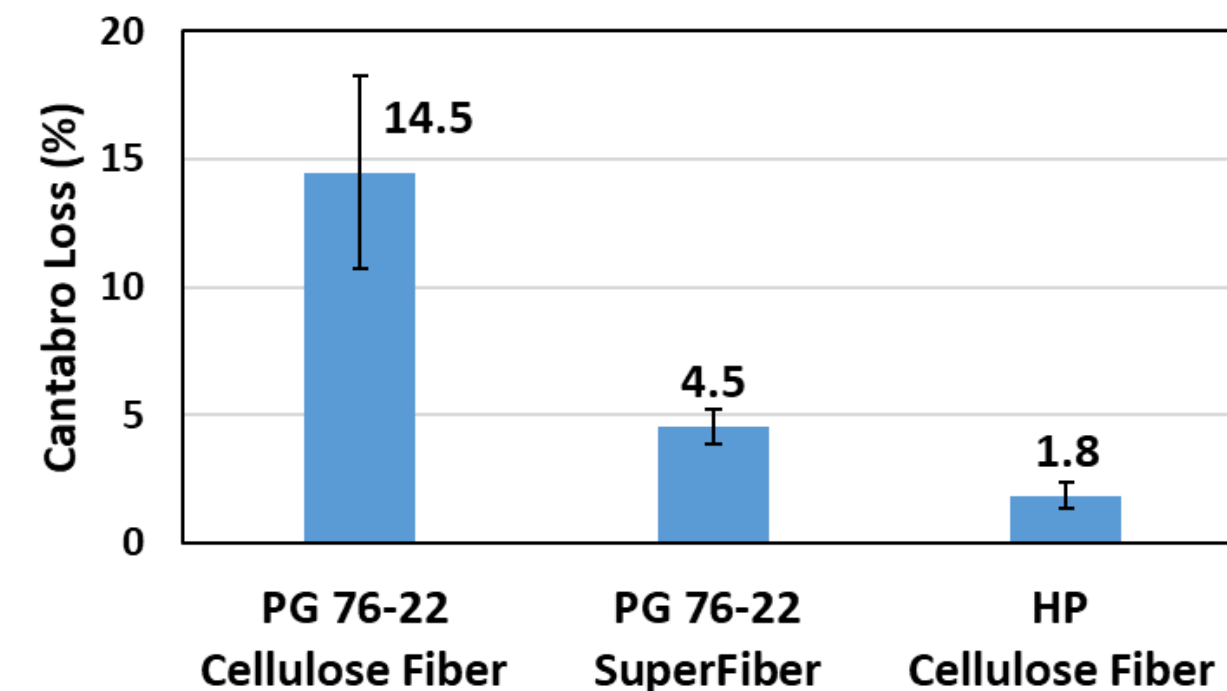
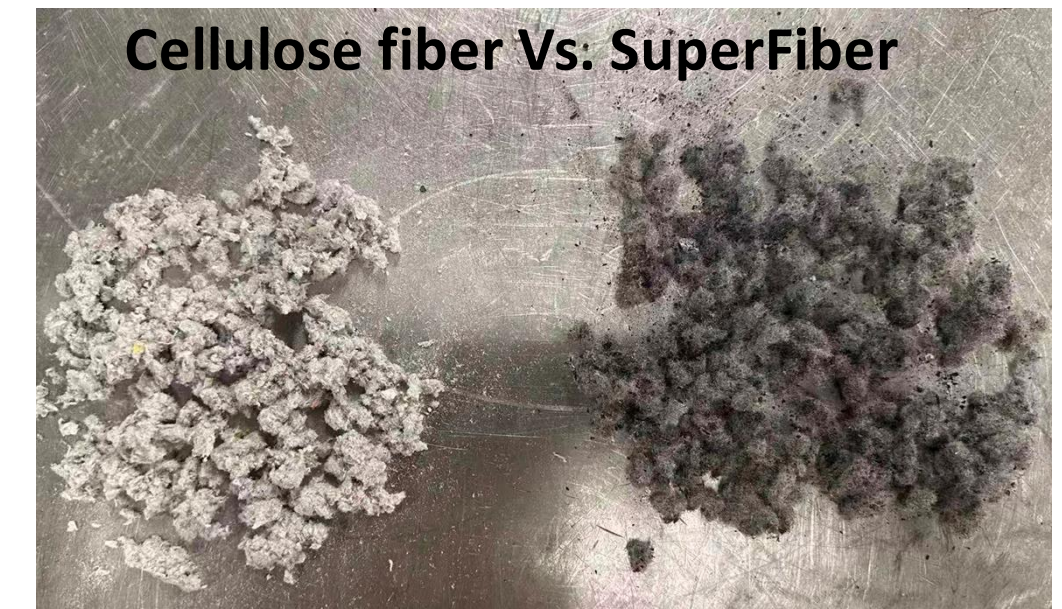
The first component is a dry ingredient powder, the second a liquid polymer emulsion resin.

- Extends pavement life while mitigating urban heat island effects
- Rapid installation
- Quick return to traffic
- Protects against UV rays, rain, snow, road salt, chemicals, fuels and lubricants

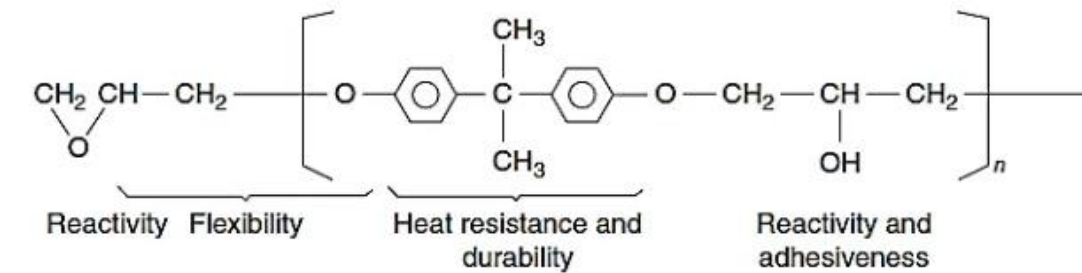


SuperFiber: A cost-effective strategy to improve OGFC Durability

- OGFC is prone to **premature failures** (i.e., raveling).
- High-polymer (HP) binder is commonly used to improve OGFC durability, increasing cost by about **\$15 per ton**.
- SuperFiber is a proprietary synthetic stabilizing fiber designed to reduce raveling, improve fatigue resistance, and increase moisture durability.
- SuperFiber dosage in OGFC mixture is **0.3%**.
- Replacing the traditional cellulose fiber with SuperFiber could increase the cost by about **\$3 per ton**.
- SuperFiber offers a cost-effective, high-performance solution for **extending OGFC service life** while maintaining excellent surface friction and drainage.



High Performance OGFC using Epoxy Asphalt Binder



- The epoxy asphalt binder includes flexible epoxy polymer (thermoset) and mixture of specialized asphalts.
- Performance advantages of epoxy asphalt binder
 - Excellent rutting and shoving resistance
 - Excellent fatigue resistance and durability
 - Superior aging resistance to oxidation aging and resiliency loss
 - Providing high strength bond to the underlying substrate
- OGFC is prone to premature failures (i.e., raveling).
- Epoxy asphalt has been used as an extremely durable binder for OGFC mixtures in New Zealand and Netherlands.
- Lab testing and field trials from the New Zealand project suggest that OGFC surface life could increase by approximately 4 to 5 times.

OGFC Project using Epoxy Asphalt in New Zealand



Low Temp HiMOD and Next-Gen HP Polymers

Ingevity's Evotherm WMA technology in combination with a new innovative Kraton SBS Polymer will enhance the performance of HiMOD, which is widely used in Utah and currently being piloted by DOTs across the nation. The HiMOD dense-graded mixture design in this study uses locally sourced aggregates and 20% RAP, designed to 1% air voids, utilizing a high performance (HP) binder (MSCR >90%R, <0.1 Jnr_{3.2}).

Objectives:

- Reduce traditional HiMOD production and laydown temperatures (> 50°F) using Evotherm WMA to minimize binder oxidation, achieve target density, and lower emissions.
- Demonstrate the new Kraton MD1199 HP Polymer, leveraging technology to reduce polymer loading and overall cost structure without a reduction in specifications or quality of the binder.
- Prove these two technologies will ensure successful production/construction and result in



— INNOVALT® Amplify —



A cost-efficient, upcycled additive that enhances the SBS polymer network



**Easy-to-Use &
Highly Compatible**



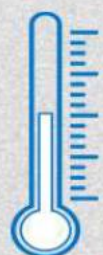
**Enhances
Performance**



**Economical &
Eco-friendly**

Sample	Neat 58-28	+1.0% Linear SBS	+1.0% SBS + 1.5% Amplify
MSCR @ 64°C (T350)	Failed	Failed	V
% Recovery 3.2 kPa (T350)	0.0	3.7	44.7
Separation (D7173)	N/A	Passing	Passing

% RECOVERY
✓
**12x
HIGHER!**



Blending Temp:
163 - 180 °C



Form:
Solid, granular

LONGER LASTING ROADS • COST SAVINGS

Genable™ Pavement: Wet Addition

Graphene-enhanced asphalt modifier engineered to improve road durability and extend pavement service life.

Dry addition validated

HMA plant + NCAT / field trials

**Wet addition launched**

Blend into binder at terminal

Product benefits

**Terminal-ready adoption**

Added into liquid binder at the bitumen terminal using standard mixing equipment.

**Balanced durability performance**

Improves rutting, fatigue cracking, stripping, and low-temperature durability.

**Superior economics**

Economic advantage due to the reduced dosage rate vs. SBS (Target Range: 2–2.5% Genable™) and no cross-linker

**Sustainability + Aging**

Improved aging and weathering resistance leading to longer-life pavement potential.



Universal Matter Inc.'s polyhedral graphene with advanced polymers creates a high-performance additive designed to outperform conventional modifiers.

**Dry-addition proof point**

+7M ESALs applied • minimal rutting • no cracking • steady IRI • improved aging & weathering resistance

Now scaling into a terminal-additive wet application.

HIGH POLYMER PAVEMENT INNOVATION WITH HIGH ELASTICITY ELVALOY™ COPOLYMERS



A reactive elastomeric terpolymer designed to enhance binder performance and enable more durable, high-performance pavements



Novel high-elasticity resin designed for HP binder specifications



Low dosage (2–4 wt%) required to meet high polymer (HP) specifications



Up to 4 PG grade bumps



Faster processing that boosts production throughput



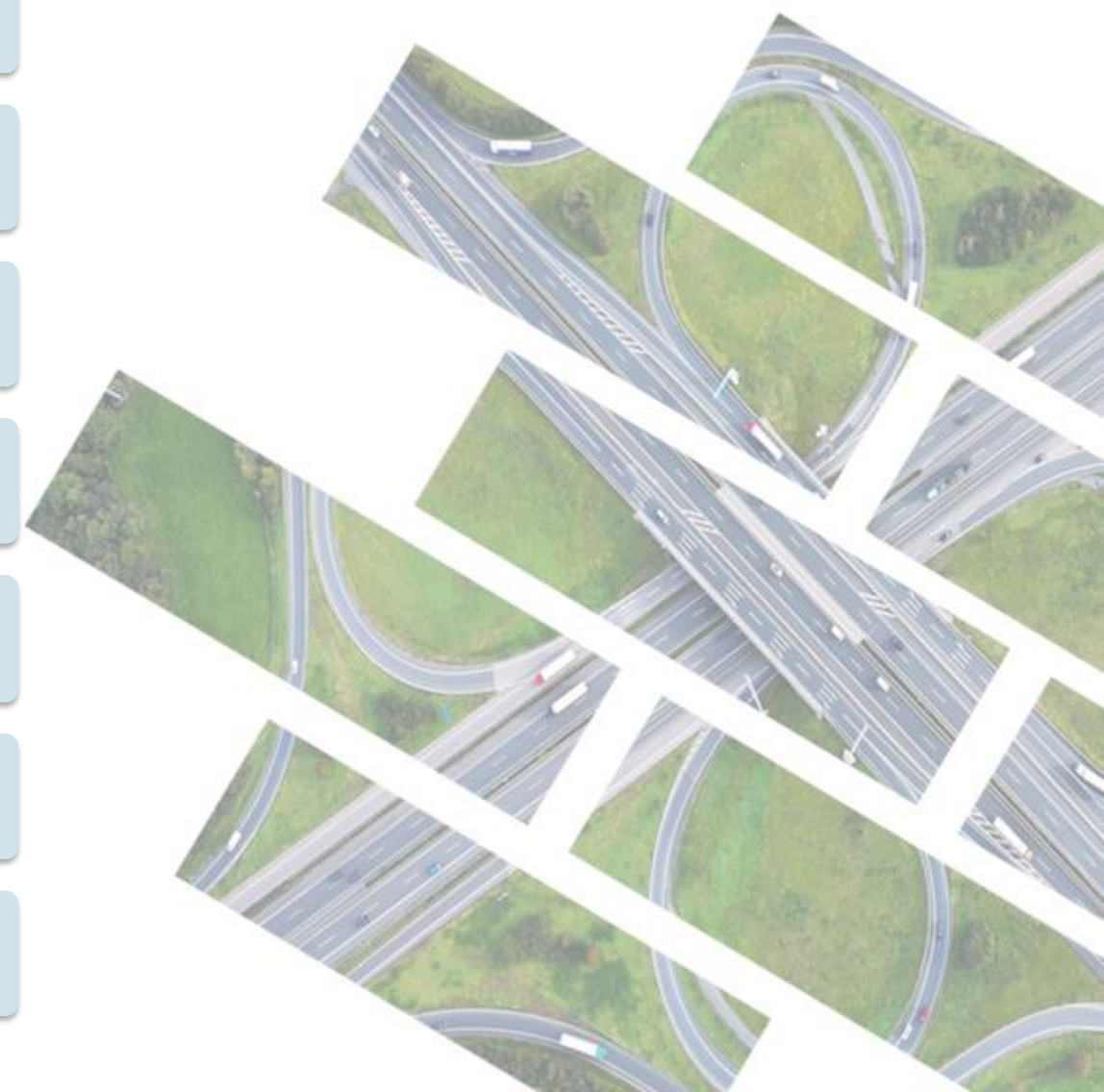
Permanent chemical bond with binder enabling long-term storage stability



Meets viscosity targets for reliable field workability



Domestic manufacturing supports Buy America alignment and reduces supply chain risk



High Elasticity ELVALOY™ Copolymers + rPE Modified Binder Targeting HP Binder Performance

Driven Plastics + Dow

Combines High Elasticity ELVALOY™ Copolymers from Dow with post-consumer recycled polyethylene (rPE) processed by Driven Plastics to develop a modified asphalt binder targeting High Polymer (HP) binder performance from a neat base binder.

NCAT will evaluate the system in a RAP and high-polymer mix design with increased asphalt content and lower design air voids, compared against NCAT's conventional HP binder benchmark.

Value to DOTs and Industry

- Creates a high-value reuse pathway for hard-to-recycle rPE
- Targets HP binder performance in a controlled modified binder system
- Supports rutting, fatigue cracking, and long-term aging performance
- Supports Buy America alignment and reduces supply chain risk



rPE material by Driven Plastics

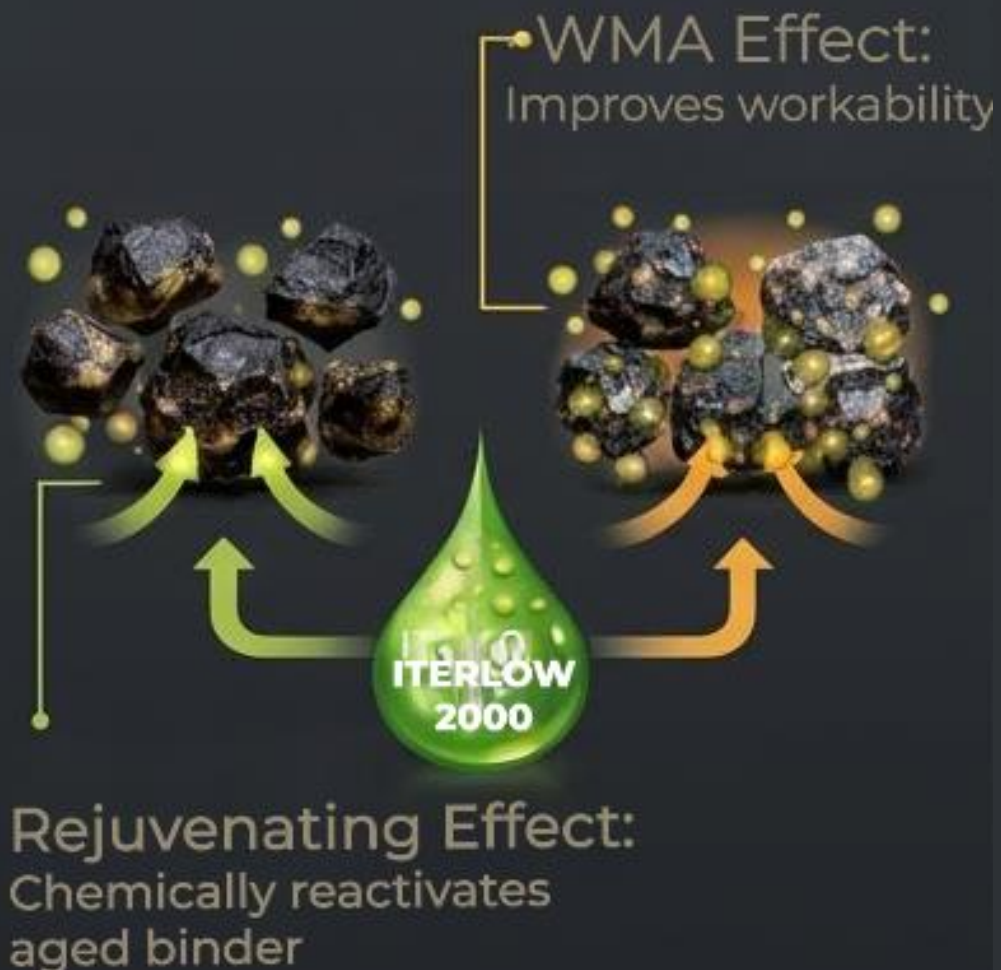




ITERLOW 2000: The Two-in-One Solution for Sustainable Pavements

Advanced bio-based chemical technology trusted across 5,000+ miles of laid asphalt.

Dual-Action Mechanism



Dosage: 0.2% – 2.0%
(by binder weight)

Lab Test Results

WMA Technology (WMA vs. HMA)

-35°F	-15°F	+7.5%
Reduction in Mixing Temperature, from 310°F to 275°F	Reduction in Compaction Temperature, from 290°F to 275°F	Increase In TSR, from 75.0 to 82.5%

Rejuvenation (HMA vs. HMA+45% RAP+ITERLOW)

+20.3	+0.9	Restored PG Grade
N_f Cycles increased from 225 to 245.3 (Tex 248-F)	CT_{Index} Increased from 14.6 to 15.5	After 2 PAV cycles

Field Project in the U.S.



Application

1.5-inch surface lift

Binder

PG 70-22

Dosage

0.5% by binder
weight

Temperatures

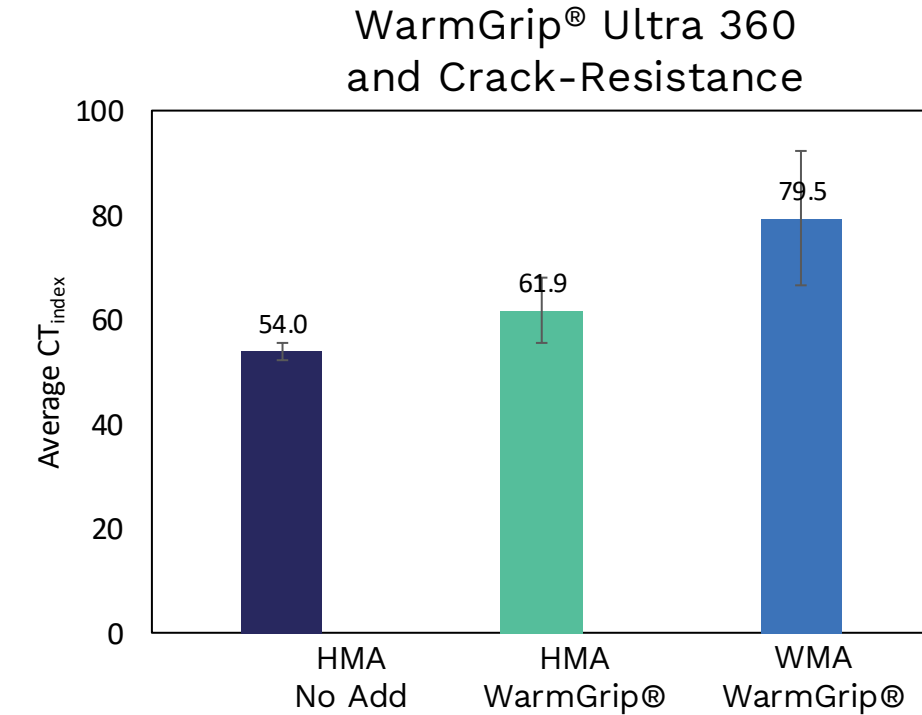
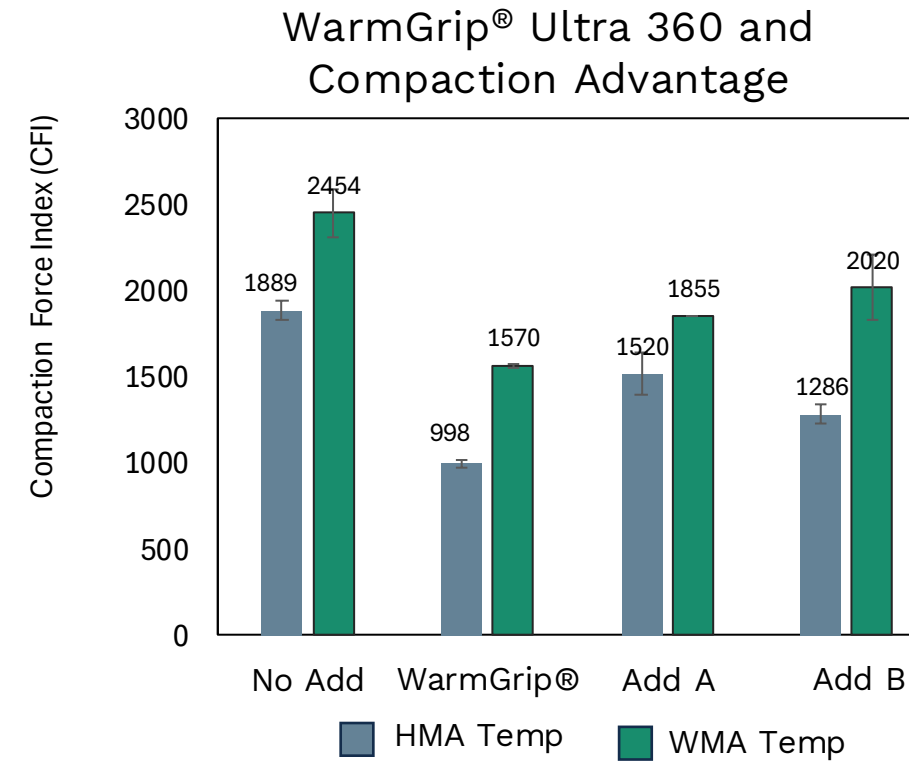
284±9°F Production
248±5°F Compaction

WarmGrip® Ultra 360

WARM MIX ADDITIVE – BALANCED PERFORMANCE

○ WarmGrip® Ultra 360 offering balanced mix performance:

- Excellent anti-stripping performance
 - NTPEP / PEAS published data
- Improved RAP incorporation
- Reduced compactive effort at WMA temp.
- Geared to support BMD adoption and improving crack-resistant performance



○ True warm mix performance:

- Capable of true warm mix
 - Maintains workability in the mix
 - Incorporates high RAP % (40+%)
- Improves EPDs / blue smoke elimination
 - Immediate effect at lower temp production



HMA produced (340°F)



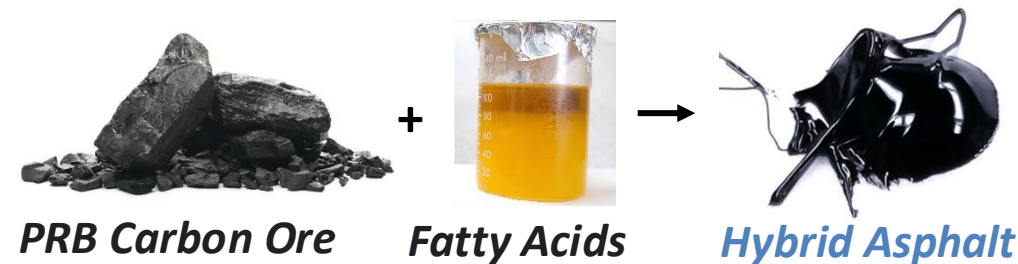
WMA produced (320°F)
WarmGrip® Ultra 360



WMA produced (280°F)
WarmGrip® Ultra 360

THE PRODUCT

A petroleum-free paving binder from Wyoming PRB coal, solvent-extracted and chemically reacted with renewable fatty acids. A true chemical bond— not a physical blend.



PRODUCTION FLOW

Solvent Extraction → Filtration → Distillation → Fatty Acid Reaction → Formulation

BENEFITS & LAB EXPERIENCE

Potential Benefits

\$ Estimated binder cost will be at the upper end of current asphalt binder prices

New non-petroleum feedstock

5-6x lower upstream CO_{2e}

Binder-Level Lab Experience

- 🧪 ~30 lbs produced 2023 continuous pilot plant run — UWSER, Laramie, WY
- 🧪 ~New large continuous pilot plant built 2024-2026 – UWSER, Laramie, WY
- 🧪 ~30 lb batches produced in 2024-2025 at WRI, Laramie, WY
- 🧪 **Rheology comparable** WRI tests showed results comparable to petroleum asphalt: PG 52-40 up to PG 76-16 have been produced

SUPPLY CHAIN OUTLOOK



- ☐ Mature rail network
- ☐ 23.1B tons recoverable PRB coal
 - ☐ >900 yrs of US asphalt supply
- ☐ ~\$13–15/ton feedstock cost

Scale-Up Roadmap

CURRENT – PILOT PLANT

Scaled pilot (22 lb coal/hr) - Laramie, WY

2027 – DEMO PLANT

\$17M demo plant, 900 lb coal/hr, 24 hr/5-day – Gillette, WY

2028+ – COMMERCIAL

30k tons coal/day



Trafigura

CarbonBind®

THE PRODUCT

ORIGIN

Oil produced from agricultural plant waste that would otherwise be burned for energy.

PROCESS

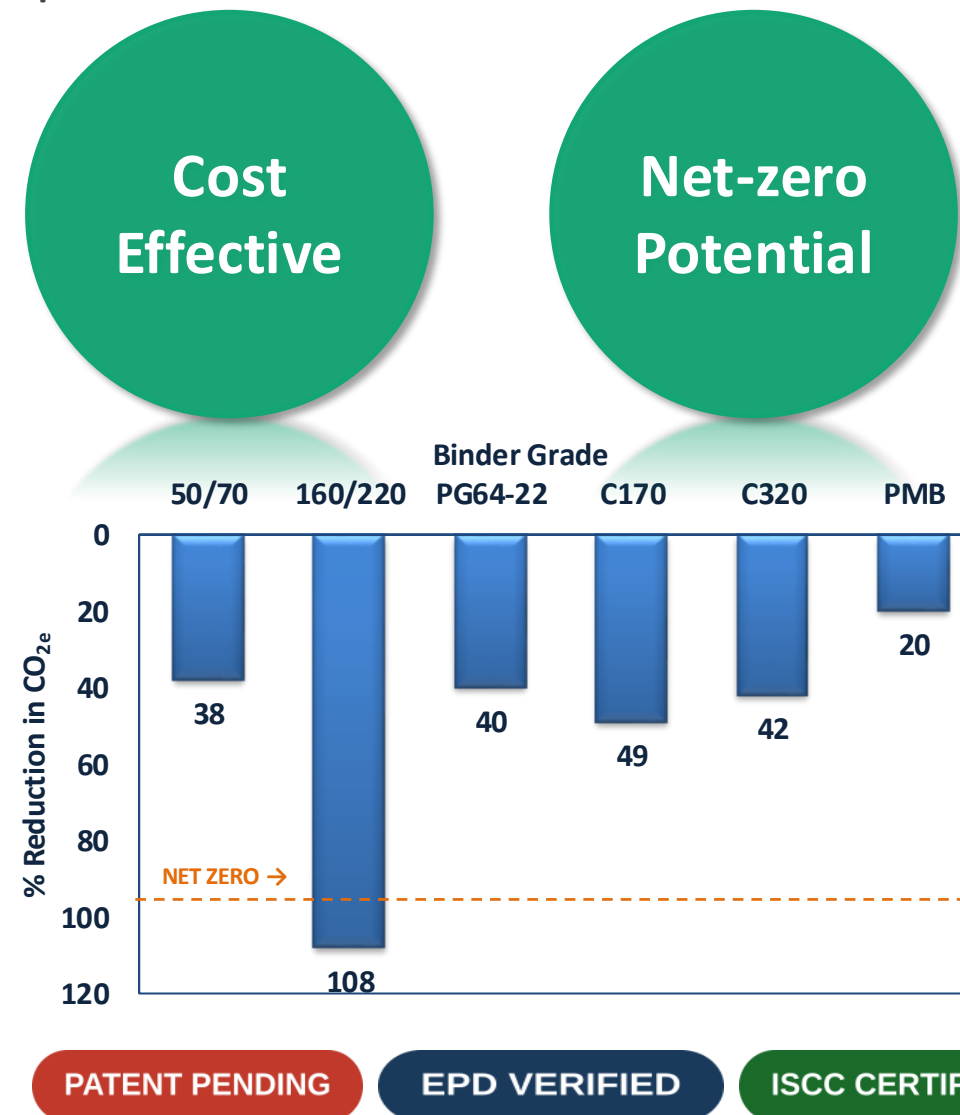
Proprietary chemical modification: extensive polymerization & cross-linking → viscosity increased by orders of magnitude → blended with conventional bitumen at Puma terminals.

THE ROAD

Finished binder meets AASHTO M320 / M332. Drop-in compatible — no changes to mix design, production, or paving.

POTENTIAL BENEFITS

CarbonBind® products are formulated to comply with typical Australian, European and US paving grade bitumen and polymer modified binder specifications.



FIELD TRIALS

- 2021–22 Lab R&D complete; full-scale plant trials
- DEC 2022 First PMB demonstrations — Australia
- OCT 2023 Paving grade demo — Wiltshire, UK
- NOV 2023 AfPA National Innovation Award
- MAY 2024 Western Sydney International Airport
- DEC 2024 First hard paving grade demonstrations

SUPPLY CHAIN

Feedstock

- Agricultural waste oils
- Does not compete with food production
- ~10× supply vs. tall oil pitch

PRODUCTION

- Puma terminals worldwide
- Integrated Trafigura network in US

DELIVERY

- Finished binder to spec
- No plant changes needed
- Available at US scale now

Cargill Anova[®] Biosync[™] Biobinder

THE PRODUCT

ORIGIN

Agriculturally sourced bio-based raw materials from renewable feedstocks, regrown every year. Not fossil-derived.

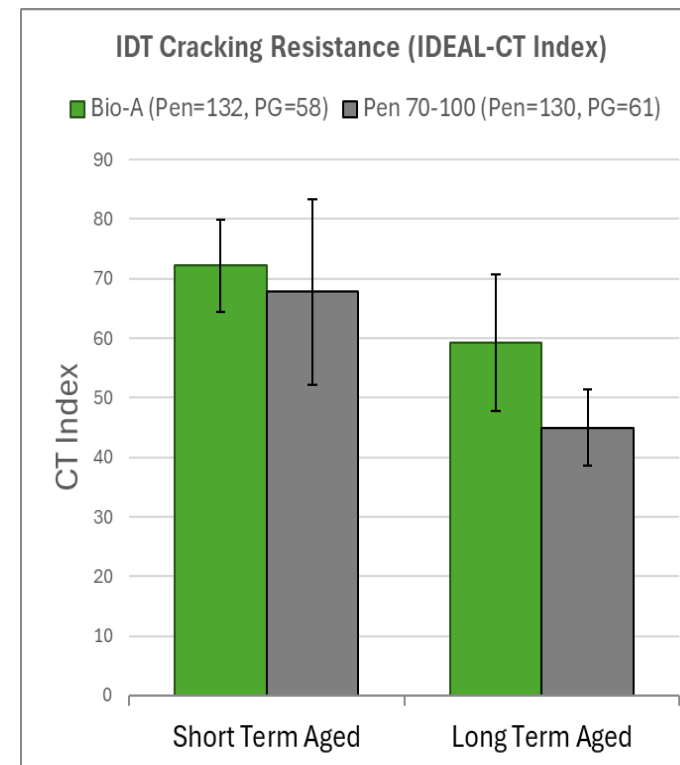
PROCESS

Purpose-built formulation from Cargill's bio industrial expertise. Blends directly into bitumen at 10 to 30% by weight via low-shear mixing.



POTENTIAL BENEFITS

- ❑ Enables >40% RAP content in mixes
- ❑ Negative overall GWP - verified EPD available
- ❑ Balanced cracking, rutting & moisture resistance
- ❑ Biogenic carbon locks CO₂ from atmosphere



- Pen 40/60 (PG64-22) + 10% bio content: final grade (Pen 70/100 or PG58-28)
- Control Pen 70/100 (PG58-28) - Similar grade to the biobinder

SUPPLY CHAIN OUTLOOK

FEEDSTOCK

- Agricultural biobased sources
 - Regrown at least annually
- Industrial grade product
- Supply stability

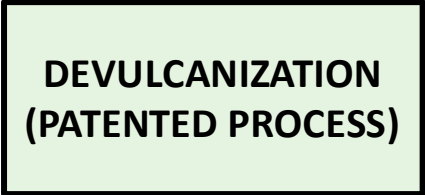
PRODUCTION

- Cargill Bio-Industrial facilities
 - Global footprint
- Blended at bitumen suppliers, depots, or plant
- Blends at ~150°C with low-shear mixing

DELIVERY

- No special long-term storage requirements
- Drop-in: no plant modifications required
- Pumpable once heated to ~100°C+

Advanced Polymer-Modified Binder using Devulcanized Rubber Asphalt Modifier (DVR-AM™)

PROCESS	PRODUCT	BENEFITS
 WHOLE TRUCK TIRES ONLY Closely monitor feedstock to ensure consistently manufactured DVR-AM™  CRUMB RUBBER  PERFORMANCE ADDITIVES  DEVULCANIZATION (PATENTED PROCESS)  DVR-AM™	➤ DVR-AM™ is a polymer replacement for polymer-modified asphalt binder production ➤ SBS-equivalent or better binder properties ➤ Very good storage stability ➤ Improved CT Index via BMD ➤ Patented process ➤ Ability to engineer product based on customer target specification and/or requirements	➤ Price competitive ➤ Improved performance ➤ Large CO₂e offset – e.g., DVR-AM™ equivalent system to 3.5% SBS polymer-modified asphalt binder shows 76% reduction in CO₂e ➤ Energy savings (less mixing time compared to SBS) ➤ Pelletized form allows for drop-in using existing SBS equipment ➤ Achieve sustainability and ESG goals



RaC

Rubberized-Aerogel Composite

WHAT IT IS & WHY

A next-generation composite that boosts asphalt-pavement performance, resilience and sustainability — countering asphalt's core weakness, thermal susceptibility (less deformation and cracking), with superior insulation and durability across climates.

Dosing dry-added at the plant (RAP collar or feeder), 12–20 lb/ton (~10–18% of binder)

Making Smart Infrastructure with RaC

WHY RaC FOR PAVEMENTS

- **Reduces permanent deformation (rutting)** across all structural and climatic scenarios.
- **Substantially lowers thermal cracking** increasing service life above 50%
- **Improves fatigue resistance** and decreases lane-cracking percentage.

Three priorities: performance enhancement · waste valorization · reduced environmental footprint.

RaC ATTRIBUTES

Particle size	0.1 – 3 mm (pellets up to 10mm)
Surface chemistry	Hydrophobic
Bulk density	0.32 – 0.60 g/cm ³
Color	Dark grey
Operating temperature	up to 250 °C



PROVEN IN THE FIELD

- 2021** Kaiteki — 50-ton sections, SW Fisher Industries plant
- 2024** VESTAR — 420-ton parking-lot retrofit, Queen Creek AZ
- 2025** Arizona DOT — 1,000 tons, US-60 lane-mile, Show Low AZ
- 2026** City of Phoenix & City of Mesa pilots (Jul–Sep)

★ **Recognition:** RAR 2025 — Best Innovation, Lisbon **Contact:** aCT@actinc-us.com

Converting recycled asphalt shingles (RAS) into usable binder with renewable fatty amines.

Patented method for modulating and processing “end of life (OR out of service)” petroleum-based hydrocarbons into new asphalt paving and roofing binders.



US patent 12,076,663

Renu MAT
Western Research
INSTITUTE

Western Research
INSTITUTE

Renewable Upcycling Materials and Asphalt Technologies (RenuMAT)

TRANSFORMING ASPHALT SHINGLE WASTE



INTO A HIGHLY MODIFIED BINDER REPLACEMENT



PERFORMANCE

- Softens hardened, oxidized asphalt to improve PG grade
- Improves crack-resistance, significantly reduces rutting
- Meets quality standards for durable HMA applications

EASE OF USE

- Handles and stores long-term like RAP without degradation
- Seamless integration into HMA feeds, no special equipment
- Stable pellet form eliminates re-agglomeration issues

WORKER SAFETY

- Pellets are safe to handle
- Eliminates airborne fiberglass fibers on job site

SUSTAINABILITY

- Stable recycle market allow for stabilized supply chain
- Significantly reduces need for virgin asphalt binder

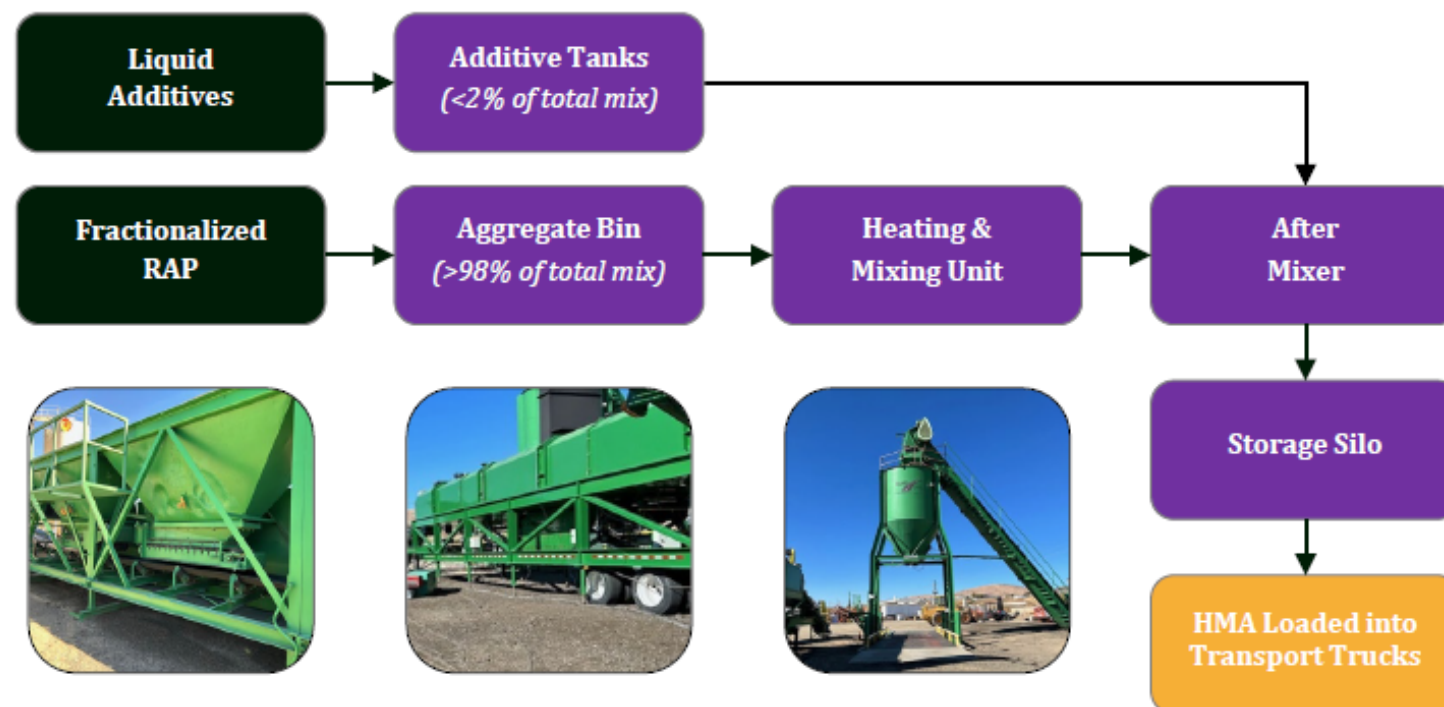
NAFCO – 100% RAP HMA Product



Opportunity Overview

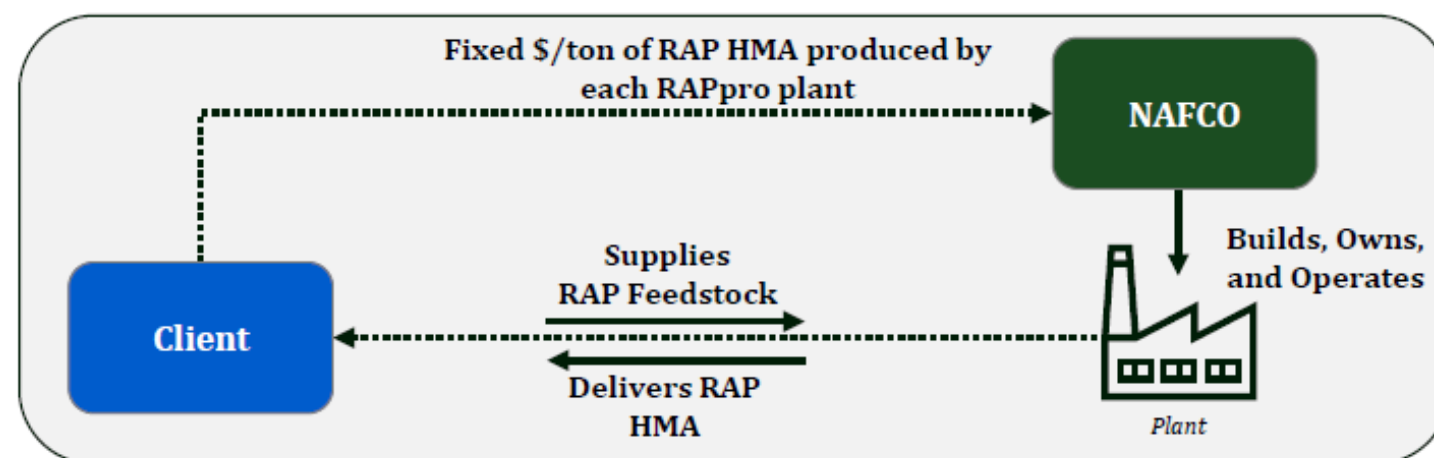
- NAFCO builds, owns, and operates HMA plants utilizing 100% RAP as aggregate feedstock.
- NAFCO's proprietary process and materials rejuvenate asphalt cement and maximize the utility of RAP, creating HMA with comparable performance to virgin HMA (as measured by IDEAL-CT and HWTT) at a significantly lower marginal cost.
- Plants consume no virgin aggregates and are agnostic to proximity to natural resources – a perfect fit for remote locations or temporary deployments near RAP stockpiles.
- Plants utilize recycled materials and proprietary technology for better margins and ~60% lower emissions.
- NAFCO will deploy operating hot mix plants in 6 - 9 months at no capital cost to clients, enabling clients to offer a 100% RAP HMA product with superlative performance metrics.

Technology



NAFCO's Role

- NAFCO partners with asphalt producers and pavers, providing RAP HMA production under a tolling-style service contract.
 - Clients and NAFCO work together to set product performance specifications for base and surface course.
 - NAFCO performs mix design lab work to establish necessary feedstock specifications required for consistent mix performance.
 - NAFCO provides capital to construct plants that will produce 100% RAP HMA for clients to sell into the market.
 - Clients provide RAP feedstock and crushing services to create reliable feedstock supply.
- Plants are configurable for throughputs between 80 - 200 tons per hour, with lead times of 6 - 9 months from contract execution.



New Rubber Technologies' ReviveRite™ Asphalt Modifiers



Introduction and Overview

ReviveRite™ asphalt modifiers are designed as a complete or partial substitute for linear or radial SBS in the binder portion of an asphalt mix. While derived from end-of-life tires, these materials differ substantially from GTR in chemical structure and as a result in technical and processing performance.

- ReviveRite™ has been formulated to improve AASHTO and PG grades at lower cost
- Provides similar physical property and processability characteristics as compared to SBS
- Exhibits weatherability and environmental advantages
- Paving applications are terminally blended

ReviveRite™ asphalt modifiers have been commercially deployed in road projects in the Midwestern United States. While quantifiable performance results are not yet available, third-party terminal, contractor and customer agency observations all indicate positive results to-date over multiple year installations.



Illustrative Formulations

Illustrative Formulation 1:

Base binder: Seneca Petroleum 58-28
Polymers: ReviveRite™ 5% and LCY3501 2%
Resulting binder grades: PG 70-28 (AASHTO M320) and MSCR 58E-28 (AASHTO M332)
Lab: Asphalt Testing Laboratory

Illustrative Formulation 2:

Base binder: Marathon Refining 67-22
Polymers: ReviveRite™ 4% and LCY3501 1.6%
Resulting binder grades: PG 76-22 (AASHTO M320)
Lab: Asphalt Testing Laboratory

Illustrative Formulation 3:

Base binder: Marathon Refining 64-22
Polymers: ReviveRite™ 10% and Zero SBS
Resulting binder grade: PG 76-22 (AASHTO M320) and True Grade 81.2-24.1 (AASHTO M320)
Lab: Asphalt Paving and Recycling Technologies (APART)

Product Overview & Performance Benefits

Organosilane-based technology that creates a **hydrophobic** soil matrix, **reducing moisture** ingress through capillary action.

Easily diluted with water and applied during compaction or as a surface treatment.



- ✓ Permanent Water Resistance
- ✓ Eliminates Capillary Rise
- ✓ Prevents Freeze Thaw
- ✓ Reduces Expansivity
- ✓ Improves Compaction Density
- ✓ Improves Load Bearing Capacity
- ✓ Water Dilutable & Easy to Apply
- ✓ Non Leaching
- ✓ Environmentally Friendly

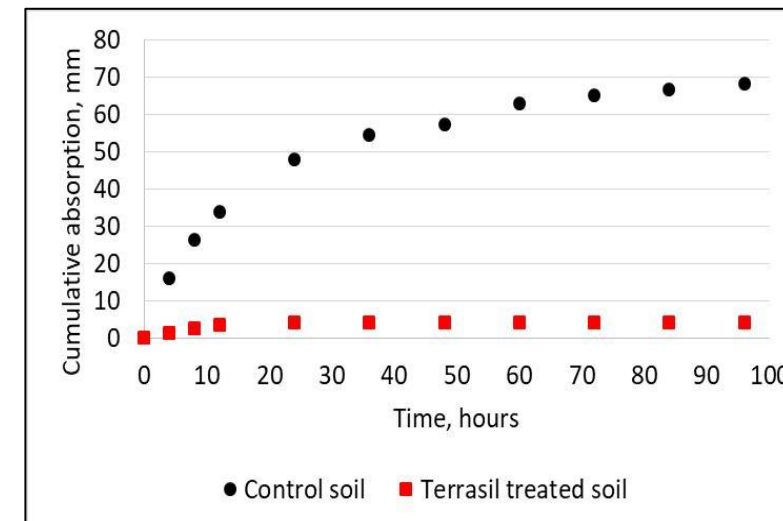
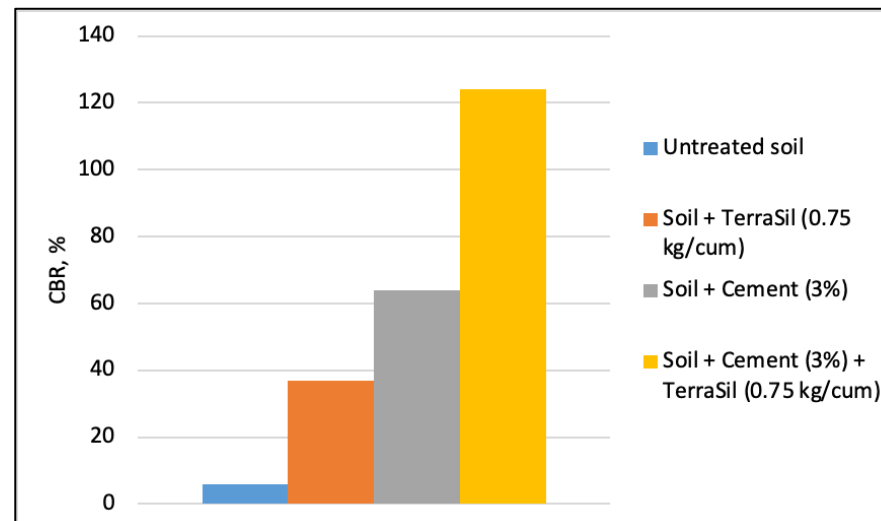
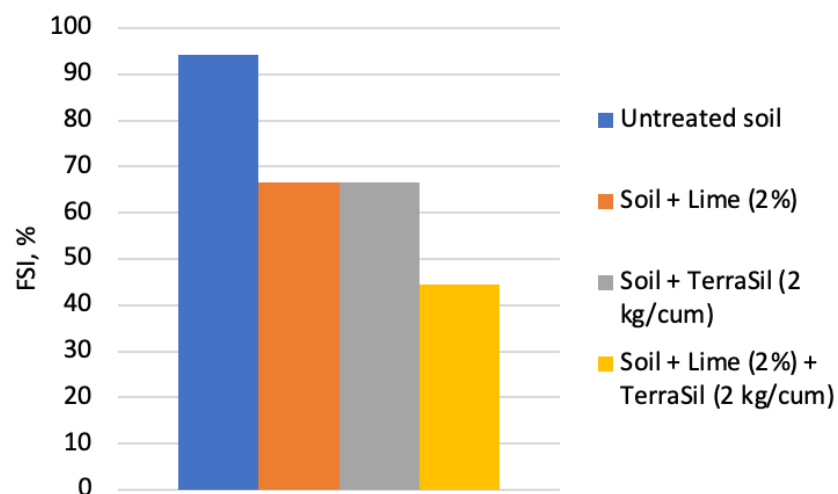
Importance to DOTs

Enhances water resistance and helps keep subgrade and base layers dry

Improves long-term performance and **extends** pavement service life

Complements and is fully compatible with traditional stabilizers

Potentially reduces swelling of expansive soils while lowering content of stabilizing agent (e.g. lime)



Control soil Treated soil



Tensar HX-AE

Tensar's most advanced high performing asphalt interlayer product



- A composite, comprising a stiff high-profile 3D multiaxial grid thermally-bonded to a non-woven paving fabric, providing three interlayer functions:
 - reinforcement,
 - stress absorption (SAMI),
 - interlayer barrier (waterproofing), once saturated with asphalt during installation.
- Enhance fatigue performance, increasing the life of reconstructed pavements or reducing asphalt layer thickness in new pavements.
- Designed to provide optimal performance for controlling reflective cracking in asphalt overlays and longitudinal cracking during longitudinal cracking in road widening.



US-36, Nemaha Co., KS – Year 9



Spray Paver – 0.34 gal/yd²



Conventional Paving - .05 gal/yd²

Performance Highlights

-  Improved bond between layers enhances cracking and rutting performance
-  Tack rate increased ~4-6x
-  Significant crack reduction during service life
-  Minimal cost increase (~3%) adds 3+ years of service life

4-6x

Tack rate increase

~3%

Minimal cost increase

3+ years

Additional service life



FLEXIBLE REFLECTIVE CRACK RELIEF INTERLAYER

ARMI™ is a 1-inch-thick Flexible Reflective Crack Relief Interlayer (FRCRI) — plant made, paver laid using locally sourced ACE XP™ aramid fiber. It stops bottom-up reflective cracking and is placed directly over deteriorated asphalt or concrete.

TEST-VERIFIED PERFORMANCE

- 2,000 $\mu\epsilon$ → 40,000+ cycles
Fatigue cycle range, lab tested
- 700 IDEAL-CT
at 7% air voids
- HWT Compliant
Qualified paving platform
- Same-Day Pave-Over
Fast return to service
- Razor-Edge, Local Materials
Field-friendly placement



7x

Crack resistance improvement

Up to 50%

Pavement life extension

1 inch

FRCRI layer thickness

0.67 kg

CO₂ / US mix ton (EPD)

PERFORMANCE

- Stops bottom-up reflective cracking
- Works over asphalt or concrete
- Restores ride quality & life

EASE OF ADOPTION

- Plant made, paver laid
- Locally sourced materials
- No third-party contractors

SUSTAINABILITY

- Fully recyclable pavement
- EPD-certified low carbon
- ESG reporting compliant

COST SAVINGS

- Lower cost vs. FDR / R&R
- No third-party contractor cost
- Reduced long-term maintenance