

Taking recycling of reclaimed asphalt to the next level with **SYLVAROAD™ RP1000 Performance Additive**





Enhanced PROFITABILITY

SYLVAROAD™ RP1000 Performance Additive has been designed to fully restore the binder properties of reclaimed asphalt: when it is added to the reclaimed asphalt, the aged binder is fully mobilized and can be 100% credited toward the final binder content of the mix.

The product enables reclaimed asphalt to be reused in top-layers. The material maintains strong performance over time, even in cold weather conditions.

SYLVAROAD™ RP1000 Performance Additive enables better use of the asset value of the existing road system. Using high percentages of reclaimed asphalt enables significant cost savings due to a reduced need for new materials and potential disposal fees, while increasing the lifetime of the road.

 Pine chemicals footprint
 Pine chemicals substitutes*



For a better PLANET

SYLVAROAD™ RP1000 Performance Additive makes road construction more sustainable by enabling high reuse of reclaimed asphalt instead of simply recycling it. This reduces the use of virgin materials.

The product does not release any harmful components during production and application. It enables a lower drying temperature in the drum, which leads to lower energy consumption and reduces the CO₂ footprint of the pavement.

SYLVAROAD™ RP1000 Performance Additive is bio-based and made of renewable raw materials. It is non-hazardous, safe to handle and environmentally friendly. The additive is a non-labeled product under REACH registration.

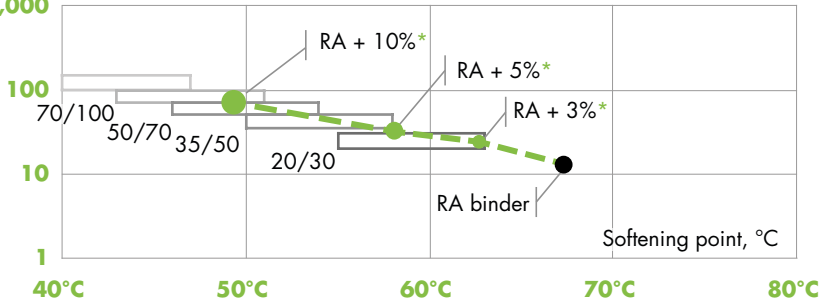
*Pine Chemical Substitutes = weighted average

Optimal asphalt mix PERFORMANCE

Less than a kilogram of SYLVAROAD™ RP1000 Performance Additive is needed per ton of asphalt to restore the original properties and meet the most challenging pavement requirements for rutting and cracking. The water sensitivity is restored to the level of a new mix. This is particularly relevant for wearing courses.

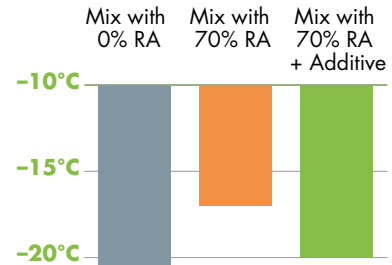
Penetration at 25°C, 0.1 mm
1,000

Impact on viscosity of the product added to the aged binder



* % additive dosage calculated on the aged binder of the asphalt mix

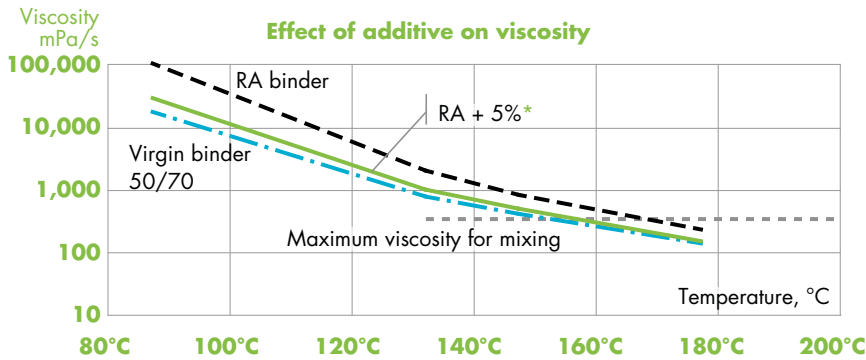
Low temperature behavior (EN 12697-46)



The additive improves the low-temperature performance of mixes in surface layers without compromising high-temperature performance. The product recovers the fatigue resistance for base layers while maintaining an adequate modulus. It upgrades the old binder toward the required bitumen grade and remains active in the mix, which ensures optimal asphalt mix performance.

Improved PROCESS EFFICIENCY

The mixing process in the asphalt plant is optimized by matching the viscosity of aged and added virgin binder.

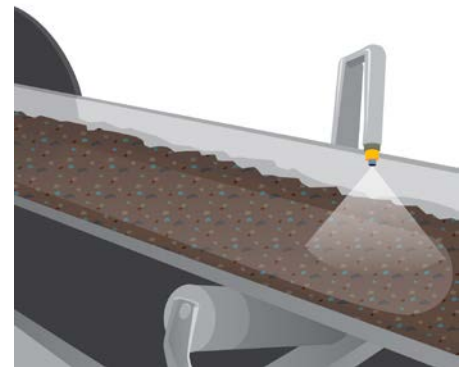


* % additive dosage calculated on the aged binder of the asphalt mix

SYLVAROAD™ RP1000 Performance Additive has been developed to obtain the required bitumen quality when added directly to the reclaimed asphalt. The product is easy to handle, store, and process. It improves production capacity and efficiency as there is less clogging and sticking of high-viscosity bitumen throughout the plant process.

The additive is thermally stable, even at elevated temperatures. This makes it easier to add the product to reclaimed asphalt before it enters the heating drum, which optimizes production time and provides more efficient mixing. SYLVAROAD™ RP1000 Performance Additive can also be added in the pug-mill or directly into the new binder. It is also compatible with warm-mix technologies and anti-stripping agents.

All of this makes the mix optimal for high-quality asphalt that will perform over the lifetime of the road.



Easy application and PAVING PROCESS

SYLVAROAD™ RP1000 Performance Additive considerably improves processability at the mix plant and on the job site – users have praised the product for its good workability. The required degree of compaction can also be obtained at lower temperatures.

“According to our evaluation, SYLVAROAD™ RP1000 Performance Additive fully restores the flexibility of the mix especially with regards to the cracking susceptibility at low temperature.”

– Professor M. Wistuba, head of Braunschweig University's Pavement Engineering Centre, Germany

“Because of the new production method and the use of the bio-based rejuvenation product, SYLVAROAD™ RP1000 Performance Additive, the properties are fully equivalent to ordinary asphalt.”

– KWS Infra, in response to the 100% recycled asphalt project in Rotterdam, the Netherlands



 SYLVAROAD™ RP1000 Performance Additive reference projects

 Manufacturing Plants

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