



# Stay on Track

Hybit<sup>®</sup>

the modern additive for asphalt mixes

[www.hywax.com](http://www.hywax.com)

# Hybit® is a synthetic hard wax, free from sulphur and other impurities

The use of Hybit® takes the asphalt applications to the next, new level. It can be used as an additive in many different asphalt mixtures which have a broad application band. From the lightest sidewalks to cargo runways.

Increase the performance while decreasing the price!

## Why Hybit®?

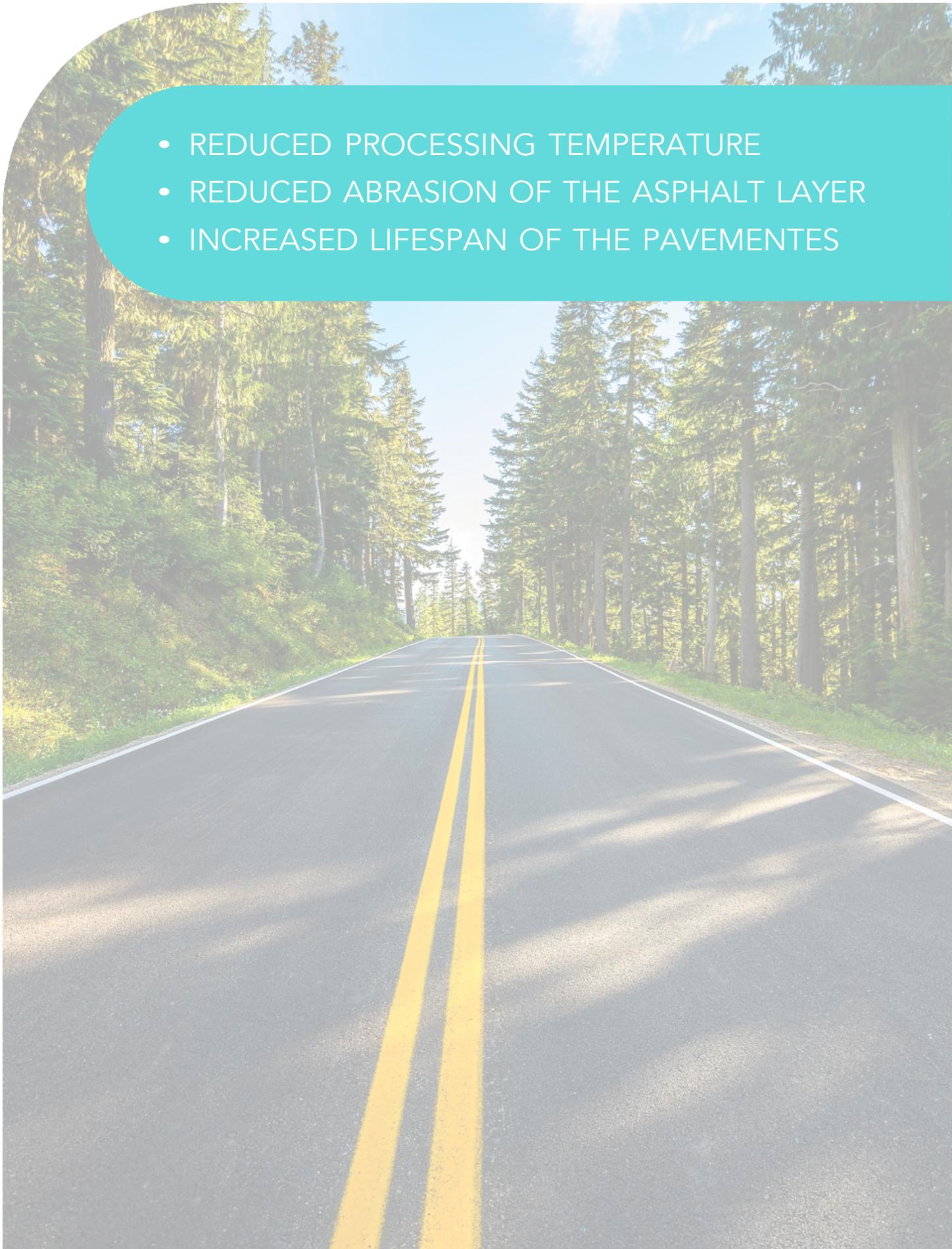
With the help of Hybit® the mixture and paving temperature can be decreased up to 30 K.

Hybit® is not only reducing its processing temperature but also reduces its viscosity, enhancing the workability of asphalt mixtures. Hybit® starts to crystallize at 90 °C and forms a lattice structure in the bitumen that increases durability. Hybit® also significantly increases the deformation resistance, without impairing low-temperature performance.

Hybit® protects resources and saves costs. It is a sustainable additive for all asphalt mixes. ■



- REDUCED PROCESSING TEMPERATURE
- REDUCED ABRASION OF THE ASPHALT LAYER
- INCREASED LIFESPAN OF THE PAVEMENTES



## Process reliability at all times

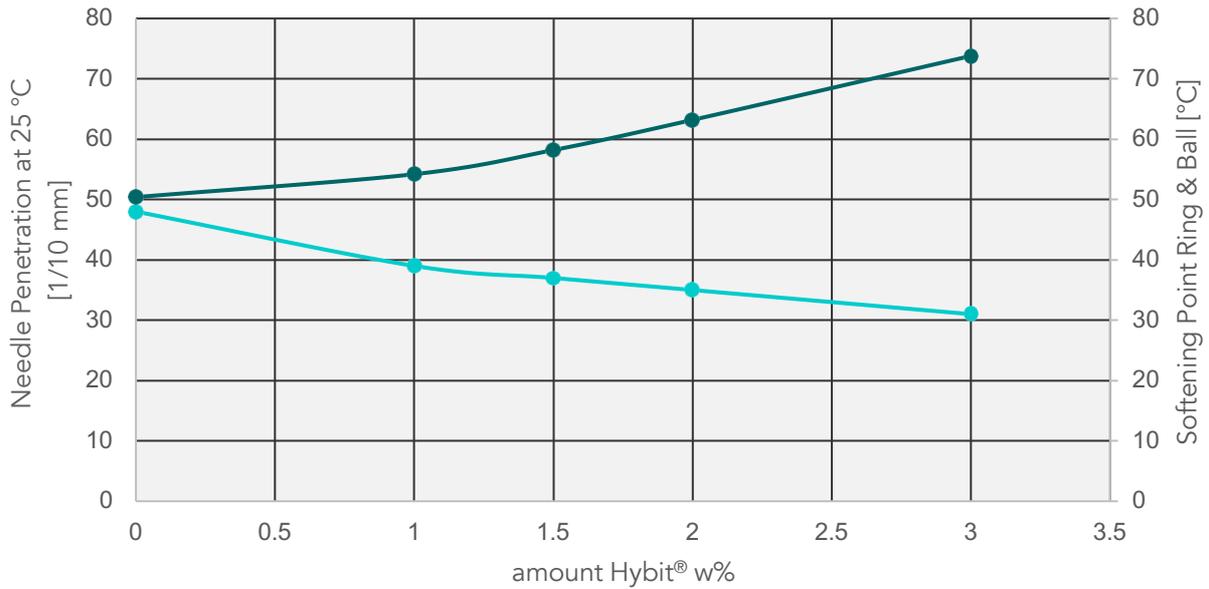
Process reliability increases from the production to the extended period of use and eventual reuse. Hybit® improves workability, adding the following benefits:

- Greatly reduced risk of compaction failures in hard and highly viscous bitumen
- Better workability during adverse weather conditions without additional compaction or without increased mixing temperatures
- Effective compaction all the way to the critical paving temperature range
- Prolonged construction season
- User friendly application manual

## What is under the hood?

	amount Hybit [w%]					
	-	1,0 w%	1,5 w%	2,0 w%	3,0 w%	
Needle Penetration [1/10 mm]	48	39	37	35	31	
Softening Point Ring & Ball [°C]	50,4	54,2	58,2	63,2	73,8	
Dyn. Viscosity (135 °C) [Pa*s]	0,45	0,40	0,38	0,38	-	
BBR	T <sub>300MPa</sub> [°C]	-19,0	-17,4	-17,8	-17,2	-16,6
	T <sub>0,3</sub> [°C]	-19,6	-19,2	-20,8	-18,8	-16,6

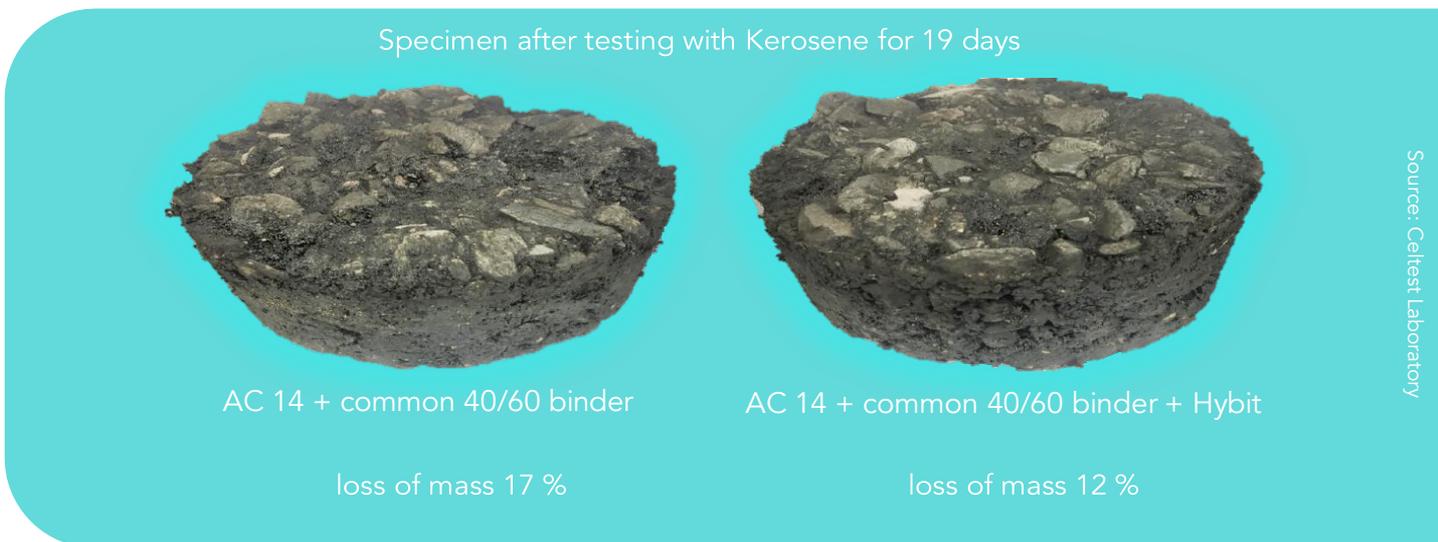
By adding different amounts of Hybit® the properties of a bitumen 50/70 can be tuned to deliver a better performance which is more appropriate to the targeted applications.



With increasing amount of Hybit® the needle penetration drops to lower values and the Softening Point ascends. In fact you get a more durable asphalt which is more resistant to daily stress cause through traffic and different weather conditions. The decreasing of the viscosity leads to a better handling at lower temperatures.

## Resistant asphalt mixes

Due to its properties asphalt is ideal for impermeable paved areas like airfield runways. These areas are also including storage facilities for liquid and solid manure, as well as silage effluents; facilities which store, bottle, or process substances, hazardous to water and facilities which produce, treat or use substances hazardous to water.

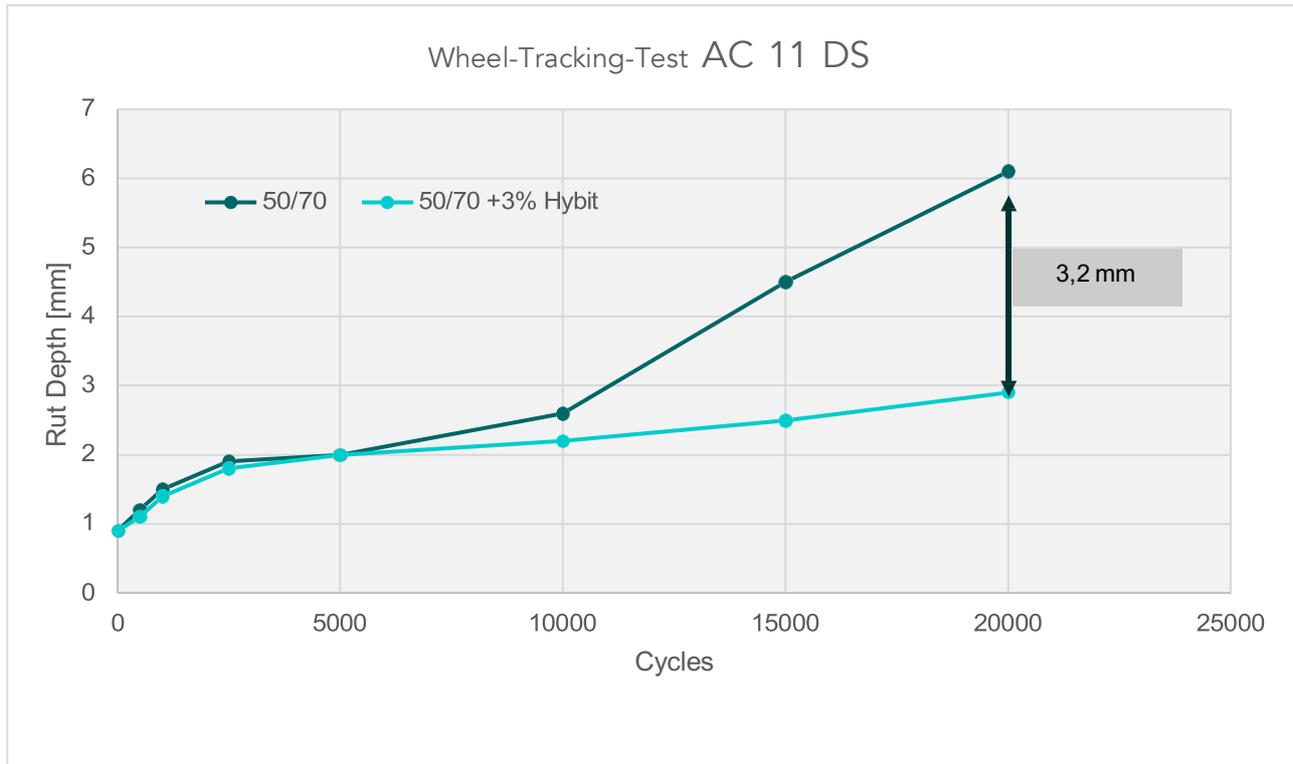


## Good workability for asphalt mixes

Hybit® highly increases process reliability and ensures optimal compaction.

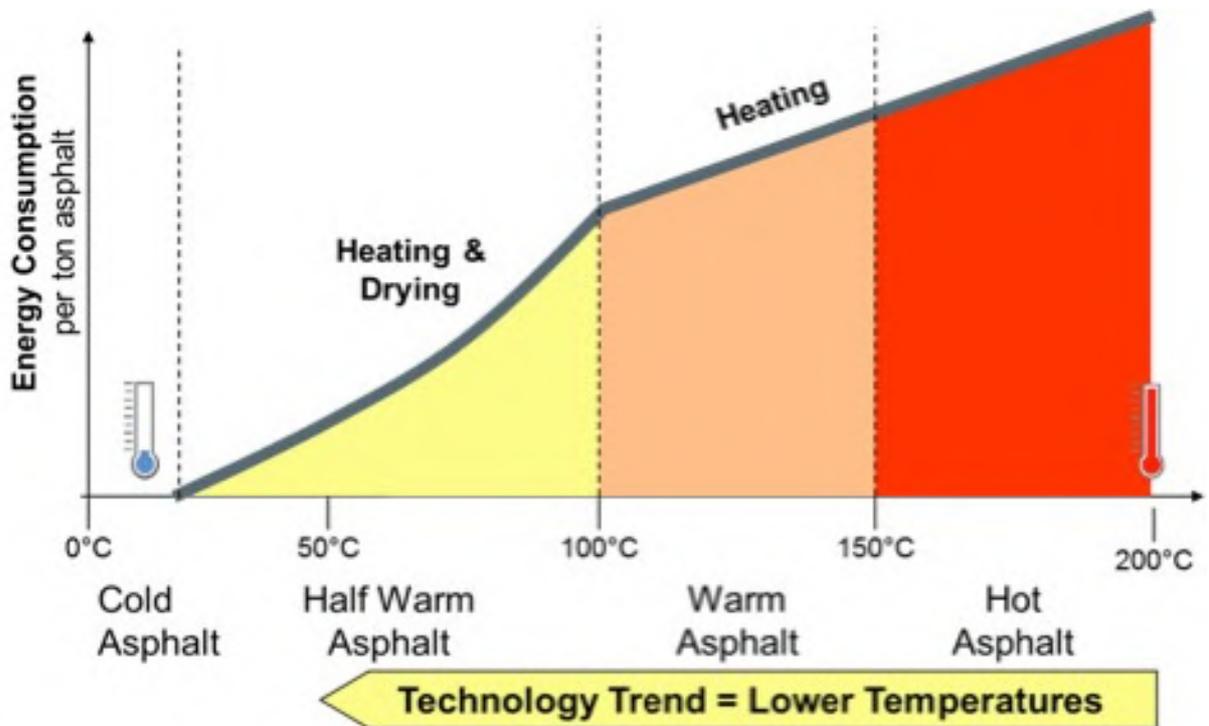
In combination with the stiffening effect in the service temperature range Hybit® greatly improves pavement performance – road durability increases in line with pavement performance.

This means significantly lower maintenance costs and ensures sustainable and resource-saving road construction projects.



## Warm mix asphalt (WMA) with Hybit®

- o < CO2 emissions
- o < energy consumption
- o < polluting fumes and aerosols
- o increased bitumen lifespan
- o increased machines lifespan



Source: European Asphalt Pavement Association, eapa.org

As described above the improvement of the asphalt mixtures with Hybit® leads to an overall better performance; you can fulfill the most modern industrial standards by reducing the processing temperature. By using different amounts of Hybit the materials can be tuned and tailored for the desired applications.

Advantage	Recommended dosage for Hybit® [w% of bitumen]							
	1,0	1,5	2,0	2,5	3,0	3,5	4,0	
Simplified Workability		■	■					
Temperature Reduction			■	■	■			
Higher process safety			■	■	■			
Stability					■	■		
Heavy Loaded Asphalt Mixes					■	■	■	



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