CASE STUDY:

ASPHALT WORKS UNDER COLD AMBIENT TEMPERATURES

“The next winter is bound to come” – it is just a matter of “when” and “how harsh”.
After all, our climate is becoming increasingly unpredictable.

Nevertheless, the infrastructure needs to be maintained and roads must continue to be built, renewed or repaired – which cannot always be carried out in sunny summer months.

We are assuming that you already are or soon will be facing road works heading towards autumn or even winter. Alternatively, your local road construction industry is subject to a basically short paving season.

Against this backdrop, we would like to draw your attention to the performance of **aspha-min®**:

aspha-min® may traditionally be best known as an additive for the production of warm mix asphalt. Its ability to maintain the compactability of asphalt mix even at temperatures of around 100 °C may as well help to maintain the workability of hot mix asphalt over a longer period of time or, especially, at cold and wind.

As you can see from the attached table, the reference site B 49 Flensungen showed that even warm mix asphalt provided the paving staff with slight compaction advantages over conventional hot asphalt at cold outside temperatures. This effect can be further extended by partially or completely dispensing with a deliberate temperature reduction.

Thus, **aspha-min®** eases compaction of standard mix designs under adverse weather conditions, long distance hauling or even high modulus mixes (e.g. PmB bitumen) in manual paving.

Do you need further information?

Do feel free to get in touch.

Comparison: Compaction values of warm mix vs. hot mix asphalt

WMA base course with aspha-min®		
Temperature at the paver		124° C
Pass	**Type**	**Value**
	Paver	82%
1	DV 8 Vibration	90%
2	DV 8 Vibration	96%
3	DV 8 Vibration	97%
4	DV 8 statisch	99%

Conventional hot base course		
Temperature at the paver		160° C
Pass	**Type**	**Value**
	Paver	84%
1	DV 8 Vibration	94%
2	DV 8 Vibration	97%
3	DV 8 Vibration	98%
4	DV 8 statisch	100%

WMA binder course with aspha-min®		
Temperature at the paver		136° C
Pass	**Type**	**Value**
	Paver	84%
1	DV 8 Vibration	92%
2	DV 8 Vibration	94%
3	DV 8 Vibration	98%
4	DR 10	100%

Conventional hot binder course		
Temperature at the paver		172° C
Pass	**Type**	**V alue**
	Paver	86%
1	DV 8 Vibration	90%
2	DV 8 Vibration	92%
3	DV 8 Vibration	96%
4	DR 10	98%
5	DR 10	99%

WMA SMA with aspha-min®		
Temperature at the paver		140° C
Pass	**Type**	**Value**
	Paver	85%
1	DV 8 Vibration	88%
2	DV 8 Vibration	93%
3	DV 8 Vibration	96%
4	DR 10	96%
5	DR 10	100%

Conventional hot SMA		
Temperature at the paver		177° C
Pass	**Type**	**Value**
	Paver	84%
1	DV 8 Vibration	91%
2	DV 8 Vibration	93%
3	DV 8 Vibration	96%
4	DR 10	98%
5	DR 10	99%

B 49 Flensungen – Comparison of compaction values of warm mix asphalt (with aspha-min) and hot mix asphalt (without aspha-min) at ambient temperatures of only 0 °C to 2 °C!