In general modifying bitumen with Sasobit increases Softening Point Ring and Ball (SP R&B) and decreases Penetration. Frequently, this changes lead to the conclusion that low temperature behaviour is impaired.

To disprove this conclusion for Sasobit modified asphalt mixes, the cooling test (TSRST) has been carried out for certain asphalt mixes. In addition the SP R&B of the used binders have been measured respectively.

Results of the cooling test (TSRST) as well as SP R&B

Source: Lab tests at asphalt-labor Schwerin and IFM Schellenberg
**Conclusion**

- Sasobit modification does not significantly impair low temperature behaviour
- Low temperature behaviour is mainly determined by the base bitumen

The following figure shows SP R&B and fracture temperature of 20/30 in comparison to a 30/45, meaning the next softer bitumen grade + Sasobit. Using a softer bitumen grade usually improves low temperature behaviour, but affects deformation resistance.

![Graph showing SP R&B and fracture temperature comparison](source: Lab test from IFM Schellenberg)

### Conclusion

A softer bitumen grade + Sasobit has at least the same asphalt mix performance as the originally chosen harder and unmodified bitumen grade.