PRODUCT INFORMATION

Recommended Dosage of SASOBIT

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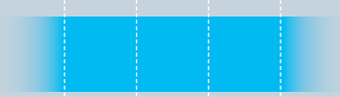
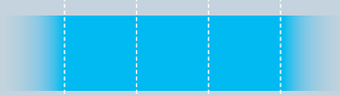
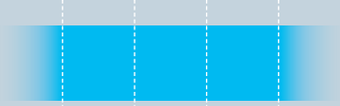
SASOBIT is a versatile additive in the field of asphalt road-building. It has been used globally and successfully since 1997. When adding **SASOBIT** to bitumen, quality of asphalt mixes improve significantly, even when admixing reclaimed asphalt pavements. The use of **SASOBIT** in asphalt mixes is approved and recommended by road authorities in Europe and the world.

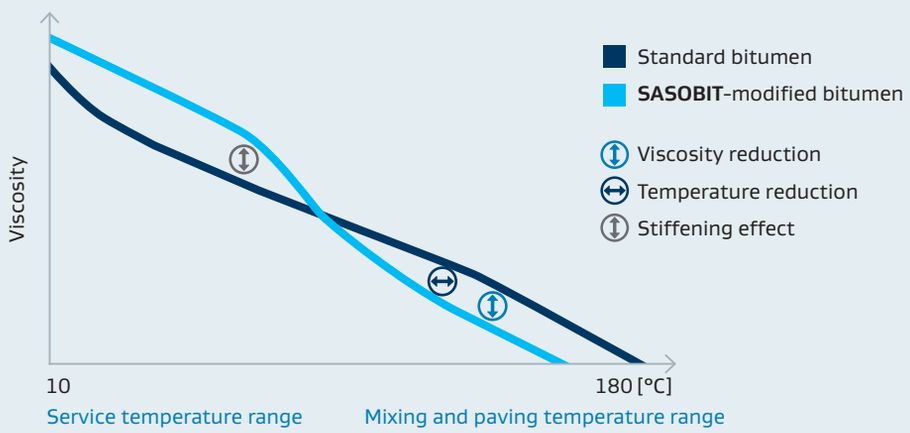
Application	Recommended dosage for SASOBIT in M. - % by weight of bitumen 1,0 1,5 2,0 2,5 3,0 3,5 4,0	Examples
Improved Workability		• Hard bitumen • Rubber-modified bitumen • Highly polymer-modified bitumen • Difficult to compact asphalt mixes
Temperature Reduction		• Resource conservation, environmental compliance • Reduction in CO_2 emissions • Reduced wear and tear on machinery • Less bitumen fumes / aerosols • Occupational health and safety • Reduced bitumen ageing
Process Reliability/ Risk Minimization		• Paving asphalt mixes during poor weather conditions • Thin layers • No compaction failures • Extended period of use • Manual application
Stability		• Faster reopening to traffic • Optimized asphalt mix design • Improved deformation resistance
Heavy Duty Asphalt Mixes		• Pavements for industrial premises and logistics centres • Container terminals • Airports • Highly trafficked roads • Bus stops • Race tracks

Keep in mind that softening point ring and ball, the needle penetration, or the bitumen viscosity etc. change according to the quantity of **SASOBIT** added or the type of bitumen used. Hence the quantity of **SASOBIT** to be added needs to be determined in lab tests.

Working principle: **SASOBIT's** effect on bitumen viscosity

Mixing and paving temperatures can be reduced by as much as 30 K when using **SASOBIT,** because above 115 °C **SASOBIT** is completely soluble in bitumen and reduces viscosity significantly. Reduced viscosity at standard temperatures enhances the workability of the asphalt mix. **SASOBIT** increases process reliability and significantly reduces the risk of improper paving operations. During the cooling phase **SASOBIT** starts to crystallize at 90 °C and forms a lattice structure in the bitumen which has a stiffening effect (the frequently cited congealing point of 100 to 105 °C refers to pure **SASOBIT**). Deformation resistance increases significantly when adding the appropriate quantity of **SASOBIT**, without impairing low-temperature performance.

Viscosity curves of standard bitumen and **SASOBIT**-modified bitumen



Selected characteristics of bitumen modified with SASOBIT

SASOBIT modified Bitumen		70/100	SmB 45 70/100+SASOBIT [1]	50/70	SmB 35 50/70+SASOBIT [1]	30/45	SmB 25 30/45+SASOBIT [1]
Penetration at 25 °C	1/10 mm	70 – 100	35 – 55	50 – 70	30 – 50	30 – 45	20 – 35
Softening Point R&B	°C	43 – 49	70 – 80	48 – 54	75 – 85	53 – 59	80 – 90
Frass Breaking Point	°C	≤ -10	≤ -10	≤ -8	≤ -8	≤ -5	≤ -5

SASOBIT co-modified PmB		45/80 – 50 A	45/80 – 50 A +SASOBIT [1]	25/55 – 55 A	25/55 – 55 A +SASOBIT [1]	10/40 – 65 A	10/40 – 65 A +SASOBIT [1]
Penetration at 25 °C	1/10 mm	45 – 80	≥ 30	25 – 55	≥ 20	10 – 40	≥ 10
Softening Point R&B	°C	≥ 50	≥ 65	≥ 55	≥ 70	≥ 65	≥ 75
Frass Breaking Point	°C	≤ -15	≤ -15	≤ -10	≤ -10	≤ -5	≤ -5

[1] 2.5 – 3.0 % **SASOBIT** by weight as a function of the technical properties of base bitumen

The given values are based on many years of experience. The characteristics after modifying the bitumen with **SASOBIT** have to be taken into account when designing the asphalt mix. **SASOBIT** is not classified as hazardous substance under currently applicable European law. This means that **SASOBIT** can be used without any additional safety precautions.

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