SAMI surface dressing	**Traditional grid**	**SAMI non-woven**
1.6-1.8 kg/m^2 polymer modified bitumen covered with 12-15 lt/m^2 bitumen coated chippings 4/8 mm	of PP, PES, glass	120-140 g/m^2 polypropylene non-woven and 1.0-1.1 kg bitumen
Costs ready-laid*: 2.5-3.5 €/m^2	**Costs ready-laid*: 2-2.5 €/m^2**	**Costs ready-laid*: 0.8-1.2 €/m^2**
Interlayer bond: o.k.	***Interlayer bond: insufficient***	***Interlayer bond: reduced***

Combination SAMI surface dressing + traditional grid
Costs ready-laid*: 4.5-5.5 €/m^2 ⇨ Interlayer bond: o.k.

Combination SAMI non-woven + traditional grid
⇨ Interlayer bond: reduced

Prebituminised S&P grid of glass fibre
Costs ready-laid*: 3-5 €/m^2
(cost is lower than traditional grid and SAMI surface dressing)
⇨ Interlayer bond: o.k.

Table 7: Cost-benefit analysis different reinforcements ****country-specific***
Note: for a 50'000 m^2 project

6. Tack coat underneath grid interlayer

On **hot summer days**, a special tack coat (polymer modified bituminous Emulsion) is needed under prebituminised S&P grids, the "S&P emulsion G", for example. Table 8 shows the technical characteristics of the "S&P emulsion G".

S&P emulsion G	Penetration index (EN12591) > 0.2	Softening point (SN EN 1427) 50 - 65º C *(country-specific)*

Table 8: Technical data S&P emulsion G

A tack coat fulfilling the specifications in *Table 8* is suitable for high daytime temperatures. Before being applied to large areas the S&P emulsion G should ideally be heated to a temperature of 50 – 60 ºC.

Calls for tenders should on all accounts specify technical data for the tack coat.

The quantity of the required bituminous emulsion depends on the roughness of the substrate and of the emulsion type 200 – 600 g/m^2 emulsion.

If the grid interlayer is applied to shaded areas or on **cool autumn days**, the problem of tack coat softening does not arise. Under these conditions a good quality adhesive is an expedient alternative.

7. Research at EMPA Dübendorf CH "Impact of different pavement layers"

7.1 Load test at the four-point bending beam

At the EMPA CH research centre, bituminous pavement layers with different types of reinforcement were examined, using the four-point bending beam. This showed two typical break patterns.

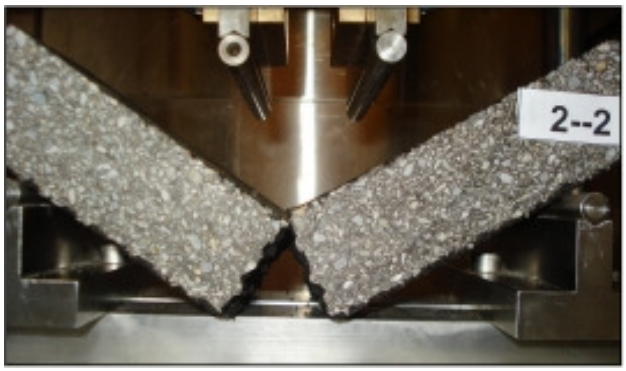

Image 2: Reference sample without grid

Image 3: Sample with S&P Carbophalt G 200 kN as interlayer

Whereas in the asphalt layer without grid *(Image 2)* a crack developed in the middle of the reference sample, leading to a break, the C-fibre reinforced asphalt layer *(Image 3)* showed optimal stress redistribution and crack distribution.