Lower Temperature – The Best for Asphalt, Bitumen, Environment and Health & Safety
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The production and laying temperature of asphalt can be reduced by adding zeolites (to rolled asphalt) or waxy additives, such as Fischer-Tropsch-Paraffin, montan wax or amide wax (to both rolled asphalt and Gussasphalt (mastic asphalt)), resulting in a significant reduction of the exposure to vapours and aerosols from bitumen at the workplace.

Rolled Asphalt

- 160 ± 20°C hot mix
- 120 – 160°C warm mix

Gussasphalt, paving

- 220 - 260°C 220 - 260°C → ≤ 230°C temp. reduced

Gussasphalt, flooring

- 210 - 280°C 210 - 280°C → ≤ 230°C temp. reduced

Both BITUMEN Forum and asphalt industry expect the use of warm mixed asphalt to result in:

- reduced emissions of vapours and aerosols
- reduced emissions of carbon dioxide
- less odor
- energy savings
- reduced wear and tear to plant and paver
- reduced oxidation and aging of the binder
- improved usage properties of the surface
- earlier open to traffic

Thus, temperature reduction is not only the silver bullet for work safety in construction but an innovative and effective way to use asphalt.

The additives used are Fischer-Tropsch-Paraffin, montan wax, amide wax and zeolite:

<table>
<thead>
<tr>
<th>Product</th>
<th>Chemistry</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sasobit</td>
<td>Fischer-Tropsch-Paraffin</td>
<td><a href="http://www.sasobit.de">www.sasobit.de</a></td>
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<tr>
<td>Asphaltan A or B</td>
<td>Montan wax</td>
<td><a href="http://www.romonta.de">www.romonta.de</a></td>
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<tr>
<td>SÜBiK VR 35 or 45</td>
<td>Amide wax</td>
<td><a href="http://www.gkg-oel.de">www.gkg-oel.de</a></td>
</tr>
<tr>
<td>Licomont BS 100</td>
<td>Amide wax</td>
<td><a href="http://www.exolit.com">www.exolit.com</a></td>
</tr>
<tr>
<td>aspha-min</td>
<td>Zeolite</td>
<td><a href="http://www.aspha-min.com">www.aspha-min.com</a></td>
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</tbody>
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Early examinations of toxicological properties showed no evidence of health problems caused by any of the above substances. In fact, there are virtually no more emissions from these substances after manufacture of the mix.

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