POROUS ASPHALT

DRAINOVIA

Effective in all weather conditions
**DRAINOVIA**

**HIGHLY POROUS ASPHALT**

Porous asphalts are road surfacings that absorb and drain off rainwater, thereby limiting its harmful effects at the road surface. Motorists easily recognise this type of surfacing.

Eurovia initiated these asphalt mixes in 1968 and today offers an even more innovative and effective solution: Drainovia.

**KEY BENEFITS**

- **Optimum** acoustic and visual comfort
- Significant increase in **skid resistance**
- **Elimination of the risk of aquaplaning** and splashing
- **Improved safety** in rainy weather
- **Production possible** with Tempera® processes

**KEY FEATURES**

- **20 to 25 % voids content** to absorb rainwater
- Noise reduction of about **3 dB**
- **Millions of square metres** of pavement surfaced to date
Superior safety, with the added bonus of comfort

Drainovia is a porous asphalt for surface courses. Its open-graded formulation gives it high interconnecting voids content. This promotes and accelerates rainwater absorption at the pavement surface and drains water off laterally. Average layer thicknesses are 40 to 50mm for the 0/10 grading – the most widely used – and 30 to 40mm for the 0/6 grading.

By preventing the formation of a continuous film of water on the pavement, Drainovia eliminates the risk of aquaplaning and splashing behind vehicles. It improves night driving conditions by eliminating reflected glare. The surfacing also has excellent rolling noise abatement properties.

Drainovia meets the requirements of the EN 13108-7 Class 1 and Class 2 “Porous asphalt” standard.

Drainovia is covered by a Technical Opinion.

For all types of traffic

Drainovia porous asphalt is particularly recommended for motorway, expressway and national highway pavements. In urban areas it is especially suitable for suburban, arterial and roundabout pavements.

Up to 25% voids

A gap-graded formulation with a small proportion of fines and mastic asphalt ensures the high interconnecting voids content that enables the porous asphalt to drain off water. The cohesion of the mix is essentially provided by the quality of the binder that causes the chips to adhere to each other. The choice of aggregate and binder is therefore particularly important.

Aggregates are selected according to the EN 13043 “Aggregates for bituminous mixes” standard and meet the requirements of the EN 13108-7 standard. The Drainovia binder is selected following an analysis of all the various factors such as substrate condition and deformability, traffic loading, climate conditions and any specific stresses applying.
Very strong binders

Eurovia’s range of Polybitume® polymer-modified bitumens and the Styrelf® range of binders are suitable for the various configurations and requirements.

Polybitume® P is covered by a Technical Opinion (see technical fact sheets presenting the different types of Polybitume®).

These modified binders have excellent durability, especially resistance to water stripping, an important characteristic in a porous asphalt which by definition has high exposure.

Controlling water

To achieve optimum effectiveness, a porous asphalt requires a suitable pavement support profile to ensure lateral water runoff and avoid retention. The surface of the pavement support may require a waterproofing layer. The type and dosing of binder depend of the nature and condition of this surface (porosity, cracking).

Drainovia is formulated to provide vertical and horizontal drainage of rainwater and thereby eliminate aquaplaning and splashing from traffic. Permeability measurements, carried out with a worksite drainometer (EN 12697-40), confirm percolation speeds higher than those specified in the porous asphalt standard.

Drainovia has good skid resistance and therefore provides excellent safety conditions for motorists. Braking force coefficient values measured on a large number of projects demonstrate this property, particularly with high-speed traffic.

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<thead>
<tr>
<th>Immersion compression ratio</th>
<th>Sensitivity to water EN 12697-12</th>
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<tbody>
<tr>
<td>EN 13108-7 specification</td>
<td>$i/C \geq 80%$</td>
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<tr>
<td>Drainovia</td>
<td>$i/C \geq 85%$</td>
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<th>Braking force coefficient (NF P 98-220-2) (results after 6 months under traffic)</th>
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<tr>
<td>60km/hr</td>
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<td>90km/hr</td>
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<td>120km/hr</td>
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