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BITUMEN AND **SUSTAINABILITY** - AT A GLANCE

About Bitumen

Bitumen is a sustainable construction material offering inherent performance properties making bitumen durable, flexible, and versatile providing proven solutions for supporting sustainability challenges.

The adaptability of bitumen to extreme climate conditions globally is an important property for today's environment. Also, the ability of bitumen to adapt to temperature reduction technologies can contribute to reducing CO_2 through lowering energy used in both end-product production and application stages.

Existing product properties of bitumen have already been providing options for innovation and this has been seen in the industry with the many solutions already available to implement.

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WHY

The 'Paris Agreement' adopted in 2015 signalled the recognition globally for the need to combat the threat from climate change.
The United Nations Sustainable Development Goals were developed as a blueprint to achieve a better and more sustainable future for all.
The EU Green Deal aims to be climate neutral in 2050 and provides Europe a Road Map to achieving this.
Eurobitume Member Companies have sustainability policies and naturally put this on their association´s agenda.

WHAT

Reaching the EU climate neutral target by 2050 will require action by all sectors of the economy.
Innovation and technological progress are seen as key to finding lasting solutions to both economic and environmental challenges, especially in areas of increased efficiency of resource and energy.

HOW

Circularity

In its most common application as an asphalt binder, bitumen is 100% re-usable, i.e. re-used in the same application.
In certain applications there may be an opportunity for incorporating secondary materials from other industries where they pose a 'recycling challenge' into either the bitumen or the asphalt. Such examples are end of life tyres or certain plastics.
The addition of such materials must be done in a considered and responsible way. The use of these secondary streams should not result in compromising existing industry HSE requirements and technical standards.
TF Secondary Materials have summarized categories to consider on use of secondary materials.

Technical
Definition of the material´s characteristics to assess the influence on performance of the final product.

HSE
No negative influence on HSE compared to standard bitumen should be accepted, unless risk assessments are conducted and controls are in place to demonstrate safe use.

Sustainability
The use of any secondary material in bituminous applications must not negatively influence the overall environmental footprint compared to standard solutions.
Modified bitumen have also been shown in some applications to allow for thinner pavements reducing need for raw materials.

Long life: Durability

Extending the service life of the end product in which bitumen is used is a critical tool for reducing the environmental impact of bitumen.
Bitumen has intrinsic and well proven technical performance properties. Reference to long life asphalt roads examples. (Even after its useful service life it can easily be re-used over and over again – with the priority focus being to ensure the life is extended.)
To maximise bitumen's service life, the correct design, use and planned maintenance is necessary especially for roads. (Use of member data to demonstrate impact of proper maintenance.)
By adding modifiers such as polymers or other additives to bitumen an extended service life has been observed in some applications.

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eurobitume
Eurobitume
Boulevard du Souverain 165
B - 1160 Brussels, Belgium
Tel.: +32 2 566 91 40
info@eurobitume.eu
www.eurobitume.eu