

FIT FOR TOMORROW



# ASPHALT PAVING

Safe, Comfortable, Sustainable

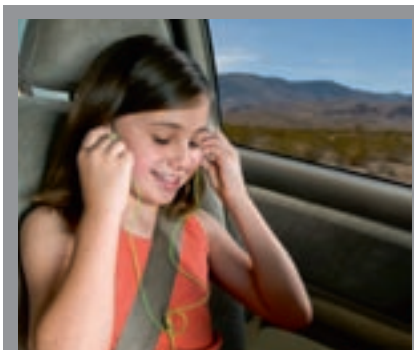


EUROPEAN ASPHALT PAVEMENT ASSOCIATION





## SAFETY FIRST



The variety of asphalt mixtures offers specifiers the right solution for all types of road and weather conditions, maximising safety for all road users.

Although we talk about ‘asphalt’, there is a wide range of types and mixtures available, all of which have qualities tailored for specific applications. For example there are asphalt mixtures that allow heavy rain to drain swiftly from the surface. There are also mixtures that can be designed to offer high skid resistance for areas likely to experience hard braking.

Maintaining a high surface quality is fundamental to ensuring continuous grip and other road characteristics. This can be easily achieved with asphalt as it offers a wide variety of options that allow optimum and cost-efficient solutions to be chosen for each road situation, taking into account traffic speed and climatic conditions.

### Reducing spray and aquaplaning

Driving in heavy rain can compromise road safety. Spray reduces visibility, and the build-up of water on road surfaces can lead to aquaplaning, where the tyre loses contact with the road because a film of water has formed between the tyre and the road surface. The quality of the road surface is therefore fundamental to ensuring good grip as well as other safety characteristics. Asphalt offers a variety of options that provide cost-

effective and easy to maintain solutions for managing the required surface texture of a road. For the road user, the result is fewer accidents and fewer costly delays.

### The colour of safety

Darker colours absorb more of the sun’s heat, rather than reflecting it. This property can be put to good use where a dark coloured asphalt surface is specified for a specific location – not only heating up in winter sunshine to melt ice, but also to reduce reflected glare in bright conditions that would otherwise dazzle or distract drivers.

The high contrast that can be achieved with asphalt surfaces and road markings can help to make them stand out more clearly, helping drivers and other road users to stay safe.

Different colours of asphalt such as red, blue, green and yellow can also be used to separate and define safety lanes for specific road users. Coloured bus routes and cycle lanes are successful examples of this working in practice. ■

# MORE CONVENIENT, MORE COMFORTABLE



Asphalt is flexible, easily upgraded, smooth and can also offer more cost-effective solutions to reducing noise when compared to other types of road surface. Shorter construction times and easier repair minimise disruption.



Although roads are the arteries of our society, it's a sad truth that the only time most people notice them is when they are delayed due to road works or experience an uncomfortable ride. Maintaining and upgrading roads to meet ever-increasing traffic and user demands requires a surface that can be quickly and efficiently applied that also provides a road surface that lasts for year after year in all conditions, needing only simple but planned and cost-effective maintenance. Asphalt meets these needs better than any other type of road surface, offering shorter construction times and easier repair.

## **Coping with the stress**

One of the major advantages of asphalt is its flexibility. Under high stress from traffic or the climate it doesn't crack like other, more brittle materials, and so even when loads exceed the maximum anticipated for a road, asphalt is able to withstand a lot more use before showing

signs of deterioration. Asphalt-surfaced roads are also easier to upgrade when traffic volumes rise – the existing surface can easily be strengthened by applying an overlay or lane widening rather than having to be reconstructed. This flexibility of application also means that asphalt roads can remain partly open whilst they are being upgraded, and without the need for long curing periods can be re-opened quickly helping to keep traffic running.

## **Total flexibility**

Asphalt is the flexible option for any road. Not just the material itself, but the fact that it can be designed to bring optimal solutions for all types and sizes of roads, lanes, cycle paths etc... For lightly-trafficked pavements, for example in the suburbs, the layers can be thinner. Special traffic or safety features in the road surface like speed ramps, roundabouts and narrowing or widening lanes can also be created. The adaptability of asphalt offers solutions to

the many changing requirements of both the road user and our society.

## **Smoother, quieter**

The smoothness of an asphalt surface has additional benefits to drivers and their vehicles. A smoother road surface helps to decrease fuel consumption by optimising the rolling resistance of tyres. It has other, long term benefits in reducing wear and tear upon shock absorbers and suspension – especially on heavy goods vehicles with their high axle loads. New asphalt surfaces also produce lower noise levels than other construction materials and can be laid to be virtually joint-free. This helps to reduce the impact on the communities that roads pass through and also increases the comfort for driver and passengers.

Investing in noise-reducing asphalt can lessen the need for alternative, more costly methods of noise reduction such as noise barriers. ■



## USE, USE AND USE AGAIN

Sustainability and environmental impact are increasingly important factors when planning road construction and repair. Asphalt is 100% reusable.

In today's world we are becoming increasingly conscious of the environmental impact of our actions. Naturally road transport has come under increasing scrutiny. But we cannot simply turn the clock back to an earlier age when people and goods didn't need to travel. Roads are here to stay as part of our modern world; in the asphalt industry we are committed to reducing the impact for future generations.

in the construction industry and exceed typical recycling volumes for glass and paper.

### Lower carbon footprint

The carbon footprint of asphalt roads is lower than that of alternative products. The availability of today's new reduced-temperature asphalt materials, offering lower mixing and laying temperatures, helps to minimise the energy required to produce asphalt and, as a result, reduces carbon dioxide emissions by as much as 35%. When used together with recycled asphalt, the embodied carbon footprint can be further reduced.

### 100% reusability

Asphalt's flexibility makes it practical to remove, break up and reuse back into asphalt almost indefinitely. Recycling techniques, which use existing asphalt to produce new asphalt, have been in use for over 30 years. Recycling can be done at existing asphalt production sites, mobile plants or in some cases in-situ at the road itself. Alternatively, reclaimed asphalt can be processed and used in the foundation layers of roads. Virtually no asphalt is sent to landfill; asphalt road surfaces are the most recycled product

### Asphalt in the Environment

Asphalt is inert in the environment and therefore does not release unwanted substances into the earth or underground aquifers. Asphalt is often used to seal the reservoirs our drinking water comes from and also to line landfill sites to prevent harmful waste materials escaping into the environment. ■



# ASPHALT – THE SUSTAINABLE TRANSPORT SOLUTION

Roads are essential to our everyday lives, playing a huge role in the transport of goods and people across Europe. Asphalt surfaces offer comfort, safety and sustainability - both today and into the future.

## What is Asphalt?

Across Europe 'asphalt' is the term used for a mixture of small stones, sand, filler and bitumen, which is used as a road paving material.

Across the world, paved roads are the arteries of our society. We travel to work, school, or to meet friends and relatives via road. Roads provide door to door access to both commerce and recreation as well as to other modes of transport. Essential services such as water, electricity, gas and sewerage are often embedded in or along roads, and emergency services rely on them. The food, drink, and consumer goods we use everyday are brought to us by road. It's no exaggeration to say that without our road network, life as we know it today could not exist. Asphalt is the unsung hero of our roads. It provides road users, from trucks to pedestrians, a consistent, safe and durable surface for their journeys, whether local or across the entire continent.

## An essential role

Within the European road network there are around 6.1 million km of paved roads, linking major conurbations and tiny communities from coast to coast. Roads are the most regularly used

access routes to all parts of Europe. When it comes to inland goods and passenger transport, the figures in recent years speak for themselves showing that; over 72% of our goods and 83% of passengers travel by road, rather than rail, air or water.

## Prosperity for tomorrow

Developing and maintaining a road network that provides unobstructed and safe transit in all kinds of weather is a key task; it supports the prosperity, productivity and competitiveness of our communities and commercial activities. At the same time we need to be aware of the cost and environmental impact of road building and maintenance.

People need roads; roads need asphalt. The members of the European asphalt and bitumen industry are aware of the challenges in meeting the needs of society, both now and for future generations. It's our aim to ensure that the solutions we provide meet and exceed expectations in the key areas of safety, comfort and sustainability. ■





#### **Fit for tomorrow**

Whatever tomorrow's Europe looks like, it is certain that a viable and durable road network will be a key part of all our lives. Asphalt is essential to creating roads in the future that are fit for purpose, sustainable and safe to use.

The European asphalt and bitumen industry is working to create the best possible materials – keeping the wheels of Europe turning.



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