

DENSIPHALT®



OUTDOOR

*A new generation
of joint-free pavements*



- Airports
- Ports
- Heavily trafficked areas



Semi-flexible pavements for outdoor floors

Densiphalt®

– a semi-flexible pavement combining the best properties of asphalt and concrete

Densiphalt® is a semi-flexible pavement combining the best properties of asphalt and concrete. Suitable for new build and renovation, it is applied as an asphalt-based wearing course that hardens to a matrix, in which the voids are filled with a Densiphalt® mortar. In this way, the Densiphalt® system combines the flexibility and freedom from joints of asphalt with the excellent bearing capacity and high wear resistance of concrete.

Applying Densiphalt® New build

Densiphalt® is easily and quickly installed. The total pavement design – in terms of subbase, gravel, bituminous base course and Densiphalt® wearing course – is determined by the loads to be carried.

The Densiphalt® wearing course is preceded by a layer of bituminous base course machine-laid to a thickness of 120mm-180mm*). This bituminous layer is then rolled and sprayed with a bitumen emulsion. This seals the surface and ensures that Densiphalt® mortar cannot seep down through the bituminous base course layer.

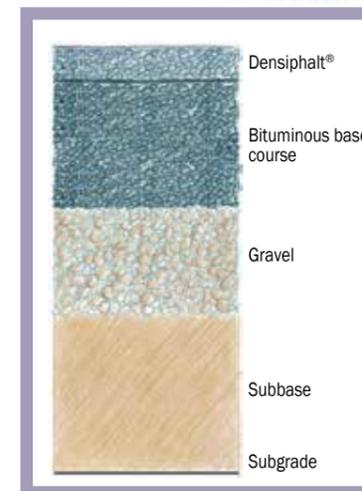
The next step is to apply the Densiphalt® wearing course. The asphalt is prepared in an ordinary asphalt mixer and laid to a thickness of 40mm*) with a traditional asphalt paver. A non-vibratory steel roller is

then used to produce a uniform, even surface.

When the asphalt has cooled down, the Densiphalt® mortar can be applied. The mortar is supplied as a homogeneous dry powder and is mixed with water on site in a continuous flow mixer or batch mixer. The mortar is pumped onto the asphalt and worked into the surface manually and/or with a specially built tractor fitted with rubber scrapers. Once the asphalt matrix has been filled with mortar, the surface is floated to an even and uniform finish.

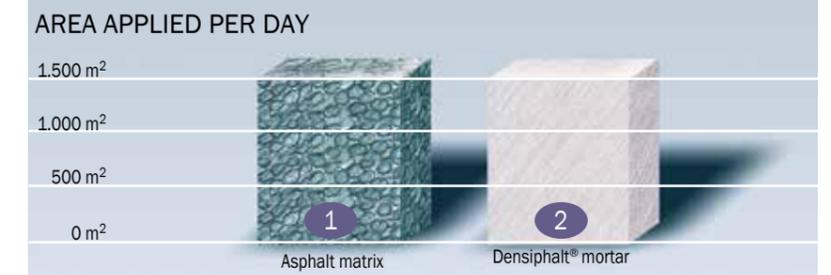
Immediately afterwards, the Densiphalt® is normally sprayed with Densit® Curing Compound to prevent the surface from drying out too quickly.

Finally, after just 24 hours' curing at 20 °C, the Densiphalt® pavement can be used.



Design of pavement

Application by a crew consisting of 4-6 men, an asphalt paver and a continuous flow mixer.



*) The examples of layer thicknesses and designs are from projects around the world. We recommend use of a consulting engineer for the design in every case



Densiphalt® asphalt.



Installation of Densiphalt®.



Densiphalt® mortar.

Renovation

The simple and rapid application process makes Densiphalt® particularly suitable for renovating old pavements. It is equally effective whether the original material is asphalt, concrete or interlocking paving blocks. Once severe imperfections such as holes, cracks and joints have been filled or repaired, the Densiphalt® can be laid and the renovated pavement can be trafficked after 24 hours' curing at 20 °C.

Densiphalt® technical data

Mortar component - Typical values

Compressive strength	Wear resistance	Freeze / thaw resistance
110 MPa	10 cm³/50cm²	<0,1 kg/m²
EN 12390-3	EN 13892-3	DS/CEN/TS 12390-9

Wearing course

Compressive strength	E-Modulus	Freeze / thaw resistance
8 MPa	8.000 MPa	<0,1 kg/m²
EN 12504-1	(ASTM-D-4123/BS DD 213)	DS/CEN/TS 12390-9

Densiphalt®

The benefits:

- Simple and rapid installation.
- Attractive solution in areas where demands for strength, durability, and chemical resistance cannot be fulfilled by concrete or asphalt alone.
- Application requires traditional equipment.
- Economical solution due to low installation costs and short construction process.

ITW Engineered Polymers - a strong partner for Flooring and Pavements around the world

ITW Engineered Polymers

ITW Engineered Polymers is a division of ITW (Illinois Tool Works). ITW is one of the world's most diversified industrial companies, with a sales turnover in 2012 of USD 18 billion. Established in 1912, today ITW employs over 65,000 people worldwide.

ITW businesses serve local customers and markets around the globe with specialized industrial equipment, consumables, and related service businesses.

ITW Engineered Polymers is a global supplier of chemical solutions targeting industrial manufacturers. ITW Engineered Polymers manufactures, markets and sells a wide variety of industrial technologies including High Performance Cementitious products, epoxy adhesives and chocking compounds, methacrylate adhesive and polyurethane coatings under leading brands such as Densit®, Ducorit®, Devcon® and Plexus®.

Densit®

Densit® is a brand of ITW Engineered Polymers. Since 1983, ITW Engineered Polymers has been specializing in the development, manufacture and supply of high performance solutions based on its Ultra High performance Cementitious (UHPC) Densit® material.

ITW Engineered Polymers is working in partnership with the ITW WindGroup to bring this unique global platform of grout solutions for offshore and onshore foundation installations into the market.

In addition to connecting offshore structures in the wind industry, UHPC Densit® materials are applied worldwide in other demanding areas such as wear and abrasion resistant solutions, the reinforcement of oil and gas platforms, industrial flooring and pavement and security barriers.

QUALITY ASSURANCE

ITW Engineered Polymers is certified to ISO 9001, ISO 14001 and OHSAS 18001.



ISO 9001 • ISO 14001
OHSAS 18001