DENSIPHALT®

A new generation of indoor floor toppings

- Warehouses
- Distribution centres
- Retail areas
- Goods terminals
- Industrial floors in light industry
- Production halls

ITW Engineered Polymers

Densiphalt

Semi-flexible pavements for indoor floor wearing courses

Densiphalt®

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

Densiphalt® is a semi-flexible floor topping combining the best properties of asphalt and concrete. Suitable for new build and renovation, it is applied as an asphalt-based floor topping 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.

New build
Applying Densiphalt®

Densiphalt® is easily and quickly installed. The total floor design – in terms of subbase, gravel, lean mix concrete and Densiphalt® wearing course – is determined by the loads to be carried.
The Densiphalt® top layer is preceded by a layer of lean mix concrete. The gravel and cement are mixed on site and machine-laid to a thickness of at least 120mm*). This lean mix layer is then rolled and sprayed with a bitumen emulsion. This seals the surface and ensures that neither water nor Densiphalt® mortar can seep down through the lean mix 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.

The next day, 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 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 wearing course is normally sprayed with Densit® Curing Compound to prevent the surface from drying out too quickly.

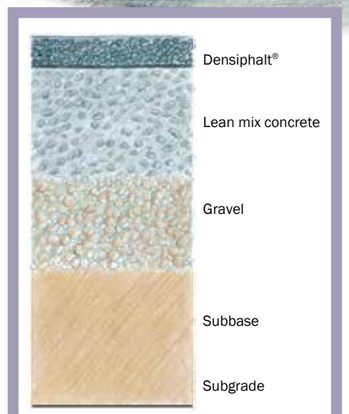
Finally, after just 24 hours' curing at 20°C, the Densiphalt® floor can be used.

**) 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.

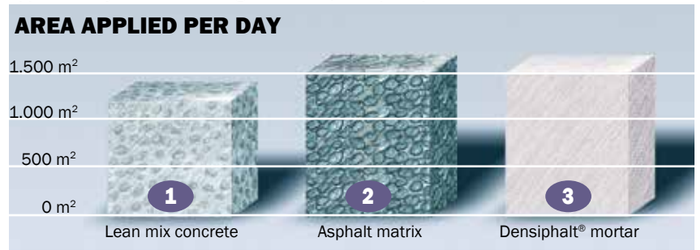
Installation of Densiphalt®.

Densiphalt® mortar.



Design of industrial floors

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



Renovation

The simple and rapid application process makes Densiphalt® particularly suitable for renovating old floors. 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 floor 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 $cm^3/50cm^2$	<0,1 kg/m^2
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/m^2
EN 12504-1	(ASTM-D-4123/ BS DD 213)	DS/CEN/TS 12390-9

Densiphalt®

The benefits:

- Simple and rapid installation.
- The option of using the lean mix concrete layer as a working platform: for example, elements can be anchored directly into the lean mix concrete.
- A lean mix layer that, after treatment with bitumen emulsion, has greater weather resistance.
- The option of applying the topping at the end of the construction process, so that the floor is not damaged before use.

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.

LLOYD'S REGISTER · LRQA
ISO 9001 · ISO 14001
OHSAS 18001

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