

RIGIPHALT®



Fulton Hogan

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What is RIGIPHALT®?

RIGIPHALT® is a composite asphalt paving material, which has enhanced rigidity and toughness, making it suitable for applications where cement concrete was thought to be the only solution.

The Benefits

RIGIPHALT® is asphalt based. It retains much of the flexibility offered by asphalt, while providing reduced deformation and better resistance to fuel and chemical spillages. Some of the benefits including:

- improved abrasion resistance
- improved chemical and fuel / oil resistance
- deformation and rutting resistance
- improved dusting resistance
- easy application
- low maintenance and easy rehabilitation
- high resistance to indentation under concentrated loads
- improved extreme weather resistance
- improved frictional resistance
- reduced surface permeability.



RIGIPHALT® grout is blended and applied to the pavement surface using proprietary techniques.

Suitable for a range of applications

RIGIPHALT® is proven both effective and practical for use on industrial and heavy-duty pavements. Solid tyres or tracked vehicles can be used on RIGIPHALT®. It is also suitable for high stress static loads. Some of the working areas include:

- warehouses
- docksides and container terminals
- transport depots
- airports
- army and defence installations
- car parks
- bus depots and bus stops
- loading docks
- factories and engineering workshops.

Riding Quality

In case of vehicular traffic, the driver should expect a ride quality similar to that of dense graded asphalt of the same maximum nominal aggregate size.

In industrial applications RIGIPHALT® offers the advantage of a smoother ride for unsprung or solid tyred equipment.



The asphalt carrier mix is applied using conventional paving equipment.



A practical and effective solution for industrial and heavy-duty pavements, RIGIPHALT® is ideal for dockside and container terminals.

The Construction Method

RIGIPHALT® is a composite paving material. It comprises of a support layer of specially graded asphalt to produce air voids that are completely filled with a heavily modified cement grout.

The asphalt base is placed using conventional paving equipment and techniques. The RIGIPHALT® grout is blended and applied to the surface using proprietary techniques to ensure complete penetration of the voids in the support layer.

The final texture and appearance of the surface can be modified to suit the intended service. If a smoother surface finish is required further treatments can be carried out after the material has hardened.

Curing Time

The curing time depends on weather and environmental conditions. Generally it can be open for pedestrian traffic after 6 to 8 hours and for light vehicular traffic after 24 hours. Heavier vehicular traffic and loadings may be introduced gradually after the first 24 hours. Longer curing periods where possible may be recommended to ensure the durability of the product.



RIGIPHALT® pavement supports stacked cargo containers weighing over 20 tonnes.

Applications

New Pavements

RIGIPHALT® wearing course can be applied as a replacement for dense graded asphalt or cement concrete surfaces. The layer thickness can be calculated using the conventional flexible pavement design methods described in the Austroads pavement Design Guide. The minimum thickness is 50mm. If needed, the RIGIPHALT® layer thickness can be increased to more than 150mm.

Existing Pavements

Before using RIGIPHALT® the strength of the existing pavement must be proven to ensure it can provide adequate support for the RIGIPHALT® surfacing.

RIGIPHALT® can be applied as an overlay, or existing surface levels can be retained using mill and fill techniques, subject to thickness verification.

The recommended minimum layer thickness is 50mm, however the selection of the final thickness depends on the intended usage of the surface. Thinner layers may be appropriate if strength is not an issue and the purpose of the application is to provide fuel and chemical resistance, durability or other surface properties.

RIGIPHALT® has been proven over several years in a number of container terminals including Fisherman Island in Brisbane, Port Botany in Sydney, Swanson Dock in Melbourne and the Container Forklift and Cargo Storage Hardstand in the Port of Newcastle.



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