

ABOUT ROADWAYS

ROADWAYS PTY LTD
A . B . N . 2 8 0 0 9 4 8 5 8 1 2



ROADWAYS PTY LTD

SPECIALISTS IN BITUMINIOUS SURFACING

Roadways Pty Ltd is Tasmania's largest privately owned and operated specialist bituminous surfacing company. Founded in 1969, Roadways can supply asphalt (hotmix) anywhere in Tasmania from its production facilities located at Burnie and Bridgewater. Roadways also maintains contract laying crews to assist in the placement of asphalt or application of spray seal utilising the latest state of the art equipment and vehicles. A N.A.T.A. accredited laboratory and dedicated technical team provides testing and design services for any project specific requirements.

PRODUCT / SERVICE INFORMATION SHEET

ASPHALT OR SPRAY SEAL?



Roadways maintains third party certification for its Safety, Environment and Quality Management System. Your guarantee of satisfaction.



Give us your feedback—If you found this helpful or have any suggestions, contact us:
PO Box 303
GLENORCHY TAS 7010

Phone: 03 6271 3500
Fax: 03 6272 9606
E-mail:office@roadways.com.au



Proudly a member of:



TEL : 03 6271 3500

www.roadways.com.au

ASPHALT OR SPRAY SEAL?



Bridgewater asphalt plant—high capacity with hot storage facilities

ASPHALT: or Hotmix Asphalt Concrete is a mixture of mineral aggregates and natural sand held together with a binder (glue) of Bitumen. The advantage of using bitumen instead of say cement to make concrete is that resultant asphalt concrete remains flexible, allowing it to move with the underlying pavement and or traffic it is exposed to.

Asphalt is manufactured at a batching plant to produce a homogeneous mix and is placed, either by hand or machine and compacted to a dense matt.

Although used as a trafficable wearing surface – Asphalt at greater depths does have some inherent strength of its own and can be used to correct or regulate the shape a new surface prior to a final overlay. If asphalt is placed in too thin a layer it will not have enough strength to support any load.

The final finish of an asphalt surface is a smooth matt finish, however there can be differences in the appearance between areas upon close inspection. Asphalt contains various sizes of aggregates, sand, bitumen and other ingredients which can cause a varied texture on the surface. In addition, asphalt areas that have been raked and spread with hand tools may appear different in texture from those spread by machine.

Although every effort is made to avoid any surface irregularities, some small puddles can form when wet, depending on the natural slope and drainage of your ground.

Asphalt can remain relatively soft for up to 12 months. Even once cured, do not expect it to be as hard as concrete.

An asphalt surface will soften and harden as temperatures rise and fall. Although it is not required, you can use cool water from the hose to cause the driveway to harden for particular loads.

Starting and stopping too fast, turning the front wheels while your vehicle is stationary, turning tight corners or driving at extreme rates of

Bitu-

minous Surfacing is a flexible water-proofing wearing course used to surface roadways, driveways, paths, tennis courts etc. It is a cost effective alternative to concrete or other similar rigid pavements.

Roadways can offer a selection of treatments—but it is important that the right treatment is used in the right application. An explanation of some features and limitations of the two main treatments are offered in this handout.

speed on an asphalt surface can cause scarring, especially in the first 12 months. In damage prone areas, it may be prudent to scatter some loose sand to help lubricate the skidding motion and resist scuffing in the initial period until the asphalt mix hardens.

During the first 12 months

- ⇒ It is important to not park in exactly the same location – as depressions can form.
- ⇒ Avoid using jacks and car ramps other such items of point loading unless something, such as a piece of wood, is used to distribute the weight.
- ⇒ Watch out for bicycle and motorcycle kick stands, pointy high heels, deck chairs and patio furniture, especially on hot days as they exert weight on concentrated areas and will create holes and depressions.
- ⇒ Excessive weight from large heavy vehicles can leave depressions in your new surface. If storing boats and caravans for long periods of time, place a piece of plywood under the jockey wheel and under the tyres
- ⇒ Scuffing and marks from power assisted steering movements whilst a vehicle is not moving is a common complaint to which asphalt has little or no resistance to.

Although asphalt edges do not need side support, the edges are the weakest parts, so it is better not to drive on the edges. This avoids cracking or crumbling that can occur over time. Building up the edges with topsoil is a great way to strengthen the edges.



Laying asphalt through a paver

Petrol, diesel, oil, antifreeze, some detergents and degreasers, power steering and transmission fluid spills and leaks can harm any surface and will 'kill' the bitumen and cause it to break down. Any holes left by these should be repaired to stop water ingress. practically

SPRAY SEAL: Is a combination of a spray coat of hot cutback bitumen binder to waterproof the area, followed by an even spread of aggregates. The final finish of a spray seal is from fine to coarse – depending on aggregate size, with probability of loose aggregate remaining in the surface for the majority of the seal life in low traffic areas.

A spray seal can be done as either single coat seal (single/ single) or a Two coat seal (double / double).

A spray seal finish is only as good as the prepared base, as it will follow all depressions in the unsealed pavement. A tight, sound surface, formed to the

desired shape is required. There is no ability to improve the surface shape with a spray seal.

In some situations where the pavement is not to standard and there is a risk of damage to the prepared pavement surface a dry matt of aggregate followed by a heavy application for bitumen and a top coat of aggregate is applied to achieve the same result as a two coat, without damage to the underlying surface. Dry matt should be used in low stress areas only.



Spray sealing—Flinders Island Airport

A spray seal treatment is specifically designed following the Austroads Seal Design Method, which, amongst other parameters, is based on seal aggregate size, design traffic loads and volumes, and the underlying surface texture. The lower the traffic volume and the greater the aggregate size, the greater the bitumen application rate required to hold the aggregate.

A spray seal has no resistance to shear force exerted by vehicle tyres in turning movements as it is only a thin layer of bitumen (1 – 2 mm) with aggregate rolled into the surface. A two coat seal of usually 14mm / 7 mm aggregate provides some mechanical interlock between the aggregate particles which may reduce the risk of damage by shear forces exerted by vehicle tyres in turning movements. As the bitumen binder oxidises and hardens over time, the surface becomes more durable and resistant to shear movements.

As a spray seal is compiled of bitumen and aggregate, bitumen can, given the right conditions be picked up on boots and shoes – tracking over adjacent surfaces. Loose aggregates also have the tendency to travel some distance. Bitumen that is being picked up should be covered / absorbed by loose aggregate, which once cooled will become a part of the sealed surface.

To assist in the process of adhesion of aggregates are usually pre-coated with a bitumen / diesel / kerosene blend. When sealing around buildings and dwellings it is often more prudent to use an un-precoated washed aggregate, to avoid soiling surrounding surfaces.

To achieve an even spray cover and aggregate adhesion / retention during variable weather conditions, the bitumen is thinned or 'cut' with kerosene. This cutter evaporates over time, and may take up to 12 months. Until this time, the seal may remain tender, particularly during days of hot pavement temperatures.

Flushing, or bleeding of the seal can occur if too much bitumen has been applied to the seal, or if the applied cover aggregate (s) have been pushed