



SAMI
Pty Limited
A.B.N. 52 001 089 416
12 Grand Ave
Camellia NSW 2142
PO Box 163
Granville NSW 2142
Australia
Telephone: 02 9638 0110
Facsimile: 02 9638 4090

TECHNICAL BULLETIN #13

Carbonyte Sealcoat High Performance Asphalt Pavement Sealant

Description

Carbonyte Sealcoat is a high performance pavement microsurfacing sealant. It is manufactured using technology derived from a decade of polymer science research to produce NASA's Space Shuttle exterior protective coatings. The advanced process used to produce Carbonyte Sealcoat converts bitumen into a superior-performing thermoplastic which penetrates deep into the pavement's surface where it weatherseals the surface.

Carbonyte Sealcoat is a Microsurfacing, which incorporates fine aggregates to provide texture to an asphalt surface. Carbonyte Sealcoat is also a very effective waterproofer and rejuvenator for sprayed seal surfaces.

Uses

Carbonyte Sealcoat is typically used on urban streets with low – medium traffic volumes, airport taxiways, or car parks where the existing surfacing requires rejuvenation and/or waterproofing as well as micro texture providing low speed skid resistance.

Carbonyte Sealcoat is recommended for the following:

- to protect or repair the surface from ageing and oxidising
- protect against weathering
- protect against tyre scuffing and power steering abuse
- to address a surface-ravelling problem
- to repair a very "open" asphalt surface, or fine cracking

Benefits

There are many benefits to be gained by treating a pavement surface with Carbonyte Sealcoat.

- seals pavement surfaces against sun and moisture damage
- rejuvenates oxidised asphalt or sprayed seal surfaces
- provides the pavement with a "black" surface
- extends pavement life and lowers maintenance costs
- resistant to power steering abuse
- no tyre scuffing in high temperatures
- highly water-resistant once cured
- UV solar resistant
- provides surface texture offering skid resistance
- fast curing, and in some conditions can be applied at nighttime
- able to have Pavement Markings applied immediately after curing
- has tenacious adhesion and will not delaminate
- non-hazardous

Typical Properties

| Property | Test Method | Results |
|---|---------------------------------|--|
| Long Term Weathering (>150 months) | Controlled field tests | No cracking, crazing or shrinkage fissures. Retains black hue. |
| Accelerated 10,000 hour QUV | ASTM E 96 | Passes and retains black hue |
| Aged Colour Retention (Beckman 5240 spectrophotometer) | ASTM E903 | Exhibits less than 3% spectra reflectance at 60 months |
| Wet Track Abrasion | ISSA a-105(TB 100) ASTM 3910 | < 5 grams loss, 6 day soak |
| Ductility / Flexibility | ISSA TB 146 | Passes at 0°C |
| Skid Resistance | Caltrans SRL Standard | Passes 60 Kph |
| Aggregate to Asphalt adhesion | ISSA TB 114 Boiling test | Passes at >95% adhesion |
| Solids Content | ASTM D244 | 58% minimum |

Pavement Preparation

Prior to application the surface must be thoroughly cleaned. Repair all potholes and seal cracks. SAMI's Pavefix is recommended to fill potholes, and SAMIfilla HM is recommended for crack sealing.

Application

SAMI's Carbonyte Sealcoat is spray applied at ambient temperature using purpose-built equipment operated by SAMI Road Services. The application rate is dependent on the pavement condition, porosity, surface texture and age of the asphalt. A general guide for a single coat application is between 0.6 – 0.8 litres per m². A double coat application may be required where the surface is rougher than normal and in this situation both coats will be applied at around 0.60 litres per m². Surfaces to be treated should be dry otherwise moisture trapped under the Carbonyte Sealcoat will blister the new coating. Concrete surfaces are particularly susceptible and may require a SAMIprime prior to treatment.

Curing

Carbonyte Sealcoat is fast drying without the need for direct sunlight and dries from the bottom up which means that when the surface appears dry, it is dry. Generally a single coat is usually sufficient to seal most surfaces against all moisture intrusion. Curing takes place in two distinct phases. The first is a rapid cure, which is normally trafficable in less than 30 minutes, the second is a substantial hardening of the surface which under sunny conditions takes about 4 hours. Once cured, Carbonyte Sealcoat is not affected by water or rain, and can have pavement markings applied. If a second coat is required, the first coat must have fully cured before the second application.

NOTE: Whilst every care is taken in the preparation of this bulletin, no responsibility is accepted for the interpretation of the information contained herein, nor is any warranty expressed or implied for the suitability of the material for a particular application.