

Application of Asphalt over Tufflon P80 Membrane

CASE STUDY

THE SITUATION



Waterproofing asphalt roads

Polyurea has been used as a waterproofing beneath hot asphalt, Bridge decks, car parks and road decks. The asphalt is used as a wearing sacrificial top layer.



THE SOLUTION



High temperature tolerance - short-term,
- Fresh asphalt placed at 140 - 180 °C,
Can deal with short-duration thermal spikes.

Seamless, fully bonded membrane -
mono lithic, joint free membrane.
Eliminates failures due to vibration found
in sheet membranes.

High Tensile strength and elongation -
Deals with concrete shrinkage, thermal
cycling and vibration from traffic.

Fast cure - meets need for fast construction.

Epoxy primer resistant to heat

- 1 coat of LV 100 sealer coat (4m²/L) instead of 2 coats
- 1 coat of HB 200 (DFT : 200µm)
- Spray coat P80 (DFT : 2-3mm)

The monolithic, fully bonded membrane eliminated joints and laps, reducing potential water ingress pathways commonly associated with sheet membrane systems.

THE RESULTS



The polyurea waterproofing system installed beneath the asphalt driveway in July 2022 has performed as intended during and after asphalt placement. The membrane successfully withstood short-term exposure to hot asphalt temperatures (approximately 140–180 °C) without visible degradation, blistering, softening, or loss of adhesion.

No cracking, splitting, or delamination of the polyurea membrane has been observed, indicating effective tolerance of thermal shock during asphalt placement.

The system has accommodated substrate movement, thermal cycling, and traffic-induced vibration without distress, consistent with the high tensile strength and elongation properties of the polyurea.

The epoxy priming system (LV100 sealer and HB200 primer) maintained adhesion and stability during heating, confirming suitability for use beneath hot asphalt.

The fast cure characteristics enabled efficient construction sequencing, with no delays to asphalt placement.

Applied in July 2022 - and it has been in service for 4 years without issues.

PROJECT OVERVIEW: Commercial Surface Solutions

PRODUCTS USED: CiviloX LV100 Sealer, CiviloX HB200, Tufflon P80 Polyurea

SOURCE: Hurttville, NSW, Australia