

# AfPA Technical Memo: Bitumen Supply, Specification, and Quality

28 April 2026

Following national media coverage of disruptions to Australia's bitumen supply chain, the Australian Flexible Pavement Association is providing technical context to ensure accurate industry and public understanding of the current supply position, specification arrangements, and long-term quality considerations. AfPA contributed directly to the ABC's national coverage of these developments, and we welcome the public conversation it has generated. Our focus now is on converting this moment of national attention into lasting, evidence-based reform that strengthens Australia's road infrastructure supply chain for the long term.

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## Current Supply Position (28 April 2026)

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The majority of bitumen supplied across Australia remains fully compliant with Australian specifications. Imports continue to be overwhelmingly C-grade bitumen, blended to meet Australian specification requirements upon receipt. Where specification waivers have been granted by state road authorities, they relate to a limited number of specific supply instances. This is not a market-wide change in bitumen quality. Supply is being supplemented with some penetration-grade bitumen from alternative international sources, but the primary supply base remains C-grade compliant.

## Technical Context: Harder-Grade Spray Seal Binders in Australia (C240)

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The vast majority of spray seal work is performed using C170 as a base binder. However, the use of harder-grade spray seal binders is not new to Australian practice. C240 bitumen has been used widely in New South Wales as the preferred product for over 15 years, a period covering more than a full spray seal lifecycle. This established track record provides a strong, evidence-based understanding of how harder-grade binders perform under Australian conditions. Other Australian jurisdictions have utilised harder-grade binders in spray seal applications under some of the country's most intense heat and demanding climatic conditions. Real-world experience from these States demonstrates that appropriately selected harder binders perform reliably under high-temperature and vehicle tyre stresses when paired with sound design and construction practices.

The C240 specification waiver is therefore not expected to create issues with cracking or long-term performance. All other material and performance specifications remain fully met, with the only variation being the substitution for C170 in spray seal applications.

The C170 classification itself covers a viscosity range of 140–200 at high road surface temperatures where cracking is not an issue. It is a specification range, not a single value to govern potential bleeding and flushing in sprayed seals. Variation within this range is normal and expected in standard practice.

## Polymer Modification: The Performance Factor That Matters Most

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In practice, C170 bitumen is not often sprayed neat in Australian road construction. Many spray seals are modified with polymers such as styrene-butadiene-styrene (SBS) or crumb rubber derived from end-of-life tyres. These modifications enhance critical performance characteristics including elasticity, crack resistance, and aggregate retention. The performance changes produced by polymer modification far exceed any variation in base binder viscosity. Modified binders produced from these bitumens fully meet required specifications. The critical technical requirement is that the base bitumen is compatible with the polymer system, and this compatibility is being maintained across current supply.

## Field Performance and Preventative Maintenance

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AfPA's position is clear: bitumen quality is ultimately defined by performance in the field. The single most important factor in delivering long-term, high-quality pavement performance is maintaining the road network with a periodic, routine resealing program, approximately 7 to 10% of the network annually, equating to a 10 to 15-year resealing cycle. A consistent preventative maintenance program outweighs any consideration of binder input variation.

AfPA's message to all clients and state road authorities is clear: the path to safe, fit for purpose, long-life high-quality road surfaces is investment in **timeous periodic maintenance of 7-10% of the network annually**.

## AfPA's Key Message, Industry Response and Forward Agenda

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The flexible pavement industry has responded effectively to the current supply disruption. Contractors, bitumen suppliers, and state road authorities have collaborated to source fit for purpose alternative supply, maintain construction schedules, and protect the functionality of Australia's road network, including disaster recovery works and major infrastructure projects. This response demonstrates the sector's capability and adaptability. It also creates a clear opportunity, one that AfPA is actively pursuing, to formalise the lessons learned into durable policy frameworks.

**AfPA will continue to engage with state road authorities nationally to advance three priorities:**

1. An AfPA led national review and harmonisation of bitumen specifications against international supply realities, delivering more flexible and accessible supply chains without compromising quality to ensure that they remain fit for purpose.
2. Formalised emergency response frameworks and specification protocols that enable the industry to respond to future disruptions by design, not improvisation.
3. Ensuring that whole-of-supply-chain, including the sector's smaller contractors and regional operators, who carry significant exposure in supply disruptions, are protected through fair contract mechanisms and transparent supply arrangements.

AfPA contributed directly to the ABC's national coverage of this issue, and we welcome the public conversation it has generated. Our focus now is on converting this moment of national attention into lasting, evidence-based reform that strengthens Australia's road infrastructure supply chain for the long term.

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