



# Review of Australasian and Overseas Specifications and Performance Tests for Bitumen

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This report describes a literature review on the bitumen/binder specifications and test methods used in Australasia, USA, Europe and South Africa. The project investigated whether the Australian and New Zealand bitumen specifications are adequately related to performance, and appropriate for evaluating the current generation of bitumens.

The Australian bitumen specification (AS 2008) and PMB specification ([AGPT/T190](#)) were found to be able to rank the performance of binders at high road

temperatures (e.g. 60 °C), and also could account for regional climatic variations. Concerns have been raised in New Zealand about the New Zealand bitumen specification (NZTA M1) as bitumens are increasingly being imported into the country. As a result of these concerns, new bitumen/binder specifications have been under development in New Zealand. Preliminary New Zealand validation studies appear to suggest that the new specifications may be appropriate for evaluating the performance of asphalt and sprayed sealing grade binders in New Zealand.

The current Australian and the proposed New Zealand bitumen specifications were not immediately interchangeable in their current forms, and thus further studies would be required if a common specification is to be developed for the two countries in the future.

A review of international development work into performance-based specifications indicated that traditional binder tests (e.g. viscosity at 60 °C and penetration at 25 °C) were generally considered suitable for ranking the performance of bitumens. A number of potential performance-based tests are currently under development in various countries to characterise the properties of PMBs. The results of this research are expected to provide useful information when the Australian and New Zealand PMB specifications are updated

## Table of Contents

### Summary

#### 1. Introduction

#### 2. Australian Specifications

- 2.1 Viscosity Grading for Bitumen
- 2.2 AS 2008 and Performance Properties
  - 2.2.1 Australian Studies of the Rut Resistance of Bitumen
  - 2.2.2 European Studies of Capillary Viscosity Results
  - 2.2.3 AS 2008 and Sprayed Seal Surfacing Performance
- New Zealand specification for sprayed sealing bitumens
- Texas SPG specification

- 2.3 Austroads AGPT/T190 Specification for PMBs
- 2.4 AGPT/T190 and Performance Properties
- 2.4.1 Elastometer Consistency 6% and Binder Rut Resistance in Asphalt
- 2.4.2 Extensiometer Force Ratio and Cracking Resistance of Binders

### **3. New Zealand Specifications**

- 3.1 Penetration Grading for Bitumen
- 3.2 Development for Performance-based Specifications
- 3.3 Draft Specification for Sprayed Sealing Bitumens
- 3.4 Sprayed Sealing Bitumen Specification and Performance Properties
- 3.4.1 MSCR Test for High and Intermediate Temperature Performance
- Aggregate retention at high road temperatures
- Aggregate wetting at intermediate temperatures
- 3.4.2 Tensile Strength Test for Aggregate Retention at Low Temperatures
- 3.4.3 Durability
- 3.4.4 Resistance to Water Stripping

### **4. Comparison between Australian and New Zealand Bitumen Specifications**

- 4.1 Comparison of Test Methods and Criteria
- 4.2 Comparison of Grading Methods
- 4.3 Feasibility of Testing PMB Materials

### **5. US Specifications**

- 5.1 Penetration Grading for Bitumen
- 5.2 Viscosity Grading for Bitumen
- 5.3 Superpave Performance Grading (PG) for Asphalt Binders
- 5.4 Further Development for the PG Specification
- 5.4.1 Multiple Stress Creep Recovery Test for High Temperature Performance
- 5.4.2 Tests for Intermediate Temperature Performance
- 5.5 TxDOT Surface Performance Grading (SPG) Specification for Sprayed Sealing Binders
- 5.5.1 SPG Specification and Performance Properties

### **6. European Specifications**

- 6.1 Penetration Grading for Bitumen
- 6.1.1 EN 12591 and Performance-related Properties
- 6.2 Specifications for PMBs
- 6.2.1 EN 14023 and Further Development

### **7. South African Specifications**

- 7.1 Penetration Grading for Bitumen
- 7.1.1 Bitumen Specification and Performance Properties
- 7.2 Proposal for a Performance-based Specification Framework

### **8. Summary and Conclusions**

#### **References**

#### **Appendix A Australian AS 2008 Bitumen Specifications**