

**PART R33**  
**DESIGN OF SPRAY SEALS**

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**1. GENERAL**

- .1 This Part specifies the requirements for the design of Spray Seal Wearing Courses, which includes seals for new pavements and reseals.
- .2 The Contractor shall prepare a design that achieves the required surface characteristics.
- .3 The following documents are referenced in this Part:
  - (a) AUSTRROADS 2000

**2. FUNCTIONAL REQUIREMENTS**

- .1 The Contractor shall design the of seal treatment to achieve the following requirements:
  - (a) the Expected Design Life, in accordance with Table 2.11 "Typical Service Lives and Suggested Initial Inspection Times" of "Guide to Selection of Road Surfacing, AUSTRROADS 2000";
  - (b) a seal treatment that effectively seals any cracks and provides a waterproof surface for the design life of the seal;
  - (c) minimal loose aggregate after application to reduce the potential for accidents and broken windscreens;
  - (d) retention of aggregate after application to provide a skid resistant surfacing and prevent water from entering and weakening the pavement;
  - (e) surface texture to optimise contact between the road surface and tyres, and provide a skid resistant surface; and
  - (f) uniform colour and texture appearance.
- .2 These functional requirements also apply to the first application of a double application seal until the final treatment is applied.
- .3 The design shall be undertaken in accordance with proven design method based on sound scientific principles. For reseals, existing site and pavement conditions shall be incorporated into final designs and treatments.

**3. DESIGN INFORMATION**

- .1 At a minimum, the following information shall be submitted with the design:
  - (a) The proposed treatment;
  - (b) Rationale for the selection of proposed treatment;
  - (c) Design input data, and design methodology (including ALD, flakiness, pavement hardness, AADT's and Commercial Vehicles);
  - (d) Proposed additives to be used;
  - (e) Aggregate source, type and design rates of application;
  - (f) Binder source, type and design rates of application;
  - (g) Details of other necessary materials or products for each job;
  - (h) Details of proposed NATA endorsed laboratory;
  - (i) An assessment of the failure mechanism;
  - (j) Existing texture;

- (k) Recent experience and expertise in selection and design of pavement surfacing and sealing; and
- (l) Sufficient information to enable the design to be evaluated. This shall include, but is not limited to, the following:
  - (i) summary report detailing critical aspects of the design.
  - (ii) statement of the manner in which the maintenance serviceability and durability requirements have been satisfied in the design for all elements.

- .2 If the above information has not been provided prior to the Date of Acceptance of Tender, the information shall be provided no later than 30 days prior to the commencement of the sealing work.
- .3 Provision of the information shall constitute a **HOLD POINT**.
- .4 If any aspect of the design changes (e.g. actual input data is different from that assumed in the initial design), the Contractor shall immediately submit the changes to the Principla.
- .5 The design may not be changed without prior approval of the Principal.

**4. HOLD POINTS**

- .1 The following is a summary of Hold Points referenced in this Part:

| CLAUSE REF. | HOLD POINT                      | RESPONSE TIME |
|-------------|---------------------------------|---------------|
| 3.          | Provision of design information | 1 week        |

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