

Specification (Measurement)

**Transport and Main Roads Specifications
MRS13 Microsurfacing**

November 2025

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1 Introduction

This Specification applies to the manufacture and laying of a microsurfacing road surfacing system.

This Specification shall be read in conjunction with MRS01 *Introduction to Specifications* and other Specifications as appropriate.

This Specification forms part of the Transport and Main Roads Specifications Manual.

2 Measurement of work

2.1 Standard Work Items

In accordance with the provisions of Clause 2 of MRS01 *Introduction to Specifications*, the Standard Work Items covered by this Specification are listed in Table 2.1.

Table 2.1 – Standard Work Items

Standard Item No.	Description	Unit of measurement
Bituminous Slurry Surfacing		
40901	Preparation of existing surface	m ²
40909	Tack coat	litre
40910	Microsurfacing, Size [<i>nominal size</i>]	m ³
40911	Microsurfacing rut-filling, Size [<i>nominal size</i>]	m ³

2.1.1 Work Operations

Item 40901 Preparation of existing surface

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) setting out
- c) surface cleaning
- d) protection of Services, and
- e) water fog coat application.

Item 40909 Tack coat

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) supply and application of tack coat.

Item 40910 Microsurfacing, Size [*nominal size*]

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) having a registered Mix Design or obtaining a registered Mix Design
- c) supply and delivery of all materials
- d) manufacture of the microsurfacing in accordance with the Job Mix design
- e) undertaking a placement trial (if required), and
- f) laying and finishing the microsurfacing treatments.

Item 40911 Microsurfacing rut-filling, Size [*nominal size*]

Work Operations incorporated in the above items include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) having a registered Mix Design or obtaining a registered Mix Design
- c) supply and delivery of all materials
- d) manufacture of the microsurfacing in accordance with the Job Mix design
- e) undertaking a placement trial (if required), and
- f) laying and finishing the microsurfacing treatments.

2.1.2 Method of measurement

2.1.2.1 Preparation of the existing surface

The preparation of the existing surface shall be measured as the area over which the microsurfacing is laid.

2.1.2.2 Tack coat

The quantity of the tack coat, as residual bitumen at 15°C, shall be determined from the area on which the tack coat is placed and the nominated application rate of residual bitumen.

2.1.2.3 Microsurfacing treatments

The quantity of microsurfacing shall be measured by volume of dry mineral aggregate (not including filler) used in completing the Works.

3 Utilisation of a rejected lot for a reduced level of service.

3.1 General

For the purposes of this clause, a particle size distribution, binder content or softening point that does not conform to the acceptance criteria specified in Table 10.6 of MRTS13 *Microsurfacing* constitutes a defect.

Where approved by the Administrator, a Lot which contains 6 or less defects may be utilised for a reduced level of service provided that:

- a) The Contractor takes the necessary action to prevent recurrence of the nonconformance and states, on the nonconformance report, what action is to be taken, and
- b) The Contractor accepts payment for the lot at the reduced value given in Clause 3.3.

A Lot in which more than 6 defects shall not be utilised for a reduced level of service and must be rectified so as to comply with the requirements of this Specification.

If the test results indicate that the defects arise from aggregate gradings and the Contractor can demonstrate by way of an alternative mix design that the gradings used have no detrimental effect on compliance with the mix properties set out in Table 7.2 of MRTS13 *Microsurfacing*, the number of defects may be re-calculated based on the alternative mix design.

The cost of all replacement or corrective works, including any restoration work to the underlying or adjacent pavement, surface or structure must be borne by the Contractor. Material removed from the Works must be replaced by conforming materials.

If the Contractor proposes to rectify nonconforming microsurfacing by means other than removal and replacement with conforming microsurfacing, it must submit a proposal to the Administrator with evidence that long term performance of the microsurfacing will not be adversely affected.

3.2 Calculation of defects

Calculation of defects is based on variation of the aggregate particle size distribution and binder content from the Job Mix design as shown in Table 3.2.

The aggregate particle size distribution determined from samples taken on the job should be within the appropriate particle size distribution band for that nominal size.

The percentage passing each sieve must not vary from those specified in the Job Mix design by more than the maximum permitted variation shown in Table 9.15 of MRTS13 *Microsurfacing*. Any value exceeding the limits is counted toward calculation of the total number of defects.

The total number of defects in a Lot is calculated as the number of defects in the two samples representing that Lot. In the case of a terminated Lot, for which only one sample has been obtained, the number of defects must be twice the number of defects in the sample.

Table 3.2 - Defects schedule

Measurement	Variations ¹	Number of defects
% Passing	1 or 2 measurements:	1
13.2 mm	3 measurements:	2
9.50 mm		
6.70 mm		
4.75 mm		
2.36 mm		
1.18 mm		
0.600 mm		
0.300 mm		
0.150 mm		
% Passing 0.075 mm		
Binder content, % by mass	Each 0.25% in excess of 1.0% over or below 0.5% under the binder content nominated in the Job Mix design:	1
Softening Point of the residual binder	Each 2°C under the minimum:	1

¹ Over the particle size distribution limits for the nominal size specified in Table 6.4 of MRTS13 Microsurfacing or the maximum permitted variations shown in Table 9.15 of MRTS13 Microsurfacing.

3.3 Determination of the reduced value

The reduced value for defects in a lot shall be determined from Table 3.3.

Table 3.3 - Reduction in value for defects in a lot

Average Number of Defects in a Lot	Percentage Reduction in Value
1-2	2
3	5
4	10
5	15
6	20
> 6	Remove and replace

