



Asset Management Section – Head Office

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Highway Management Division Memorandum No. SM 8/01/04

Subject: Skid Resistance for New Surfacing

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Circulation: Regional Managers
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1. Purpose

This memo is to advise Highway Management Division skid resistance requirements for **all new surfacings** (resurfacing or new construction). Possible upgrade of surfacings laid prior to the date of this memo will be covered by specifications expected to be issued shortly.

2. Background

Requirements for macro texture are currently found in the Bituminous Sealing Manual, and SHAMM manual. Requirements for PSV are found in the specification T/10 Skid Resistance Deficiency Investigation.

3. Requirements

The following requirements shall be followed for **all** new surfacings.

1. All aggregate used in new surfacings shall meet the requirements of the PSV equation in section 5.1 of T/10: 1999.
2. Macrotexture for all new surfacings shall be in accordance with the table below:

	Minimum Macrotexture; MPD (mm)
Urban; legal speed less than 70kph	0.7
Rural; legal speed greater than or equal to 70kph	0.9

Note:

1. It will be acceptable for up to 1.0m² of pavement in any 100m² to fall below the above texture requirements provided free bitumen is not present on the pavement surface.
2. These texture requirements are in addition to any requirements in other specifications. For example all chipseals should have macro texture well in excess of these requirements when new.

4. Discussion

1. These requirements are not new but have been ignored in the past. This instruction allows us to bring new construction into line with our resurfacing requirements, and addresses the issue of low skid resistance from traditional dense asphaltic concrete mixes. The evidence is clear that even with high PSV aggregates the lack of macro texture in dense asphaltic concrete mixes leads to a higher than necessary crash rate.
2. It is accepted that the timing of this notice will not be ideal in terms of the contract round. It is likely that some consultants will have specified non conforming surfacing in contracts out to bid or accepted. Where this is the case, please raise these with Dave Cook, Surfacing Engineer, 04 496 6658 in the first instance so that we can get a handle on the scale of the problem.
3. Surfacing to be replaced or overlaid within 12 months may use lower PSV aggregate provided it is shown that the micro texture (Investigatory level SFC table 1 of T/10 1999) will be exceeded for the life of the surfacing and the designer ensures a check is made that the surfacing is overlaid within 12 months. In addition the contingency action to be taken should the surfacing not be covered within 12 months shall be detailed.

4. Well designed surfacings using the following mixes should meet the above macro texture requirements: Chipseals, OGPA, macadam mixes, SMA, UTA. Mix 20 is marginal and should only be used where evidence of acceptable use can be shown.
5. The following mixes are unlikely to meet the macro texture requirements: Mix 10, slurry, and bitumen rich mixes (eg British hot rolled asphalt)
6. Some high texture surfacings will generate more noise than others. Safety in terms of this memo must not be traded off against reduced noise.

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