

## RTA QA SPECIFICATION 3368

### SKID RESISTANT FRICTION COATING FOR TEMPORARY STEEL ROAD PLATES

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### REVISION REGISTER

<b>Edition Number</b>	<b>Clause Number</b>	<b>Description of Revision</b>	<b>Authorised By</b>	<b>Date</b>
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Ed 2	Global	Clauses re-numbered	GM, IC (P Bamford)	24.10.06
Ed 2/Rev 1	“Notice” Spec Ref No Foreword Annex C	RTA PO Box and Fax numbers updated Revision No added. Previous version deemed to be Revision 0. Copyright clause added Clause reference corrected	GM, IC	18.02.09
Ed 2/Rev 2	Global	Clauses rearranged and renumbered to be consistent with other Materials specs. Text changed to direct imperative.	GM, IC	04.08.09

<p style="text-align: center;"><b>GUIDE NOTES</b> (Not Part of Contract Document)</p>
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This is a Quality Assurance specification.

It is to be used in contracts where a quality management system is required to be in place by the contractor/supplier.

The application of QA in contracts must be appreciated and understood prior to the use of this document.





QA SPECIFICATION 3368

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# SKID RESISTANT FRICTION COATING FOR TEMPORARY STEEL ROAD PLATES

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## FOREWORD

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### REVISIONS TO EDITION 2

This document is based on RTA Specification 3368 Edition 2 Revision 0 – October 2006.

All revisions to RTA 3368 Ed 2/Rev 0 (other than minor editorial and project specific changes) have been indicated by a vertical line in the margin as shown here.

### PROJECT SPECIFIC CHANGES

Any project specific changes have been indicated in the following manner:

- (a) Text which is additional to the base document and which is included in the Specification is shown in bold italics e.g. ***Additional Text***.
- (b) Text which has been deleted from the base document and which is not included in the Specification is shown struck out e.g. ~~Deleted Text~~.



# RTA QA SPECIFICATION 3368

## SKID RESISTANT FRICTION COATING FOR TEMPORARY STEEL ROAD PLATES

### 1 SCOPE

This Specification sets out the requirements for coatings applied to temporary steel road plates (e.g. over road openings) in order to improve the skid resistant frictional properties of the road plates.

The requirements for field measurement of the frictional properties of existing coated road plates prior to installation and in service are included.

### 2 STRUCTURE OF THE SPECIFICATION

This Specification includes a series of annexures that detail additional requirements.

#### 2.1 (NOT USED)

#### 2.2 SCHEDULE OF IDENTIFIED RECORDS

The records listed in Annexure 3368/C are Identified Records for the purposes of RTA Q Annexure Q/E.

#### 2.3 (NOT USED)

#### 2.4 REFERENCED DOCUMENTS

Unless otherwise specified or is specifically supplied by the Principal, the applicable issue of a referenced document is the issue current at the date one week before the closing date for tenders, or where no issue is current at that date, the most recent issue.

Standards, specifications and test methods are referred to in abbreviated form (e.g. AS2439.1). For convenience, the full titles are given in Annexure 3368/M.

### 3 DEFINITIONS

**British Pendulum Number (BPN):** A quantitative estimate of the adherence of a rubber slider to a wet surface determined by measuring the energy lost in friction of the rubber slider against the wet surface.

**Friction Coating:** A coating designed to be applied to temporary steel road plates which will result in surface skid resistance properties fit for the purpose of vehicular trafficking. Skid resistance is assessed by the coating achieving a specified minimum British Pendulum Number (BPN), both as applied and

after a specified regime of simulated trafficking and polishing.

## **4 QUALITY MANAGEMENT SYSTEM**

Establish and maintain a Quality Management System in accordance with ISO 9001 as a means of ensuring that the product conforms to the Specification requirements.

Provide a certificate of compliance verifying that the frictional coating complies with Clause 4 of this Specification.

## **4 MATERIAL REQUIREMENTS**

### **4.1 COMPOSITION**

The friction coating must be composed of resinous binder and inert mineral matter.

### **4.2 GENERAL**

When applied to a smooth steel road plate according to the manufacturer's recommendations, the friction coating must demonstrate the specified performance when subject to the following tests in Clauses 4.3 to 4.6.

### **4.3 COLOUR**

When examined visually in accordance with AS/NZS 1580.601.1, the friction coating must be an approximate match to any grey colour in the range N32 to N65, or to the red colour R62 of AS 2700S. The luminance factor should be no greater than 0.14.

### **4.4 PULL-OFF ADHESION TEST**

When tested in accordance with AS/NZS 1580.408.5, the friction coating must show no sign of cohesion and/or adhesion failure at a load of 3.0 MPa.

### **4.5 RESISTANCE TO WATER IMMERSION**

When tested in accordance with AS/NZS1580.455.1, after immersion in water at  $23 \pm 2^\circ\text{C}$  for 1,000 hours, the friction coating must show:

- (a) no softening, swelling or delamination.
- (b) no difference in the scratch resistance of the immersed and the unimmersed coating.
- (c) no material removed by rubbing with cotton wool.

### **4.6 FRICTION VALUE**

When tested in accordance with the procedures of AS 1141.41 and AS 1141.42 the initial and final British Pendulum Number (BPN) must be not less than 55.

## **5 MEASUREMENT OF SKID RESISTANCE OF EXISTING COATED STEEL ROAD PLATES**

### **5.1 MEASUREMENT FREQUENCY**

The BPN of the friction coating of each existing coated steel road plate must be measured at the storage stockpile or on the road:

- (i) prior to its initial installation in the roadway at the site.
- (ii) for road plates in continuous use under traffic, after every 12 months of service.

In addition, for road plates in continuous use at one site, the BPN must be measured where, by visual assessment:

- (iii) more than 10% of the total area of the coating is polished, damaged or missing.
- (iv) more than 20% of the coating is polished, damaged or missing in a clearly defined wheel path.

In cases (iii) and (iv) the BPN must be measured after completion of necessary remedial work to the polished, damaged or missing areas of the friction coating.

### **5.2 TEST METHOD FOR MEASUREMENT**

The frictional resistance of existing coated steel road plates must be measured using a portable skid resistance tester in accordance with RTA T231.

The measurements must be taken in and between the positions of the wheel paths at the rate of one measurement per linear metre in the direction of traffic.

### **5.3 FRICTION VALUE**

When tested in accordance with RTA T231, the Skid Resistance Value (SRV) measured in units of British Pendulum Number (BPN) must be not less than 55.

**ANNEXURE 3368/A – (NOT USED)**

**ANNEXURE 3368/B – (NOT USED)**

**ANNEXURE 3368/C – SCHEDULE OF IDENTIFIED RECORDS**

Refer to Clause 2.2.

The records listed below are Identified Records for the purposes of RTA Q Annexure Q/E.

<b>Clause</b>	<b>Description of the Identified Record</b>
2	Certificate of compliance

**ANNEXURES 3368/D TO 3368/L – (NOT USED)**

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## **ANNEXURE 3368/M – REFERENCED DOCUMENTS**

Refer to Clause 2.4.

### **Australian Standards**

AS/NZS 1580	Paints and related materials - Methods of test
AS/NZS 1580.408.5	Paints and related materials - Methods of test - Adhesion - Pull-off test
AS/NZS 1580.455.1	Paints and related materials - Methods of test - Resistance to water at room temperature
AS/NZS 1580.601.1	Paints and related materials - Methods of test - Colour - Visual comparison
ISO 9001	AS/NZS ISO 9001 – Quality management systems – Requirements
AS 1141	Methods for sampling and testing aggregates
AS 1141.41	Methods for sampling and testing aggregates - Polished Aggregate Friction Value – Horizontal bed machine
AS 1141.42	Methods for sampling and testing aggregates - Pendulum Friction test
AS 2700S	Colour Standards for general purposes

### **RTA Test Method**

RTA T231	Frictional Resistance by Pendulum Tester
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### **RTA Specification**

RTA Q	Quality Management System
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