

**TRANSPORT FOR NSW (TfNSW)**  
**QA SPECIFICATION 3269**  
**BITUMEN ADHESION AGENT**  
**(FOR POLYMER MODIFIED BINDER)**

**NOTICE**

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**REVISION REGISTER**

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Ed 1		Previously issued as RTA Specification No 3263 Edition 1, June 1991 First issued as RTA Specification No 3269 with no changes from RTA No 3263 Edition 1	GM, CMS	04.03.93
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Ed 5/Rev 0 (cont'd)	2.4 5.1, Annex M	Definitions of "you" and "your" added. References updated.		
Ed 5/Rev 1	Global	References to "Roads and Maritime Services" or "RMS" changed to "Transport for NSW" or "TfNSW" respectively.	DCS	22.06.20



# BITUMEN ADHESION AGENT (FOR POLYMER MODIFIED BINDER)

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IC-QA-3269

VERSION FOR: DATE:
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## FOREWORD

### TfNSW COPYRIGHT AND USE OF THIS DOCUMENT

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### REVISIONS TO PREVIOUS VERSION

This document has been revised from Specification TfNSW 3269 Edition 5 Revision 0.

All revisions to the previous version (other than minor editorial and project specific changes) are indicated by a vertical line in the margin as shown here, except when it is a new edition and the text has been extensively rewritten.

### PROJECT SPECIFIC CHANGES

Any project specific changes are 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~~.

# **TfNSW QA SPECIFICATION 3269**

## **BITUMEN ADHESION AGENT (FOR POLYMER MODIFIED BINDER)**

### **1 SCOPE**

This Specification sets out the requirements for adhesion agents compatible with various grades of polymer modified binder, for use in both sprayed sealing and asphalt works.

### **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 3269/C are **Identified Records** for the purposes of Specification TfNSW Q Annexure Q/E.

#### **2.3 (NOT USED)**

#### **2.4 REFERENCED DOCUMENTS AND DEFINITIONS**

Unless specified otherwise, the applicable issue of a referenced document, other than a TfNSW Specification, must be 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. AS 2350). For convenience, the full titles are given in Annexure 3269/M.

The term “the Supplier” means the supplier of the product covered by the scope of this Specification.

### **3 (NOT USED)**

### **4 SUPPLIER’S QUALITY MANAGEMENT SYSTEM**

The Supplier must establish and maintain a Quality Management System complying with AS/NZS ISO 9001 as a means of ensuring that the product conforms to this Specification.

Provide evidence verifying compliance with this Clause.

## **5 MATERIAL REQUIREMENTS**

### **5.1 SAFETY**

The material must not contain any components which, when handled in accordance with approved work practices (such as those contained in “TfNSW Sprayed Sealing Guide” and “Austroads Guide to Pavement Technology Part 4B”), will cause the worker to be exposed to harmful substances above the legal limit concentration.

### **5.2 HOMOGENEITY**

The material must be homogeneous. Liquid adhesion agents after agitation and when ready for use must remain free from skinning, precipitation or any other deterioration for 72 hours (Test Method TfNSW T590).

### **5.3 CONCENTRATION**

The percentages of adhesion agent quoted in Clause 5.4 and “TfNSW Sprayed Sealing Guide” are based on a 40/60 mixture of adhesion agent concentrate/diesel fuel oil.

Where adhesion agent concentrate is to be used alone, adjust the actual percentage of product used accordingly.

### **5.4 RESISTANCE TO STRIPPING**

Blend the adhesion agent with the specified grade of polymer modified binder at a concentration of 0.5% v/v.

When tested in accordance with Test Method TfNSW T230 with the specified grade of polymer modified binder and each of the four aggregates: Microgranite (ex Mugga 1 Quarry, Canberra), Basalt (ex Peats Ridge), Quartzite (ex Marrangaroo, Lithgow) and Nepean River Gravel (ex Emu Plains) under the following two surface conditions:

- (i) dusty;
- (ii) saturated surface wet,

the percentage stripped must not exceed 10% with any combination of aggregate and surface condition listed above.

### **5.5 CONCENTRATION OF ACTIVE COMPONENT**

Provide details of a reproducible laboratory test which will allow the concentration of the active component of the material to be determined. Specify an average value for the concentration of the active component and an acceptable minimum value above which the material is considered to be effective.

## **6 PRODUCT CERTIFICATION**

Provide a certificate of compliance verifying that the adhesion agent complies with Clauses 5.2 and 5.4 of this Specification, together with test results reported on NATA endorsed test documents.



The certification must relate only to the formulation of the product on which the tests were carried out. New certification will be required every three (3) years or whenever a change in product formulation is made.

## **7 IDENTIFICATION OF CONTAINERS**

Mark each container clearly and durably with the following information.

- (a) name of manufacturer and/or supplier;
- (b) trade name of the product (if applicable);
- (c) product reference number or identification number;
- (d) grade(s) of polymer modified binder with which the adhesion agent is compatible;
- (e) batch number or date of manufacture; and
- (f) "Use By" date.

Provide a copy of the certificate of compliance and Safety Data Sheet with each delivery.

## **8 INFORMATION TO BE PROVIDED BY SUPPLIER**

Provide a Materials Data Sheet which include the following information:

- (a) whether the adhesion agent is in the form of a solid, liquid or paste.
- (b) chemical and physical properties.
- (c) information as to the effectiveness of the adhesion agent when it is subjected to prolonged heating. This must take the form of a table or graph of values depicting the % loss of effective adhesion agent (at temperatures of 160°C and 180°C) as a function of time, expressed in hours. The maximum period of prolonged heating, in bitumen at temperatures of 160°C and 180°C, to which the adhesion agent may be subject without losing its effectiveness must also be stated.
- (d) recommended method of handling and mixing.
- (e) recommended mixing time.

## **ANNEXURES 3269/A TO 3269/B – (NOT USED)**

## **ANNEXURE 3269/C – SCHEDULE OF IDENTIFIED RECORDS**

Refer to Clause 2.2.

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

<b>Clause</b>	<b>Description of Identified Records</b>
5.5	Average and minimum value of concentration of active component and details of related tests
6	Certificate of compliance verifying that the adhesion agent complies with Clauses 5.2 and 5.4 together with test results reported on NATA endorsed test documents
7	Certificate of compliance and Safety Data Sheet to be supplied with each delivery
8	Materials Data Sheet

## **ANNEXURES 3269/D TO 3269/L – (NOT USED)**

## **ANNEXURE 3269/M – REFERENCED DOCUMENTS**

Refer to Clause 2.4.

### **TfNSW Specification**

TfNSW Q                      Quality Management System

### **TfNSW Test Methods**

TfNSW T230                Resistance to Stripping of Cover Aggregates and Binders.

TfNSW T590                Homogeneity of Liquid Precoats and Adhesion Agents.

### **TfNSW Guides**

TP-GDL-001                TfNSW Sprayed Sealing Guide.

### **Australian Standards**

AS 2008                      Residual bitumen for pavements.

AS/NZS ISO 9001        Quality management systems – Requirements

**Austrroads Documents**

AGPT04B/07

Guide to Pavement Technology – Part 4B: Asphalt

## **APPENDIX A**

The requirements of this Appendix will apply where the order on the Supplier is placed directly by the Transport for NSW (TfNSW).

### **A1 MEASUREMENT**

For adhesion agent supplied in drums, measurement for the purpose of payment will be based on litres. For bulk delivery, measurement for the purpose of payment will be by net mass as measured on a certified weighbridge.

### **A2 PAYMENT**

Payment for adhesion agent conforming to the Specification will be made on the basis of the quantities measured in accordance with Clause A1.

In the case of adhesion agent not conforming to the Specification, the cost of loading, freight and other charges incurred by the TfNSW prior to or subsequent to the material being rejected will be a charge against the Supplier.

The Supplier must provide the TfNSW with a certificate of compliance verifying that the adhesion agent complies with the specification before payment is made.