

TRANSPORT FOR NSW (TfNSW)
SPECIFICATION D&C 3269
BITUMEN ADHESION AGENT
(FOR POLYMER MODIFIED BINDER)

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Transport
for NSW

SPECIFICATION D&C 3269

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FOREWORD

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BASE SPECIFICATION

This document is based on Specification TfNSW 3269 Edition 5 Revision 1.

TfNSW SPECIFICATION D&C 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 D&C Q6 Annexure Q/E.

2.3 (NOT USED)

2.4 REFERENCED DOCUMENTS AND DEFINITIONS

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 D&C Q6 Annexure Q/E.

Clause	Description of Identified Record
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 D&C Q6 Quality Management System (Type 6)

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