

TRANSPORT FOR NSW (TfNSW)

QA SPECIFICATION 3265

QUICK DRYING PRIMER

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REVISION REGISTER

Ed/Rev Number	Clause Number	Description of Revision	Authorised By	Date
Ed 1/Rev 0		First issue.	DCS	19.09.19
Ed 1/Rev 1	Global	References to “Roads and Maritime Services” or “RMS” changed to “Transport for NSW” or “TfNSW” respectively.	DCS	01.05.20

<p style="text-align: center;">GUIDE NOTES (Not Part of Contract Document)</p>

Use of Quick Drying Primer

The quick drying primer is intended for use as a preliminary coating to enhance bonding of the binder of the subsequent bituminous surfacing layer to concrete surfaces such as that of a bridge deck, by counteracting the effects caused by the presence of dust, and filling voids and plastic shrinkage cracks in the surface. It is not intended to function as a tackcoat.

It is expected that within 24 hours after its spraying, the primer can be overlaid with the subsequent bituminous surfacing layer such as sprayed seal or asphalt.

The low binder content of the primer of 0.04 to 0.06 L/m² residual bitumen will apply only a minimum of binder to the concrete surface which is just sufficient to mitigate the effect of dust and promote adhesion to the subsequent layer.

The fast evaporating solvent is intended to leave little or no solvent behind, which could soften the overlying sprayed seal or asphalt.

Safety

Due to their low flash point, quick drying primers must be treated as “dangerous goods” as defined in the Australian Dangerous Goods Code (ADG Edition 7). The primer should not be heated.

The primer can generate highly flammable fumes which are denser than air, which should be managed for safety reasons, for example, measures must be taken to prevent the fumes from entering the stormwater drainage system or other confined spaces.

Application

The primer should not be applied over a surface which is damp or was wet in the previous 24 hours.



QUICK DRYING PRIMER

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IC-QA-3265

VERSION FOR: DATE:

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FOREWORD

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When this document forms part of a contract

This document should be read with all the documents forming the Contract.

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REVISIONS TO PREVIOUS VERSION

This document has been revised from Specification TfNSW 3265 Edition 1 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 3265

QUICK DRYING PRIMER

1 SCOPE

This Specification sets out the requirements for the supply of quick drying primer for sprayed bituminous surfacing. An example of such sprayed bituminous surfacing is that applied on concrete bridge decks where the quick drying primer is applied prior to the sprayed bituminous waterproofing membrane (refer Specification TfNSW B344).

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 3265/C are **Identified Records** for the purposes of Specification TfNSW Q Annexure Q/E.

2.3 (NOT USED)

2.4 REFERENCED DOCUMENTS

Unless otherwise specified, the applicable issue of a referenced document, other than a TfNSW Specification, 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. AS 1234). For convenience, the full titles are given in Annexure 3265/M.

3 DEFINITIONS

The terms “you” and “your” mean respectively “the Contractor” and “the Contractor’s”, or “the Supplier” and “the Supplier’s”, as appropriate.

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

References to the “quick drying primer” have been abbreviated to “primer” in this Specification.

4 QUALITY MANAGEMENT SYSTEM

The Supplier must have in place 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 primer must not contain any known component which, when handled in accordance with accepted road making practice and within the temperature range recommended by the Supplier, would cause any person to be exposed to any injurious substance above the legal concentration limit.

Supply the Safety Data Sheet for each material.

5.2 CONSTITUENT MATERIALS

5.2.1 Binder

Binder used to manufacture the primer may be either:

- (a) Class C170 or C240 bitumen conforming to Specification TfNSW 3253; or
- (b) Styrene butadiene styrene (SBS) type material such as S10E, S15E or S35E conforming to Specification TfNSW 3252.

5.2.2 Solvent

The solvent used to manufacture the primer may be xylol (xylene), or a refinery produced hydrocarbon "cut" which have a similar boiling temperature range to xylene, i.e. distilled to 95% by volume at or below 150°C and a final boiling point at or below 160°C (when tested in accordance with ASTM D86).

Submit a certificate of compliance for the solvent, supported with NATA endorsed test results which are less than three years old.

Ordinary medium curing cutback bitumen containing cutter such as that conforming to AS 3568 must not be used in formulating the primer.

5.3 QUICK DRYING PRIMER PROPERTIES

The primer must comply with the requirements of Table 3265.1.

Table 3265.1 – Quick Drying Primer Properties

Property	Test Method	Requirement
Non-volatile content (% by mass)	AS/NZS 2341.23 or AS 1580.301.1	$\geq 22, \leq 35$
Viscosity at 25°C (mPa.s)	AS/NZS 2341.2 or AS/NZS 2341.4 ⁽¹⁾	≤ 3.0
Matter insoluble in toluene (% by mass)	AS/NZS 2341.20 or AS/NZS 2341.26	≤ 1.0

Note:

⁽¹⁾ Using Brookfield Enhanced UL Adapter.

6 PRODUCT CERTIFICATION

The Supplier must provide a certificate of compliance, supported with NATA endorsed test results verifying that the primer complies with Clauses 5.2 and 5.3.

The Supplier must provide a new certification every three years or whenever a change in constituent materials or product formulation is made.

7 DELIVERY

7.1 CONTAINERS

All containers used to deliver the primer must be in good condition.

Implement procedures in accordance with your PROJECT QUALITY PLAN which will ensure that all containers are clean and free from any contaminants (including volatile hydrocarbons) which could alter the properties of the primer.

7.2 HANDLING TEMPERATURES

The temperature of the primer at the point of loading, and at the point of delivery, must not be greater than 50°C and 40°C respectively.

7.3 DETAILS OF CONSIGNMENT

Provide the following information with each delivery of the primer:

- (a) Manufacturer's name.
- (b) Batch number or date of manufacture.
- (c) Product name.
- (d) Loading temperature.
- (e) Delivery temperature of the primer.

- (f) Weighbridge tickets showing gross mass of the delivery, the mass of the empty vehicle or container and the net mass of the primer.
- (g) Certification that the delivery procedures in Clause 7.1 have been complied with for that delivery.
- (h) Documentary evidence that the solvent used to manufacture the primer complies with Clause 5.2.

8 CONFORMITY OF DELIVERED PRIMER

8.1 GENERAL

Verify conformity of the delivered primer with this Specification before its use in the Works by sampling and testing, and providing records of process control.

8.2 SAMPLING

Carry out sampling at the point of delivery at the frequencies agreed with the Principal.

Sampling must be conducted by a NATA signatory, or a nominee deemed competent for that sampling procedure with documented training records.

Take samples of the primer for testing in accordance with the relevant procedures set out in the sampling section of AS 2157.

8.3 TESTING

Carry out testing by a laboratory with current NATA registration for the tests specified in Clause 5.3.

Submit the test results directly to the TfNSW Pavements and Geotechnical Section within 14 days of delivery. The report may be forwarded by email to pavements@rms.nsw.gov.au.

8.4 NONCONFORMITIES

A consignment will be considered to be nonconforming if any single test result of a sample taken from that consignment in accordance with Clause 8.2 fails to meet the specified criteria in Table 3265.1.

Nonconforming primers must not be used.

Where such nonconforming primer has been delivered to the Site or applied, you must remove the nonconforming primer at your cost.

The cost of rectification or replacement, including any restoration to the work and to the Principal's premises or property that becomes necessary as a result of such rectification or replacement, will be borne by you.

Replacement primer must conform to this Specification.

ANNEXURES 3265/A AND 3265/B – (NOT USED)**ANNEXURE 3265/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.

Clause	Description
5.2.2	Certificate of compliance for solvent, together with test results
6	Certification at point of delivery that each batch of primer complies with Clauses 5.2 and 5.3, together with test results
8	Testing records verifying compliance of the delivered primer

ANNEXURES 3265/D TO 3265/L – (NOT USED)**ANNEXURE 3265/M – REFERENCED DOCUMENTS**

Refer to Clause 2.4.

TfNSW Specification

TfNSW Q	Quality Management System
TfNSW 3252	Polymer Modified Binder for Pavements
TfNSW 3253	Bitumen for Pavements

Australian Standards

AS 1580.301.1	Paints and related materials – Methods of test – Non-volatile content by mass
AS 2157	Cutback bitumen
AS 3568	Oils for reducing the viscosity of bitumen
AS/NZS ISO 9001	Quality management systems – Requirements
AS/NZS 2341	Methods of testing bitumen and related roadmaking products
AS/NZS 2341.2	Determination of dynamic viscosity by vacuum capillary viscometer
AS/NZS 2341.4	Determination of dynamic viscosity by rotational viscometer
AS/NZS 2341.20	Determination of sieve residue for bituminous materials
AS/NZS 2341.23	Determination of residue from evaporation
AS/NZS 2341.26	Determination of sieve residue for bitumen emulsion

ASTM Standard

D86

Test method for distillation of petroleum products.