

Applicant's Guide

Registration of Products used for Surface Treatments

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1 Introduction

This document outlines the Department of Transport and Main Roads (department) process for assessing and registering products used for Coloured Surface Treatments (CST) and High Friction Surface Treatments (HFST) on the department's infrastructure projects.

This document is maintained by Pavements, Research and Innovation Section of Engineering and Technology Branch of the department. Enquiries about this document should be directed to TMRRoadSurfacings@tmr.qld.gov.au.

2 Types of surface treatments

2.1 Coloured Surface Treatments

Coloured Surface Treatments are used to delineate different parts of the road surface using a coloured binder and fine, uniformly graded aggregate to provide a textured surface.

CSTs are typically used in the following applications:

- a) cycleways / bike lanes
- b) bus lanes
- c) threshold treatments for school zones
- d) threshold treatments for wildlife conservations areas, and
- e) township entry treatments.

Due to their high cost, use of this treatment is typically limited to critical locations on the road network.

2.2 High Friction Surface Treatments

High Friction Surface Treatments provide a highly skid resistant surface for road users. HFSTs are commonly used at / around signalised intersections and tight curves. Due to their high cost, use of this treatment is typically limited to critical locations on the road network.

3 Overview of the department's registration system for CSTs and HFSTs

The department uses the Australian Road Research Board (ARRB) Transport Infrastructure Product Evaluation Scheme (TIPES) as the method of assessing the suitability of products to be used for CSTs and HFSTs on the state-controlled road network. TIPES is a process aimed at providing an independent fit-for-purpose assessment of road construction products.

The process for suppliers to apply to have their product assessed through TIPES is outlined in the ARRB documents:

- TIPES – *Supplement for Applicants – Coloured Surface Treatments for Department of Transport and Main Roads*, and
- TIPES – *Supplement for Applicants – High Friction Surface Treatments for Department of Transport and Main Roads*.

These documents can be downloaded from [ARRB's website](#).

Enquires about the TIPES process should be directed to arrb.qld@arrb.com.au

Products that have been assessed through TIPES and issued with a TIPES Certificate, will be considered suitable for registration by the department at the Application Level nominated on the TIPES Certificate. If a product is issued with a TIPES Certificate, the TIPES management team will forward a copy to the department and the product will be included on the department's registered product list next time it is updated.

However, registration by the department is conditional upon the supplier:

- a) developing and submitting an 'information pack', which is based on the content of their TIPES submission, to TMRRoadSurfacings@tmr.qld.gov.au that covers the following:
 - product supplier's details
 - materials
 - pavement surface requirements, and
 - construction procedures.
- b) making available a copy of their 'information pack' to Contractors and the department's contract administration personnel upon request, and
- c) ensuring any special conditions of TIPES certification and/or departmental registration are observed.

A summary of the minimum requirements for the 'information pack' is provided in Appendix A.

Suppliers must immediately advise the department via TMRRoadSurfacings@tmr.qld.gov.au of any updates / changes to the 'information pack' being provided to Contractors or the department's Contract administration personnel.

The registration status of a product may be reassessed when additional information is submitted to the TIPES Product Evaluation Panel for consideration.

4 Registration levels

The department will register products at a designated level based on the assessment undertaken by the TIPES Product Evaluation Panel. This level reflects the quantity of experience and duration that satisfactory field performance has been demonstrated. An indicative description of each level is provided in Table 4. The minimum level that applies for a specific project will be stated in the Contract documents for the department's project.

Table 4 – Levels of product registration for CST and HFST

Departmental Product Registration Level (TIPES Application Level)	Indicative description of performance ¹
3 (Full)	≥ 5 years satisfactory field performance under heavy traffic loading conditions
2 (Interim)	≥ 2 years satisfactory performance under heavy traffic loading conditions
1 ² (Trials)	Satisfactory field performance under heavy traffic conditions not yet validated

¹ As assessed through TIPES

² Level 1 products are typically used for trials on projects involving up to 50 m² of surface treatment. Further advice about the use of Level 1 registered products can be obtained from TMRRoadSurfacings@tmr.qld.gov.au.

5 Departmental registered product list

The department's registered product list for CSTs and HFSTs is a publicly available document published on the department's website.

The list is updated regularly. It includes the following details:

- name of product
- contact details for the supplier of the product
- date of registration
- date of registration expiry
- level of registration, and
- any conditions associated with the product's registration status.

Appendix A – Information pack requirements for products used for CSTs and HFSTs

Product supplier's details
Product name (and any other name(s) commonly used to refer to it)
Legal entity name
Australian Business Number (ABN)
Business address
Contact person's name, telephone number and email address
Materials
Detailed description of each material (for example, resin, accelerant, aggregate, colour additive, primer, cleaning agent and other materials, as appropriate). Include a photograph of each material and its packaging. For the aggregate, including aggregate supplied as part of the resin, the type / geology and particle size distribution of the aggregate must be included as part of the description.
Name and address of the manufacturer for each material.
Manufacturing location(s) for each material.
Product specific transport, handling, and storage requirements for each material.
Shelf-life for each material.
Australian safety data sheet for each material.
Pavement surface requirements
Pavement surface types on which CST / HFST can be applied and the CST / HFST will achieve at least five years satisfactory performance, for example, asphalt, sprayed seal, concrete, steel (for example, large pits and valve covers).
Pavement surface characteristics that will adversely affect the performance of the CST / HFST and will result in less than five years satisfactory performance being achieved.
Construction procedure
Weather conditions (for example, temperature and humidity) during which it is appropriate to install the CST / HFST.
Method(s), materials and equipment used to clean and prepare the pavement surface (for each applicable pavement surface type and pavement surface characteristic (for example, texture depth)) so that at least five years satisfactory performance will be achieved. Include photographs, where appropriate.
Method(s), materials and equipment used to dry the pavement surface (where appropriate). Include photographs, where appropriate.
Method(s), materials and equipment used to mask the boundaries of the work and features within the work, such as pavement markings. Include photographs, where appropriate.
Binder formulation (proportions of each constituent material, for example, resin, accelerant and colour additive).
Method(s) and equipment used to mix the constituent materials (for example, resin, accelerant and colour additive) to form / make the binder.

Method(s) and equipment used to apply the binder and aggregate to the pavement surface. Include photographs of the equipment and procedures to be used.

Include time limits that apply between:

- mixing of binder constituents and its application to the pavement surface
- mixing of binder constituents and application of aggregate (for products where the aggregate is not an integral component of the binder), and
- each application of binder (for products that require multiple applications of binder).

Method(s) used to determine the appropriate application rate of binder and aggregate, including how the application rate(s) should be varied based on the texture and type of existing pavement surface and traffic loading so that an acceptable finish and treatment life is achieved. Include close-up photographs of what the finished surface should look like immediately following installation.

Quality management procedures to verify the required application rate(s) for binder and aggregate have been achieved.

Method(s) used to remove excess (loose) aggregate from the pavement surface without damage prior to opening to traffic.

Method(s) used to determine the finished CST / HFST has cured sufficiently to withstand the action of traffic without damage (for example, minimum curing period for the product and how this might vary based on weather conditions).

