

**HAPAS**

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**HAPAS Certificate**

**10/H162**

Product Sheet 1

**COLAS MODIFIED BITUMEN ROAD EMULSIONS**

**SURFIX 80S, PRINMULS LITE LMP90X, PREMIUM 80, SURFIX SLX 80 AND PRINMULS MP90X ROAD EMULSIONS**

This HAPAS Certificate Product Sheet<sup>(1)</sup> is issued by the British Board of Agrément (BBA), supported by Highways England (HE) (acting on behalf of the Overseeing Organisations of the Department for Transport; Transport Scotland; the Welsh Assembly Government and the Department for Regional Development, Northern Ireland), the Association of Directors of Environment, Economy, Planning and Transport (ADEPT), the Local Government Technical Advisers Group and industry bodies. HAPAS Certificates are normally each subject to a review every three years.  
(1) Hereinafter referred to as 'Certificate'.

This Certificate relates to Surfix 80S, Prinmuls Lite LMP90X, Premium 80, Surfix SLX 80 and Prinmuls MP90X Road Emulsions, comprising polymer-modified bitumen emulsions for use in surface dressing systems for highways.

**CERTIFICATION INCLUDES:**

- factors relating to compliance with HAPAS requirements
- factors relating to compliance with Regulations where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.



**KEY FACTORS ASSESSED**

**Durability** — the products have been used in surface dressing systems in the UK since between 2006 and 2009, and available evidence indicates that they contribute to a surface dressing system's satisfactory performance (see section 7).

The BBA has awarded this Certificate to the company named above for the products described herein. These products have been assessed by the BBA as being fit for their intended use provided they are installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of Second issue: 10 November 2015

Simon Wroe  
Head of Approvals — Engineering

Originally certificated on 6 September 2010

Claire Curtis-Thomas  
Chief Executive

The BBA is a UKAS accredited certification body – Number 113.

The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at [www.bbacerts.co.uk](http://www.bbacerts.co.uk)

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## Requirements

In the opinion of the BBA, Surfex 80S, Prinmuls Lite LMP90X, Premium 80, Surfex SLX 80 and Prinmuls MP90X Road Emulsions, when assessed in accordance with the *Guidelines Document for the Assessment and Certification of Modified Bitumens for Surface Dressings, Micro-Surfacing and Bond Coats for Highways*, and used in accordance with the provisions of this Certificate, are suitable for use in surface dressings for highways.

## Regulations

### **Construction (Design and Management) Regulations 2015** **Construction (Design and Management) Regulations (Northern Ireland) 2007**

Information in this Certificate may assist the client, Principal Designer/CDM co-ordinator, designer and contractors to address their obligations under these Regulations.

See section: 3 *Delivery and site handling* (3.2) of this Certificate.

## Additional Information

### CE marking

The Certificate holder has taken the responsibility of CE marking the products in accordance with harmonised European Standard BS EN 13808 : 2013. An asterisk (\*) appearing in this Certificate indicates that data shown are given in the manufacturer's Declaration of Performance.

## Technical Specification

### 1 Description

1.1 Surfex 80S and Prinmuls Lite LMP90X are intermediate-grade polymer-modified bitumen emulsions for use in surface dressing systems for highways as defined within the *Manual of Contract Documents for Highway Works, Series NG900, Volume 2, Table NG 9/8*.

1.2 Premium 80 and Surfex SLX 80 are premium-grade polymer-modified bitumen emulsions for use in surface dressing systems for highways as defined within the *Manual of Contract Documents for Highway Works, Series NG900, Volume 2, Table NG 9/8*.

1.3 Prinmuls MP90X is a super-premium-grade polymer-modified bitumen emulsion for use in surface dressing systems for highways as defined within the *Manual of Contract Documents for Highway Works, Series NG900, Volume 2, Table NG 9/8*.

### 2 Manufacture

2.1 The products are manufactured by blending raw materials within a colloidal mill.

2.2 As part of the assessment and ongoing surveillance of product quality, the BBA has:

- agreed with the manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of nonconformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control being operated by the manufacturer are being maintained.

2.3 The management system of Colas Limited has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2008 by BSI (Certificate Q06036).

### 3 Delivery and site handling

3.1 The products are delivered to site in bulk tankers and are applied on site in accordance with the Certificate holder's instructions and this Certificate.

3.2 The Certificate holder has taken the responsibility of classifying and labelling the products under the *CLP Regulation (EC) No 1272 / 2008 on the classification, labelling and packaging of substances and mixtures*. Users must refer to the relevant Safety Data Sheets.

## Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Surfifix 80S, Prinmuls Lite LMP90X, Premium 80, Surfifix SLX 80 and Prinmuls MP90X Road Emulsions.

## Design Considerations

### 4 Use

Surfix 80S, Prinmuls Lite LMP90X, Premium 80, Surfifix SLX 80 and Prinmuls MP90X Road Emulsions are satisfactory for use as binders in surface dressing systems on highways.

### 5 Practicability of installation

The products are designed to be installed by contractors experienced with this type of material.

### 6 Maintenance

The products do not require routine maintenance, but any damage must be repaired (see section 10).

### 7 Durability

The products have been used as binders in surface dressing systems in the UK since between 2006 and 2009. Inspections of existing sites indicate that the products contribute to a surface dressing system's satisfactory performance in service.

## Installation

### 8 General

8.1 Surfifix 80S, Prinmuls Lite LMP90X, Premium 80, Surfifix SLX 80 and Prinmuls MP90X Road Emulsions are hot-applied for use in surface dressings in accordance with the Certificate holder's instructions, which include requirements for surface preparation and application rates.

8.2 The products are suitable for application on existing bituminous or concrete surfaces at a minimum surface temperature of 10°C measured on a rising thermometer. The substrate must be free from standing water.

8.3 Traffic management must be in accordance with the installer's risk assessment, based on the guidance given in the Department of Transport *Traffic Signs Manual*, Chapter 8, the Department for Transport *Safety at Street Works and Road Works – A Code of Practice*, the *Design Manual for Roads and Bridges*, Volume 8, the RSDA/CSS<sup>(1)</sup> *Code of Practice for Traffic Control at Surface Dressing Sites* and the RSTA/ADEPT *Code of Practice for Surface Dressing*.

(1) Now known as RSTA/ADEPT respectively.

8.4 The surface dressing contractor, in conjunction with the Certificate holder, must ensure compatibility between the road emulsion and the aggregate(s) used in the surface dressing process.

## 9 Preparation

The road surface is prepared for the installation of the surface dressing in accordance with the recommendations in TRL Road Note 39 *Design Guide for Road Surface Dressing* and the RSTA/ADEPT *Code of Practice for Surface Dressing*.

## 10 Application

10.1 The products are spray-applied to the substrate at a temperature of between 80°C and 90°C.

10.2 The application rates for the products must be in accordance with the Certificate holder's recommendations or TRL Road Note 39.

10.3 Installation of the surface dressing system is carried out in accordance with a Quality Assurance Scheme complying with the requirements of Highways England National Highways Sector Scheme 13A *Sector Scheme for The Supply and Application of Surface Dressings to Road Surfaces*.

## 11 After-care

As with all surface dressing systems, the installer must plan and execute the after-care of the works in accordance with the RSTA/ADEPT *Code of Practice for Surface Dressing*.

## Technical Investigations

## 12 Tests

Test reports were evaluated in relation to Surfifix 80S, Prinmuls Lite LMP90X, Premium 80, Surfifix SLX 80 and Prinmuls MP90X relating to:

- penetration\*
- softening point\*
- Vialit pendulum before and after ageing on recovered binder
- rheology by dynamic shear rheometer before and after ageing on recovered binder.

## 13 Investigations

13.1 A user/specifier survey relating to existing sites at least two years old on which the products had been used was carried out to confirm the products' performance in use.

13.2 Visits to existing sites at least two years old on which the products had been used were carried out to confirm the products' performance in use.

13.3 The manufacturing process was evaluated, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

## Bibliography

BS EN 13808 : 2013 *Bitumen and bituminous binders — Framework for specifying cationic bituminous emulsions*  
BS EN ISO 9001 : 2008 *Quality management systems — Requirements*  
*Guidelines Document for the Assessment and Certification of Modified Bitumens for Surface Dressings, Micro-Surfacings and Bond Coats for Highways*, SG04 Doc 086, May 2010  
Manual of Contract Documents for Highway Works, Volume 2 *Notes for Guidance on the Specification for Highway Works, Series NG900 Road pavements – bituminous bound materials*

### 14 Conditions

#### 14.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page – no other company, firm, organisation or person may hold claim that this Certificate has been issued to them
- is valid only within the UK
- has to be read, considered and used as a whole document – it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- is subject to English Law.

14.2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

14.3 This Certificate will remain valid for an unlimited period provided that the product/system and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

14.4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

14.5 In issuing this Certificate the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- actual installations of the product/system, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product/system is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product/system, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to CE marking.

14.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.