HAPAS

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HAPAS Certificate
20/H299
Product Sheet 2 Issue 1

FILL AND OVERBAND CRACK SEALING SYSTEM FOR HIGHWAYS

DANTEX ULTRABAND FILL AND OVERBAND CRACK REPAIR SYSTEM FOR HIGHWAYS

This Product Sheet(1) is issued by the British Board of Agrément (BBA). The Highways Authorities Product Approval Scheme (HAPAS) is supported by National Highways (NH) (acting on behalf of the Overseeing Organisations of the Department for Transport; Transport Scotland; the Welsh Government; and the Department for Infrastructure, Northern Ireland), the Association of Directors of Environment, Economy, Planning and Transport (ADEPT), the Local Government Technical Advisers Group and industry bodies.

(1) Hereinafter referred to as 'Certificate'.

This Certificate relates to the Dantex Ultraband Fill and Overband Crack Repair System for Highways, a polymer-modified thermoplastic system containing graded aggregates used to seal and repair cracks, fretted joints, reinstatement joints and joint slots up to 40 mm wide in non-porous bituminous and concrete highways, in accordance with the BBA HAPAS *Guidelines for the assessment and Certification of Crack Sealing Systems for Highways* and the *Manual of Contract Documents for Highway Works* (MCHW), Volume 1, Series 700, Clause 711.

The BBA has awarded this Certificate to the company named above for the system described herein. This system has been assessed by the BBA as complying with the requirements of the BBA HAPAS Certification Scheme according to the assessments set out in this Certificate.

On behalf of the British Board of Agrément

Date of issue: 8 November 2024

Originally certificated on 9 September 2011

Hardy Giesler
Chief Executive Officer

This BBA HAPAS Certificate is issued under the BBA's accreditation to ISO/IEC 17065 (UKAS accredited Certification Body Number 0113).

Clauses marked † are additional information outside the scope of accreditation.

Readers MUST check the validity and latest issue number of this BBA HAPAS Certificate by referring to the BBA website or contacting the BBA directly.

The Certificate should be read in full as it may be misleading to read clauses in isolation.

Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

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1 Product Description

1.1 The Certificate holder specifies the product under assessment, the Dantex Ultraband Fill and Overband Crack Repair System for Highways as a polymer-modified thermoplastic system containing graded aggregates used to seal and repair cracks, fretted joints, reinstatement joints and joint slots up to 40 mm wide in non-porous bituminous highways(1) with texture depths not exceeding 2 mm, and concrete highways in accordance with the BBA HAPAS *Guidelines for the assessment and Certification of Crack Sealing Systems for Highways* and the MCHW(2), Volume 1, Series 700, Clause 711.

(1) For the purpose of this Certificate, non-porous bituminous highway surfaces include hot-rolled asphalt, asphalt concrete, mastic asphalt and thin surfacing systems.
(2) The MCHW is operated by National Highways (NH) (acting on behalf of the Overseeing Organisations of the Department for Transport; Transport Scotland; the Welsh Government; and the Department for Infrastructure, Northern Ireland).

1.2 The system comprises a graded aggregate, coated with a polymer-modified thermoplastic resin.

1.3 Aggregates approved for use in the system include granite, basalt, and calcined bauxite.

1.4 Creteprime CP Primer is essential to use with the system on concrete surfaces and has been assessed with the system.

2 Requirements

Requirements for the product are outlined in the BBA HAPAS Certification Scheme and Technical Specifications Documents, and have been established from the following specification documents:

- the MCHW, Volume 1, Series 700, Clause 711
- the MCHW, Volume 2, Series NG 700 and NG 711

3 Summary of Product Assessment

The system was assessed on the basis of the following characteristics in accordance with HAPAS requirements.

3.1 Binder characteristics

Table 1 Laboratory tests on the binder(1)

Product assessed	Assessment method	Requirement(2)	Outcome
Dantex Ultraband Fill and Overband Crack Repair System for Highways	Cone penetration (dmm) to BS EN 13880-2 : 2003		
	Control	> 35	Pass
	Heat aged(3)	≥ 60 % of control value	Pass
	Resilience (%) to BS EN 13880-3 : 2003		
	Control	Value achieved	53.0
	Heat aged(3)	≥ 60 % of control value	Pass
	Flow resistance at 60 °C (mm) to BS EN 13880-5 : 2004	≤ 2	Pass

(1) Binder without aggregates.
(2) Requirements for Grade F inlaid crack sealing systems as defined in the BBA HAPAS Guideline Document.
(3) Heat aged for 28 days at 70 (±2) °C.

3.1.1 The assessment showed that the system complies with the HAPAS requirements for this characteristic.

3.2 Laboratory performance tests on the system

Table 2 Laboratory performance tests on the system

Product assessed	Assessment method	Requirement	Outcome
Dantex Ultraband Fill and Overband Crack Repair System for Highways	Skid Resistance Value (SRV) Control to Appendix A, Method 1[(1)(2)]	≥ 60	Pass
	After wheel tracking at 50 °C to Appendix A, Method 3[(2)(3)]	≥ 50	Pass
	Tensile bond ($N \cdot mm^{-2}$) to TRL Report 176 : 1997, Appendix J[(2)]		
	Control	0.5	Pass
	Heat aged[(4)]	≥ 60 % of control value	Pass

(1) Requirements for fill and overband crack-sealing systems as defined in the BBA HAPAS Guideline Document.
(2) The test documents are detailed in the bibliography.
(3) Test carried out on a concrete substrate formed with a "V" channel 30 mm wide by 23 mm deep.
(4) Heat aged for 28 days at 70 (±2) °C.

3.2.1 The assessment showed that the system complies with the HAPAS requirements for these characteristics.

3.3 Retained texture depth and SRV measured on existing installations over two years old

Table 3 Retained texture depth and SRV measured on existing installations

Product assessed	Assessment method	Requirement	Outcome
Dantex Ultraband Fill and Overband Crack Repair System for Highways	Retained texture depth (mm) to Appendix B, Method 4[(1)(2)(3)]	≥ 0.75	1.29
	Retained skid resistance value (SRV) to TRL Road Note 27 : 1969[(1)(2)(3)]	≥ 50	62

(1) The test documents are detailed in the bibliography. Numbers in this Table refer to sections/parts of the various documents.
(2) The BBA HAPAS Guideline Document (10 April 2000).
(3) The system was 6 months old when tested.

3.3.1 The assessment showed that the system complies with the HAPAS requirements for this characteristic.

3.4 Durability

3.4.1 The system is used to seal and repair cracks in both longitudinal and transverse directions of the carriageway, with a minimum expected life of three years.

3.4.2 Where cracks have penetrated substantially through the pavement depth owing to structural failure, resulting in significant movement under traffic, an expectation of life cannot be predicted. Where pavements are structurally sound, with cracking confined to the surfacing layer or layers, and these remain bonded to the road-base, the three-year minimum life should be achieved.

3.4.3 The most severe wear from trafficking (primarily by heavy goods vehicles) occurs within the wheel track zones, approximately between 0.5 and 1.1 m and between 2.55 and 3.15 m from the centre of the nearside lane markings for each traffic lane of 3.65 m. In the wheel track zones, the expected minimum life is unlikely to be exceeded. Conversely, for cracks outside the wheel track zones, provided the pavement surface is otherwise sound, the expected minimum life in terms of skid and deformation resistance is likely to be exceeded.

3.4.4 The most onerous conditions typical occur during the summer months on heavily trafficked, exposed carriageways with significant gradients in cuttings and on the surface of the pavements carried by elevated structures. In these situations, surface temperatures can approach or even exceed 50 °C. Should surface temperatures exceed this figure for prolonged periods (such as in an exceptionally hot summer), the expected minimum life in the wheel track zone may not be attained.

4 Summary of Process Assessment

Manufacturing process and quality control	Complies with HAPAS requirements
Delivery and site handling	Complies with HAPAS requirements
Installation	Complies with HAPAS requirements

4.1 Manufacture

4.1.1 The BBA has undertaken the following tasks for the assessment of product manufacture and has established that the manufacture complies with BBA HAPAS Certification Scheme requirements:

- the BBA has recorded and evaluated the manufacturer's documentation of the methods adopted for quality control procedures and product testing against HAPAS requirements
- the BBA has assessed the quality control operated over batches of incoming materials and formulations against HAPAS Requirements
- the BBA has evaluated the process for management of non-conforming work
- the BBA has audited the production process and verified that it is in accordance with the documented process
- the BBA has checked that equipment has been properly tested and calibrated.

4.1.2 The BBA has undertaken to review the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

4.2 Delivery and site handling

† 4.2.1 The Certificate holder states that the product is delivered to site in nominal 20kg bags labelled with the Certificate holder's name, batch date and batch number.

4.2.2 The Certificate holder states that Creteprime CP Primer is supplied in 5 or 25 litre tins.

4.2.2 To achieve the performance described in this Certificate, delivery and site handing must be performed in accordance with the Certificate holder's instructions and this Certificate, including:

4.2.3.1 The system components must be stored in cool, dry conditions and protected from inclement weather.

4.3 Design

4.3.1 The Ultra-Band Fill and Overband Crack Repair System for Highways is satisfactory for use as a crack sealing system for the repair of cracks, reinstatement joints and fretted joints typically from 5 to 40 mm wide in non-porous bituminous, highway surfaces with texture depths not exceeding 2 mm, or on concrete highway surfaces. The Certificate holder must be consulted regarding the suitability of the existing road surfacing to receive the system.

4.3.2 The system is laid in two stages: application of Ultra-Band material is carried out until flush with the adjacent surfacing; once cooled Ultra-Band material is then applied as a 40 to 200 mm wide strip directly over the filled crack or joint.

4.4 Installation

4.4.1 The Certificate holder's instructions for installation of the system were confirmed as meeting the BBA HAPAS Certification Scheme requirements.

4.4.2 To achieve the performance described in this Certificate, the system must be installed by contractors familiar with this type of system, in accordance with the Certificate holder's Installation Method Statement and this Certificate.

4.4.3 Traffic management must be in accordance with the latest issue of the Department for Transport Traffic Signs Manual, Chapter 8, or as agreed between the purchaser and the installer.

4.4.4 The ambient and road surface temperatures must be recorded at the start, and if the weather is variable, during the installation process. Installation must only be carried out if the road surface temperature is ≥ 5 °C. The system must not be installed during periods of prolonged or heavy rain.

4.4.5 The areas to which the system is to be applied must be clearly defined by the purchaser prior to commencement of work on-site.

† 4.4.6 The Certificate holder's instructions advise the following:

4.4.7 Cracks to be treated must be clean, dry and free from loose material or other contamination that may affect the adhesion of the system.

4.4.8 The crack or joint recess and surrounding area must be thoroughly cleaned and dried using hot compressed air, removing all loose material, dust and foreign matter.

4.4.9 The system is applied in two stages, Ultraband material is melted down in agitated dedicated heated boilers to a laying temperature of between 180 and 210 °C, and the material kept at this temperature for a period of 20 minutes before using.

4.4.10 Ultraband material is then poured into the prepared recess by bucket and suitable width screed box, to finish flush with the adjacent surface and allowed to set.

4.3.11 The second application of Ultraband material may be carried out at any time after the first application. The second application is applied at a temperature of between 180 and 210 °C and applied evenly over the previous application by screed box with dimensions of between 50 to 200 mm, as necessary.

4.4.12 The finished repair is allowed to cool before opening to traffic. This will typically take between 10 to 25 minutes, depending on the ambient temperatures.

4.4.13 In all cases, the installer must conduct a visual check for correct application, uniform surface texture and any other discernible faults at each stage of the installation and carry out any remedial work as necessary.

4.4.14 In the event of damage occurring, the system should be assessed and repaired by removing the damaged section and reapplying the system.

4.5 Maintenance

4.5.1 To achieve the performance described in this Certificate, installations must be periodically inspected for damage, loss of texture and skid resistance, as part of a planned maintenance programme and, if necessary, repaired as described in sections 4.4.7 to 4.4.14.

5 Fulfilment of Requirements

5.1 The conclusion of this BBA assessment is that the Dantex Ultraband Fill and Overband Crack Repair System for Highways, when used in accordance with the provisions of this Certificate, complies with the BBA HAPAS Certification Scheme requirements.

5.2 In order for the system to continue to meet scheme requirements, it must be installed, used and maintained as per the Certificate holder's instructions and as detailed in the Certificate.

6 Validity of Certificate

Continuing validity of this Certificate is dependent on the following factors:

- continuing compliance with product or process requirements, as described in the HAPAS Scheme document, and the specification documents referred to therein
- ongoing BBA surveillance of factory production control, to verify that the specifications and quality control being operated by the manufacturer are being maintained
- formal triennial Review of the Certificate, and Reissue for required technical or non-technical updates
- compliance with ongoing Certificate obligations by the Certificate holder and manufacturer(s).

†7 Additional Regulations

Construction (Design and Management) Regulations 2015
Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

CLP Regulations

The Certificate holder has taken the responsibility of classifying and labelling the system components under the *GB CLP Regulations* and *the CLP Regulation (EC) No 1272/2008 – Classification, labelling and packaging of substances and mixtures.* Users must refer to the relevant Safety Data Sheet(s).

8 Bibliography

BBA HAPAS Guideline Document for the Assessment and Certification of Crack Sealing Systems for Highways (2010)

BS EN 13880-2 : 2003 *Hot applied joint sealants — Test method for the determination of cone penetration at 25°C*
BS EN 13880-3 : 2003 *Hot applied joint sealants — Test method for the determination of penetration and recovery (resilience)*
BS EN 13880-5 : 2004 *Hot applied joint sealants — Test method for the determination of flow resistance*

Manual of Contract Documents for Highway Works, Volume 1 Specification for Highway Works, Series 700, Clause 711 (02/16)
Manual of Contract Documents for Highway Works, Volume 2 Notes for Guidance on the Specification for Highway Works, Series NG700, Clause NG711 (02/16)

TRL Report 176 : 1997 Laboratory Tests on High-friction Surfaces for Highways

TRL Road Note 27 : 1969 *Instructions for using the Portable Skid Resistance Tester*

9 Conditions of Certification

9.1 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 or 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.

9.2 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.

9.3 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.

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

9.5 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 UKCA marking and CE marking.

9.6 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.

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