

PTS Product Assessment Certificate

Product Acceptance Scheme in accordance with Manual for Contract Documents for Highway Works, Specification for Highway Works (MCHW SHW) Volume 1 Sub-Clause 104.15 and 104.16

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Pavement Testing Services Ltd

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UK Approved Body (UKAB)
Product Area 23 Road Construction Products

Product Name: LockChip Proprietary Sealant Product for Surface Dressing

Product Family: Bituminous Sprays in Accordance with MCHW SHW Clause 920

Certificate Reference: PA920 0001



Pavement Testing Services (PTS) Ltd has awarded this **Product Assessment Certificate** to the Company named above for the products described herein. These products have been assessed by PTS Ltd as being fit for their intended use provided, they are manufactured, installed, and used as set out in this Certificate.

The issue of this Certificate under Specialist Group PTSSG PTSSG 920 Bitumen Sprays, which sets out Guidelines and Criteria for the assessment, has been authorised by the PTS Technical Supervisory Panel.

On behalf of PTS Ltd

Signature

Dr A J Sewell Managing Director

Date First Issued: 06.11.18

Date of Second issue: 23.11.21

Certificate Valid until: 05.11.24

Product Name: LockChip Proprietary Sealant Product for Surface Dressing
Product Family: Bituminous Sprays in Accordance with MCHW SHW Clause 920

This Product Assessment Certificate is issued by Pavement Testing Services Ltd (PTS Ltd) under PTS Product Acceptance Scheme (PTSPAS), in accordance with MCHW SHW Sub-Clause 104.15 and 104.16, supported by PTS Technical Supervisory Panel (PTSTSP) which includes representation from National Highways (NH), Association of Directors of Environment, Economy Planning and Transport (ADEPT), Road Surface Treatments Association (RSTA), Mineral Products Association (MPA), Joint Authorities Group (JAG), Midlands Highways Alliance (MHA), HAUC (UK) SROH Working Group, HAUC (UK) SROH Innovations Working Group and Transport Scotland.

Sub-clause 104.16 (e) requires that *“The scheme must have a technical supervisory panel that provides technical oversight on the operation of the scheme and formally consents to the issue of assessment and certification requirements of the specialist groups developing the assessment and certification requirements. This panel must include a balanced representation of key end users, recognized industry experts and those responsible for the highways on which such products will be used or installed”*.

PTSPAS Product Assessment Certificates are each subject to a review every three years, with annual interim surveillance.

PRODUCT APPLICATIONS

Cold-spray applied surfacing sealant for newly installed single, raked-in and double surface dressing *[suitability for treatment is assessed following consultation with the Client and site inspection]*

Sealing of newly installed surface dressing systems [applied minimum 24 hours after the surface dressing installation]

Improving early life retention of chips and eliminating airborne dust generated during chippings application

Preventing damage to road vehicles and complaints from road users and general public

Aesthetically pleasant finish

KEY FACTORS ASSESSED

- ISO 9001: 2015 Quality Management System - Exova BM TRADA Certificate Number C0585.03, Issue number: 2021-01, Certificate start/expiry date 29 April 2021/10 May 2024
- ISO 14001: 2015 Environmental Management System Exova BM TRADA Certificate Number 2020.03 Issue number: 2021-01, Certificate start/expiry date 05 May 2021/10 May 2024
- ISO 45001: 2018 Occupational Health & Safety Management System Exova BM TRADA Certificate Number 603.03, Issue number: 2021-01, Certificate start/expiry date 05 May 2021/10 May 2024
- Compliance with BS EN ISO 9001: 2015 Section 8.3 ‘Design and Development of Products and Services’
- BBA Certificate of Conformity of the Factory Production Control 0836-CPR-15/F303 in respect of BS EN 13808: 2013 – Cationic Bituminous Emulsion
- CE Marked – Cationic Bituminous Emulsion LockChip – C40BP3, EN13808: 2013
- Declaration of Performance No BBP015 CPR 2013 for Cationic Bituminous Emulsion - C40BP3
- Method Statement for LockChip Application CF08 MS Bitumen LockChip Application Issue v.1.2 04 Feb 2020
- Review of supporting documents and test data
- BituChem Internal Procedures and Processes
- BituChem Group Integrated Management Systems Manual, Issue 2.4, 29 July 2020
- BituChem Group Quality Plan QPL06 — LockChip, version 1, 6 September 2019
- On site documentation
- Training Matrix
- Safety Data Sheet
- Case Studies

- Report on GripTester Survey of Surface Dressed Sites in Cambridgeshire
- Research and Development Studies

1. TECHNICAL SPECIFICATION

LockChip is a cationic bituminous emulsion manufactured to conform with BS EN 13808: 2013 requirements, to reduce early aggregate loss, dust and water ingress into the newly applied surface dressing.

2. MANUFACTURE

Certificate of Conformity of the Factory Production Control 0836-CPR-15/F303 in compliance with the Construction Products Regulation 2011 (Retained EU Law EUR 305/2011) as amended by the Construction Products (Amendment etc.) In accordance with the Quality Plan for the Manufacture and Application of LockChip Bituminous Emulsion and internal procedures and processes.

3. DELIVERY AND SITE HANDLING

- 3.1 Rate of spread is determined as a function of road condition and aggregate size and programmed into the mechanical sprayer speed control as per Certificate Holder's instructions
 - 3.2 The treatment is carried out by means of mechanical sprayer application
 - 3.3 Hand application (lance pipe) is permitted on areas inaccessible to the mechanical sprayer
 - 3.4 The site can be open to traffic typically within 20 minutes following completion of treatment; visual checks are performed by the Certificate Holder on the coverage uniformity and emulsion breakage prior to opening to traffic
- Any remedial works should be carried out by the Certificate Holder as necessary. (EU Exit) Regulations 2019 and the Construction Products (Amendment etc.) (EU Exit) Regulations 2020.

4. SURFACE DRESSING CONDITION ASSESSMENT AND PREPARATORY WORKS

- 4.1 Prior to application, the site shall be assessed by the Certificate Holder as to its suitability for the LockChip, in accordance with the Quality Plan for the Manufacture and Application of LockChip Bituminous Emulsion and internal procedures
- 4.2 Site visual inspections shall be carried out by the Certificate Holder to determine the suitability of the existing surface dressing for LockChip application, location and extent of each site to be treated
- 4.3 The types and areas of defectiveness shall be recorded for submission to the Client and the suitability for sealing determined by the Certificate holder
- 4.4 All preparatory works, i.e. suction sweeping, masking of street furniture, ironworks (tape and cardboard), shall be carried out in accordance with the Certificate Holder's OH&S Method Statement and internal procedures

5. INSTALLATION PERSONNEL

- Traffic Management is the responsibility of the Certificate Holder – typically sub-contracted to specialist and suitably qualified Traffic Management companies
- Certificate Holder's staff fully trained and competent
- CPCS cards
- Specific site inductions
- Tool box talk to cover all the site specific Health and Safety issues and any permits to work, if relevant
- Health and Safety Policy Statement awareness
- Construction Phase Plan – Project Specific

6. TECHNICAL DATA

Technical data comprising the assessment of:

- Consistency and durability of consistency at intermediate service temperature [Needle Penetration BS EN 1426]
- Consistency and durability of consistency at elevated service temperature [Softening Point BS EN 1427]
- Durability of cohesion [Pendulum Test BS EN 13588]

Inspection and testing quality control checks in accordance with Table 7 and Table ZA.1 of BS EN 13808: 2013

- Bituminous Material Analysis Test Reports
- LockChip Emulsion Delivered Material Test Result Spreadsheet

GripTester Survey of Surface Dressed Sites in Cambridgeshire, with and without LockChip application

7. REQUIREMENTS

- 7.1 Product to be manufactured only by the Certificate Holder as specified in its Quality Plan and in compliance with internal procedures and processes.
- 7.2 Product to be manufactured using only the raw materials authorised by the Certificate Holder.
- 7.3 Product to be installed only by the Certificate Owner in accordance with OH&S Method Statement and internal procedures.

8. BS EN ISO 9001: 2015 SECTION 8.3 PLANNING PROCESS

- 8.1 Comprehensive development work was carried out under Project Reference No RDBBP1 on application of a chip seal process on newly laid surface dressings to the UK highways. The objective was to develop a proprietary material with specific installation method to mitigate the issues related to newly installed surface dressings, such as flying chippings causing damage to the road vehicles, air-born dust from the drying chippings and early life chip loss due to rainfall.
- 8.2 Technical challenges related to emulsion stability, emulsion breaking properties, residual binder properties and application equipment were identified and addressed during comprehensive suite of laboratory testing and site trials.
- 8.3 Product Development internal Procedure QP13 9.

9. BS EN ISO 9001: 2015 SECTION 8.3 DESIGN INPUTS

The essential requirements determined and covered under:

CE Marked – Cationic Bituminous Emulsion LockChip – C40BP3, EN13808: 2013

Declaration of Performance No BBP015 CPR 2013 for Cationic Bituminous Emulsion - C40BP3

- Viscosity—Efflux Time 2mm, 40°C Class 2
- Breaking Behaviour Class 3
- Consistency at Intermediate Service Temperature Class 3
- Consistency at Elevated Service Temperature Class 5
- Cohesion Class 4
- Durability of Consistency at Intermediate Service Temperature—Stage 1—Class 3
- Durability of Consistency at Elevated Service Temperature—Stage 1—Class 4
- Durability of Cohesion—Stage 1—Class 4

BBA Certificate of Conformity of the Factory Production Control 0836-CPR-15/F303 in respect of BS EN 13808: 2013 – Cationic Bituminous Emulsion

BituChem Building Products Ltd Quality Plan for the Manufacture and Application of LockChip Bituminous Emulsion

PTSPAS Certificate Reference (issue 7)– PA920 0001 Second issue, Revision Status v3 22.04.22

10. BS EN ISO 9001: 2015 SECTION 8.3 VERIFICATION PROCESS

- Representative sites were inspected by PTS Ltd to assess the visual condition of LockChip – PTS Technical Report Reference PTS0038, dated 21 September 2018

11. BS EN ISO 9001: 2015 SECTION 8.3 VALIDATION PROCESS

Durability: Visual condition inspections at a frequency provided by the Certificate Holder

QMS third party audit reviews

Installer competency documented

12. BS EN ISO 9001: 2015 SECTION 8.3 CHANGES PROCESS

Processes integrated in the Certificate Holder's QMS:

- Identification of authorised competent person
- Identification and assessment of change generated adverse impact.

13. TEST RESULTS

Available on request of the Overseeing Organisation from the Certificate Holder, comprising the verification and ongoing validation processes.

14. BIBLIOGRAPHY (correct at time of initial certificate issue):

BS EN ISO/IEC 17065:2012 Conformity assessment – Requirements for bodies certifying products, processes, and services

BS EN ISO/IEC 17067:2013 Conformity assessment – fundamentals of product certification and guidelines for product certification schemes

BS EN ISO 17025:2005 General requirements for the competence of testing and calibration laboratories

BS EN ISO 17025:2017 General requirements for the competence of testing and calibration laboratories

BS EN ISO/IEC 9001:2015 Quality Management System Requirements

Manual of Contract Documents for Highways Works Volume 1 Specification for Highway Works, 2 July 2019

BS EN 13108: 2013 Bitumen and bituminous binders – Framework for specifying cationic bituminous emulsions

PTS SG 920 Guidelines and Criteria Document for the Assessment and Certification of Bituminous Sprays Sealant Products for Surface Dressing issue 5, October 2018

PTS Report Stage 3 Installation Method Statement Audit,

PTS Report Stage 4 Review of Technical Data Relating to Design Inputs Verification and Consolidate Case Studies, 21 September 2018

CONDITIONS OF CERTIFICATION

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
 - valid only in 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 PTS Ltd.
 - PTS Product Assessment forms part of the Product Acceptance Scheme as described in MCHW SHW Volume 1 Clause 104.16 and shall be submitted by the Contractor/Certificate Holder to the Overseeing Organisation for Approval.
2. Publications, documents, specifications, legislation, regulations, standards, and the like referenced in this Certificate are those that were current and/or deemed relevant by PTS Ltd at the date of issue or reissue of this Certificate.
3. This Certificate will remain valid for an unlimited period, subject to 3 year review to revalidate 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 PTS Ltd
 - continue to be checked as and when deemed appropriate by PTS Ltd under arrangements that it will determine
 - are reviewed by PTS Ltd as and when it considers appropriate
 - remain in accordance with the requirements of PTSPAS. Additional review shall be carried out as necessary should Specification's / Standard's change to ensure compliance.
4. PTS Ltd has used due skill, care, and diligence in preparing this Certificate, but no warranty is provided.
5. In issuing this Certificate, PTS Ltd 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
 - individual 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
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.