

Project Reference: 4791089103

Report Number: 4791089103-1

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**UL Technical Assessment of cable coating 'Protecta Service Coat FR-1' based on the data provided
in report WF 415038**

Report Prepared for:

Polyseam Ltd
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This report has been prepared by Andrew Buck, Engineer Project Associate, in full accordance with the PFPF standard procedures guidance, (as outlined in the 2021 edition of 'Guide to undertaking technical assessments of fire performance of construction products based on test evidence') and in line with the principles of EN 15725: 2023.

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Introduction

This report relates to a request from Polyseam to undertake an assessment of the likely fire test performance of an Protecta Service Coat FR-1 based on supporting evidence.

The request to assess was for the following reason/s:

- To provide a summary of the test results of Protecta Service Coat FR-1 in Accordance with IEC 60331-21: 1999

Definition

In accordance with the PFPF guide – **Undertaking Technical Assessments of Fire Performance of Construction Products Based on Fire Test Evidence** the definition used for the scope of this report is as follows:

‘A technical evaluation of the likely performance of a component or element of structure (as defined in Approved Document B for England and Wales or their equivalent in Scotland and Northern Ireland) if it were subject to a standard fire test.

An assessment may consider design changes to a tested element of construction for a specific project or it could form a wider scope of approval with a defined period of validity.

Assessments are based on sufficient relevant test evidence and provide a defined scope of approval for a particular design or range of designs and is an opinion of the likely performance of a component or element if it were subject to a standard fire test’.

For the purpose of this assessment the level of complexity is defined as – **Basic Assessment**

The assessment of relatively minor changes to a tested product or system. Such changes shall not be critical to the fire performance of the product or construction being assessed.

Client Declaration

During the application process the client, Polyseam Ltd, has confirmed in writing the following:

All information and evidence provided is accurate and reflects exactly the product or system which is subject to assessment. All information relevant to the assessment; references, drawings technical specifications, photographs and test/certification reports have been made available to the UL assessor; including any test failures and any information/evidence which they are aware of which may be unfavourable to the assessment outcome.

The client has also confirmed that they have not been refused an assessment by any other competent organisation and that to their knowledge the product or system has not been tested in the configuration (or similar) they are seeking an assessment on.

The original application declaration is kept on file for reference.

UL Declaration

UL have agreed to undertake this assessment based on the client's supplied information and their declaration confirming full disclosure of information. UL have reviewed the application and have completed an impartiality assessment. This report therefore represents an independent expert opinion, which has not been influenced by any commercial, financial, or other pressures, that could compromise impartiality.

Assumptions

It is assumed that the Protecta Service Coat FR-1 is identical to the cable coating material included within the test reference WF 415038 and will be applied at the same thickness, following the manufacturer's instructions and to the cables of the same specifications.

Assessment – Performance to EN 60331-21: 1999

The test referenced WF 415038 was conducted in accordance with EN 60331-21: 1999 on a single insulated wire (Procedure for 1 kW pre-mixed flame) with a protective coating of 2 – 4 mm thickness.

The following cable and fire rated protective components were tested:

Generic Description	Product reference	Thickness / csa	Weight per unit length or density
Electrical cable with fire rated protective coating	"Protecta Service Coat FR-1"	29.4mm	Not stated
Individual components used to manufacture composite:			
Coating	"Protecta Service Coating FR-1"	900 microns	1.40g/cm ³
Outer sheath	"Triflex Plus H07RN-F 4G25"	4.1mm	Not stated
Conductor insulation	Not stated	1.4mm	Not stated
Conductors	"Triflex Plus H07RN-F 4G25"	25mm ²	Not stated

The test demonstrated the ability of the coating to fulfil the requirements of EN 60331-21: 1999, utilising the test apparatus detailed in IEC 60331-11: 1999 + A1: 2009, at a temperature of at least 750°C and at a rated voltage of 750 V-rm.

Limits of Applicability

The conclusion of this report only applies to Protecta Service Coat FR-1.

This assessment does not constitute product certification by UL and should not be used to demonstrate compliance where the project requires product certification.

Conclusions

In conclusion, the test referenced WF 415038 demonstrates the ability of the Protecta Service Coat FR-1 to fulfil the requirements of EN 60331-21: 1999 at a temperature of at least 750°C and at a rated voltage of 750 V-rm.

UL Confirmation of Validity

This assessment is issued on the basis of the test data and information to hand at the time of issue. If contradictory evidence becomes available to the assessing authority the assessment will be unconditionally withdrawn and the applicant will be notified in writing. Similarly, the assessment should be re-evaluated, if the assessed construction is subsequently tested, since actual test data is deemed to take precedence.

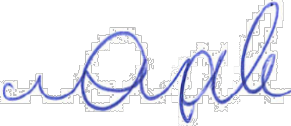
This assessment is valid for an initial period of five years (if the clause above is not enacted) after which time it is recommended that it be submitted to the assessing authority for re-evaluation.

This report may only be used in its entirety and should be supplied to interested parties or AHJ's as such.

NB This assessment report is not valid unless it incorporates all pages, and the declaration duly signed by the applicant's representative.

Signatories

Engineer Completing the Assessment on behalf of UL.

Name of Engineer	Signature	Date
Andrew Buck		19/12/2024
Name of Reviewer	Signature	Date
David Yates		19/12/2024

Date of Issue	19/12/2024
Date end of validity (five years from issue)	19/12/2029

Annex A – Supporting Evidence

WF No. 415038

A test in accordance with EN 60331-21: 1999, utilising the test apparatus detailed in IEC 60331-11: 1999 + A1: 2009, at a temperature of at least 750°C and at a rated voltage of 750 V-rm.

The test demonstrated the coated cable's ability to maintain its circuit integrity for 105 minutes (90-minute flame application period, plus a 15-minute cool down period).

Sponsor of the report: Polyseam Ltd.
Date of test: 20th August 2019

Annex B – Declaration by the Applicant

Reference No. 23-10-24 - Protecta Cable Coating Assessments Certification Declaration

We the undersigned confirm that we have read and complied with the obligations placed on us by the
Passive Fire Protection Forum (PFPF)

Guide to undertaking technical assessments and engineering evaluations based on fire test evidence

2021

Industry Standard Procedure

We confirm that any changes which are the subject of this assessment have not to our knowledge been tested to the standard against which this assessment has been made.

We agree to withdraw this assessment from circulation should the component or element of structure, or any of its component parts be the subject of a failed fire resistance test to the standard against which this assessment is being made.

We understand that this assessment is based on test evidence and will be withdrawn should evidence become available that causes the conclusion to be questioned. In that case, we accept that new test evidence may be required.

We are not aware of any information that could affect the conclusions of this assessment. If we subsequently become aware of any such information, we agree to ask the assessing authority to withdraw the assessment.

(in accordance with the principles of FTSG Resolution 82)

Signature:



Name:

Paul Ramage

Position:

Head of Technical and Certification

Company:

Polyseam Limited

Date:

19th December 2024