

Reaction to fire classification report

Issuing laboratory: Warringtonfire Testing and Certification Limited

Classification standard: EN 13501-1: 2018

Report owner(s): Aeroseal LLC

Product(s): "Duct Seal LT"

Report number: 538611

Version: 1

Quality management

| Version | Date | Summary of amendments including reasons | |
|---------|-----------------------|---|---|
| 1 | 18 January 2024 | Description | Initial issue |
| | | Name | Prepared by |
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Contents

| | |
|---|----|
| Quality management | 2 |
| 1. Introduction | 4 |
| 2. Details of classified product | 4 |
| 2.1 General | 4 |
| 2.2 Product description | 4 |
| 3. Test reports and test results in support of classification | 5 |
| 3.1 Test reports | 5 |
| 3.2 Test results | 6 |
| 3.2.1 Official test results used for the classification | 6 |
| 4. Classification and field of application | 7 |
| 4.1 Reference of classification | 7 |
| 4.2 Classification | 7 |
| 4.3 Field of application | 8 |
| 4.4 Fire performance parameters for B - s1, d0 | 9 |
| 5. Restrictions | 9 |
| 6. Limitations | 10 |
| 7. Validity | 10 |

1. Introduction

This classification report defines the classification assigned to "Duct Seal LT", in line with the procedures given in EN 13501-1: 2018.

Warringtonfire Testing and Certification Limited (Warringtonfire) issued the classification report at the request of the report owner listed in Table 1.

Table 1 Report owner details

| Entity | Address |
|---------------------|---|
| Report owner | |
| Aeroseal LLC | 225 Byers Road, Miamisburg, Ohio, 45342 USA |

2. Details of classified product

2.1 General

The product(s), "Duct Seal LT", are defined as being suitable for construction applications excluding floorings and linear pipe thermal insulation.

2.2 Product description

The product(s), "Duct Seal LT", are described in Table 2 and in the test reports listed in Section 3.1.

Table 2 Product description

| Item | Detail | |
|--|--|-------------------------------|
| General description | Acrylic sealant applied to aluminium | |
| Product reference | "Duct Seal LT" | |
| Name of manufacturer | Aeroseal LLC | |
| Overall thickness including substrate | 1.20mm (determined by Warringtonfire) | |
| Overall weight per unit area including substrate | 2.58kg/m ² (determined by Warringtonfire) | |
| Coating | Generic type | Acrylic sealant |
| | Product reference | "Duct Seal LT" |
| | Name of manufacturer | Aeroseal LLC |
| | Application thickness | 0.124mm |
| | Application rate | 0.394kg/m ² |
| | Application method | Cast |
| | Colour | Clear |
| | Number of layers | One |
| | Curing process | Room temperature for 24 hours |
| Flame retardant details | See Note 1 below | |

Continued on next page

| Item | | Detail |
|--|-------------------------|---|
| Aluminium | Generic type | Aluminium |
| | Product reference | None assigned |
| | Name of manufacturer | S & R Sheet Metal |
| | Thickness | 1mm (0.04inches) |
| | Density | 2700kg/m ³ |
| | Flame retardant details | The substrate is inherently flame-retardant |
| Brief description of manufacturing process | | See Note 2 below |
| Mounting and fixing details | | An 80mm ventilated cavity was situated between the reverse face of the specimens and the calcium silicate backing board as defined in EN 13238:2010 |

Note 1: The sponsor of the test has confirmed that no flame-retardant additives were utilised in the production of the component.

Note 2: The sponsor was unable to provide this information.

3. Test reports and test results in support of classification

3.1 Test reports

Table 3 details the test reports that have been used in support of classification.

Table 3 Test reports

| Name of laboratory | Name of sponsor(s) | Test report no. | Test date | Test and extended application standard |
|--------------------|--------------------|-----------------|------------------|--|
| Warringtonfire | Aeroseal LLC | 538375 | 20 November 2023 | EN 13823: 2020 + A1: 2022 |
| Warringtonfire | Aeroseal LLC | 538376 | 27 November 2023 | EN ISO 11925-2: 2020 |

3.2 Test results

3.2.1 Official test results used for the classification

Table 4 details the test results that have been used in support of classification. The fire performance parameters for class B - s1, d0 can be found in Table 6.

Table 4 Test data

| Test method Report number | Parameter | Number of tests | Results | |
|--|--|--------------------|--------------------------|----------------------------------|
| | | | Continuous parameters | Compliance with parameters |
| EN 13823: 2020 + A1: 2022 538375 | FIGRA (THR(t) threshold of 0.2MJ) | 3 | 30 | - |
| | FIGRA (THR(t) threshold of 0.4MJ) | | 1 | - |
| | THR _{600s} (MJ) | | 0.6 | - |
| | LFS < edge of specimen | | - | Compliant |
| | SMOGRA (m ² /s ²) | | 0 | - |
| | TSP _{600s} (m ²) | | 18 | - |
| | No flaming droplets/particles persisting shorter than 10 s in EN 13823 within 600s | | - | Compliant |
| | No flaming droplets/particles persisting longer than 10 s in EN 13823 within 600s | | - | Compliant |
| EN ISO 11925-2: 2020 (30s exposure - Surface) 538376 | Fs ≤ 150 mm within 60 s | 6 | - | Compliant |
| | No ignition of the paper | | - | Compliant |
| EN ISO 11925-2: 2020 (30s exposure - Edge) 538376 | Fs ≤ 150 mm within 60 s | 6 | - | Compliant |
| | No ignition of the paper | | - | Compliant |

Note: '-' symbol confirms this parameter is not applicable.

4. Classification and field of application

4.1 Reference of classification

This classification has been carried out in accordance with EN 13501-1:2018.

4.2 Classification

The product "Duct Seal LT" in relation to its reaction to fire behavior is classified as:

B

The additional classification in relation to smoke production is:

s1

The additional classification in relation to flaming droplets / particles is:

d0

The format of the reaction to fire classification for construction applications excluding floorings and linear pipe thermal insulation products is:

| Fire behaviour | | Smoke production | | Flaming droplets | | |
|----------------|---|------------------|---|------------------|---|---|
| B | - | s | 1 | , | d | 0 |

Alternatively shown:

Reaction to fire classification: B - s1, d0

4.3 Field of application

The classification for the product described in Section 2.2 of this report is valid for end-use applications described in Table 5.

Table 5 End-use applications

| End use | Description | Origin |
|---------|--------------|---|
| Airgap | Freestanding | According to EN 13823: 2020 + A1: 2022, clause 5.2.2.a. |

This classification is valid for the following product parameters:

- Application thickness of sealant: 0.124mm (No variation allowed)
- Application rate of sealant: 0.394kg/m² (No variation allowed)
- Number of coats of sealant: One (No variation allowed)
- Colour: Clear (No variation allowed)
- Use of flame retardants: No variation allowed
- Aluminium thickness: 1mm (No variation allowed)
- Aluminium density: 2700kg/m³ (No variation allowed)
- Construction: No variation allowed
- Composition: No variation allowed

4.4 Fire performance parameters for B - s1, d0

All the products described in Section 2.2 and within the field of application defined in Section 4.3 comply with the fire performance parameters shown in Table 6. The test results can be found in Section 3.2.

Table 6 Fire performance parameters for B - s1, d0

| Test method | Parameter | Continuous parameters | Compliance with parameters |
|-------------------------------------|---|---|--|
| EN 13823: 2020 + A1: 2022 | FIGRA (THR(t) threshold of 0.2MJ) | FIGRA _{0,2MJ} ≤ 120 W/s | - |
| | FIGRA (THR(t) threshold of 0.4MJ) | - | - |
| | THR _{600s} (MJ) | THR _{600s} ≤ 7,5 MJ | - |
| | Lateral flame spread to edge of test specimen? | - | LFS < edge of specimen |
| | SMOGRA (m ² /s ²) | SMOGRA ≤ 30m ² /s ² | - |
| | TSP _{600s} (m ²) | TSP _{600s} ≤ 50m ² | - |
| | Fall of flaming droplets/particles < 10s? | - | No flaming droplets/particles persisting shorter than 10 s in EN 13823 within 600s |
| | Fall of flaming droplets/particles > 10s? | - | No flaming droplets/particles persisting longer than 10 s in EN 13823 within 600s |
| EN ISO 11925-2: 2020 (30s exposure) | Extent of flame spread | - | F _s ≤ 150 mm within 60 s |
| | Flaming droplets / particles that ignite filter paper | - | No ignition of the paper |

Note: ‘-’ symbol confirms this parameter is not applicable.

5. Restrictions

At the time the standard EN 13501-1: 2018 was published, no decision was made about the duration of validity of a classification report.

When this report is used to support UKCA marking under the Construction Products Regulation 2011 (retained EU law EUR 2011/305) as amended by the Construction Products (Amendment etc.) (EU Exit) Regulations 2019 and the Construction Products (Amendment etc.) (EU Exit) Regulations 2020 and/or ‘CE+UK(NI)’ marking for Northern Ireland under the Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011, the provisions of those regulations prevail over any conflicting provisions in the designated/harmonised standards and technical specifications.

6. Limitations

According to the information mentioned by the sponsor on the technical information sheet there was no harmonised product standard for UKCA or CE+UK(NI) marking available at the time the classification report for the tested material/product was drafted. When such a product standard is published, this report may be submitted again to the laboratory to evaluate the adequacy of the report for UKCA or CE+UK(NI) marking.

The test laboratory played no part in sampling the product for the test, although it holds appropriate references, supplied by the manufacturer, to provide evidence for the traceability of the samples tested.

7. Validity

This document is the original version of this classification report and is written in English. In case of doubt the original version prevails over a translation.

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The classification results relate to the behaviour of a product under the particular conditions of the test(s); they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use, nor can the classification results be extrapolated and applied to other products, or imply suitability for use in configurations not specifically detailed in the classification report. The classification is based on the information available to Warringtonfire at the time of the report. Should conflicting or contradictory evidence become available, Warringtonfire reserves the right to unconditionally withdraw the classification report forthwith upon giving written notice of the same.

Reports are statements of fact prepared in accordance with the referenced version of the standards stated in Section 3 of this report. Test, classification and extended application are based upon the information provided to Warringtonfire. Warringtonfire takes no responsibility for the accuracy or completeness of such information.

The results stated in this classification report apply to the test specimens as received and/or specified in the referenced/supporting test reports. Any differences in composition, production process, thickness, density or colour of the product may significantly affect the performance and will therefore invalidate the application of the test and classification results to the variant product. It is recommended that any proposed variation to the tested configuration or product should be referred to the report owner. The report owner should then obtain appropriate documentary evidence of compliance from Warringtonfire or another accredited testing authority. The supplier of the product is responsible for ensuring that the product which is supplied for use is identical to the test specimens that were tested.

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This document does not represent type approval or certification of the product. Warringtonfire does not give an opinion nor is it Warringtonfire's responsibility to determine or state whether the product meets any particular fire or life safety standards as set out in the Building Regulations or any other appropriate document.



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