

# BRE Global Test Report

## CEN/TS 1187: 2012 Test 4 External fire exposure to roofs test on LeesonBound UVR

**Prepared for:** Leeson Polyurethanes Ltd

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## Table of Contents

|                   |   |          |
|-------------------|---|----------|
| <b>1</b>          | <b>Objective</b>  | <b>4</b> |
| <b>2</b>          | <b>Sample</b>   | <b>4</b> |
| 2.1               | Traceability  | 4        |
| 2.2               | Description of sample and test format.                  | 4        |
| <b>3</b>          | <b>Conditioning</b>                                     | <b>5</b> |
| <b>4</b>          | <b>Results</b>  | <b>5</b> |
| 4.1               | Preliminary ignition test                               | 5        |
| 4.2               | Penetration test  | 5        |
| 4.3               | Observations  | 5        |
| <b>5</b>          | <b>Conclusion</b>                                       | <b>6</b> |
| <b>6</b>          | <b>Validity</b>   | <b>6</b> |
| <b>7</b>          | <b>Reference</b>  | <b>6</b> |
| <b>Appendix A</b> | <b>Product description provided by the test sponsor</b> | <b>7</b> |
| <b>Appendix B</b> | <b>Photographs of the test specimens</b>                | <b>9</b> |



## 1 Objective

To determine the capacity to resist penetration by fire of the sample described in Section 2 using the external fire exposure to roofs test specified in CEN/TS 1187: 2012 Test 4<sup>1</sup>.

## 2 Sample

### 2.1 Traceability

The test samples were supplied by the client. BRE Global were not involved in the sample selection process and therefore cannot comment upon the relationship between samples supplied for test and the product supplied to market.

### 2.2 Description of sample and test format.

Unless otherwise stated all measurements are nominal.

|   |  |
|---|--|
| Test Sponsor  | Leeson Polyurethanes Ltd, Hermes Close, Warwick, CV34 6RP, UK  |
| Manufacturer of the roofing product                           | As above   |
| Trade name  | LeesonBound UVR  |
| Sample description (as provided by test sponsor/manufacturer) | Polyurethane bound aggregate, ref. PU4844/60<br>A product definition as supplied by the test sponsor has been included in this report as Appendix A.   |
| Description of sample (as received by BRE Global)             | PU-bound aggregate layer 22-25mm thick on plywood base 18mm thick.<br>No jointed specimens were provided. Product was applied as a continuous layer.<br>Photographs of the sample are given in Appendix B. |
| Sample receipt date   | 27 February 2020   |
| Test face   | Aggregate layer  |
| Test format   | The test was carried out in the flat position  |
| Date of test  | 18 March 2020  |
| Purchase order  | 37926  |



|               |          |
|---------------|----------|
| Test operator | P Potter |
|---------------|----------|

### 3 Conditioning

The specimens were conditioned as required by the standard.

### 4 Results

#### 4.1 Preliminary ignition test

| Specimen reference | Joint | Ambient             | Flame spread mm | Flame duration min:sec | Penetration min:sec |
|--------------------|-------|---------------------|-----------------|------------------------|---------------------|
| E12641/1           | None  | 21.4 °C<br>48.7 %RH | 0               | 0:00                   | None                |

#### 4.2 Penetration test

| Specimen reference | Joint | Ambient             | Penetration min:sec | Observations    |
|--------------------|-------|---------------------|---------------------|-----------------|
| E12641/2           | None  | 21.3 °C<br>48.5 %RH | None                | Did not ignite. |
| E12641/3           | None  | 22.7 °C<br>41.2 %RH | None                | Did not ignite. |
| E12641/4           | None  | 23.2 °C<br>48.0 %RH | None                | Did not ignite. |

No jointed specimens were provided. The product was applied as a continuous layer.

#### 4.3 Observations

No dripping of material occurred from the underside of any specimen tested, nor was any mechanical failure, or development of holes, observed.



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## 5 Conclusion

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CEN/TS 1187: 2012 does not contain acceptance criteria and therefore this test report does not indicate a pass or fail of the product.

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## 6 Validity

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This test report does not represent type approval or certification of the product.

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## 7 Reference

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- 1 CEN/TS 1187: 2012. Test methods for external fire exposure to roofs. Test 4 – Method with two stages incorporating burning brands, wind and supplementary radiant heat. CEN, Avenue Marnix 17, B-1000, Brussels, Belgium.



## Appendix A Product description provided by the test sponsor

### PRODUCT DEFINITION

|   |  |
|---|--|
| Test sponsor (Company name and address): Leeson Polyurethanes Ltd.<br>Hermes Close,<br>Warwick,<br>CV34 6RP<br>UK   |  |
| Trade name  | LeesonBound UVR  |
| Product reference/number  | PU4844/60  |
| General description   | Polyurethane bound aggregate   |
| Manufacturer of the roofing product (company name and address)  | Leeson Polyurethanes Ltd.<br>Hermes Close,<br>Warwick,<br>CV34 6RP<br>UK   |
| Place of manufacture  | Leeson Polyurethanes Ltd.<br>Hermes Close,<br>Warwick,<br>CV34 6RP<br>UK   |
| Test specimens assembled by (if not by roof product manufacturer)   | As Above   |
| Thickness (overall depth of roof structure tested)  | 36 mm  |
| Mass per unit area (overall value for the roof structure tested)  | 58 kg/m <sup>2</sup>   |
| Flame retardant treatment added or organic content limited during production (yes/no), if yes give details  | None   |
| Harmonised EN product standard, and AVCP System No. if applicable   | To be tested to EN13501-5  |
| Test face (Layer 1)<br>- Name/reference<br>- Manufacturer<br>- Type<br>- Thickness<br>- Mass per unit area<br>- Colour<br>- Application method<br>- Fire retardant (trade name, generic type, amount) | - LeesonBound UVR – PU4844/60<br>- Leeson Polyurethanes Ltd.<br>- Polyurethane bound aggregate<br>- 22 to 25 mm<br>- 42.5 kg/m <sup>2</sup><br>- Scandinavian<br>- Trowelling of wet coated aggregate, cured in-situ<br>- None |



|  |  |
|--|--|
| Test sponsor (Company name and address): Leeson Polyurethanes Ltd.<br>Hermes Close,<br>Warwick,<br>CV34 6RP<br>UK  |  |
| Trade name   | LeesonBound UVR  |
| Layer 2 <ul style="list-style-type: none"> <li>- Name/reference</li> <li>- Manufacturer</li> <li>- Type</li> <li>- Thickness</li> <li>- Mass per unit area</li> <li>- Colour</li> <li>- Application method</li> <li>- Fire retardant (trade name, generic type, amount)</li> </ul> | <ul style="list-style-type: none"> <li>- Far Eastern Marine Grade Plywood</li> <li>- Welly timber industries Malaysia</li> <li>- Marine Grade Plywood</li> <li>- 18 mm</li> <li>- 15.5 kg/m<sup>2</sup></li> <li>- Natural</li> <li>- Attached to roof mechanically with nails/screws</li> <li>- None</li> </ul> |





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Appendix B    Photographs of the test specimens

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