

The logo for BRE Global, with 'bre' in red and 'global' in white, set against a dark grey background with a white abstract line pattern.

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**Classification of fire resistance performance in accordance with EN 13501-2:2003 on a loadbearing roof without a fire separating function.**

**Sponsor:**

Astron Buildings S.A.  
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**Prepared by:**

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**Notified Body No: 1576**

**Product Name:**

LPR1000 single skin bridge roof  
with 160mm insulation

**Classification report No.:**

250520

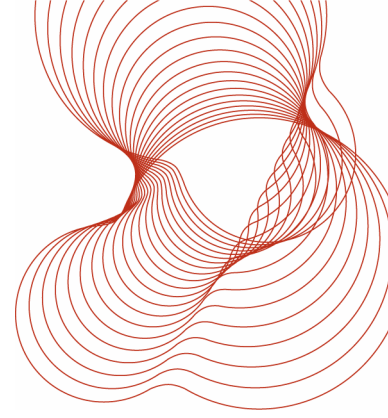
**Issue number: 1**

**Date of Issue:**

18<sup>th</sup> December 2008



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## 1 Introduction

This resistance to fire classification report defines the classification assigned to a load bearing roof without a fire separating function constructed using Astron Buildings S.A. components and designated “LPR1000 single skin bridge roof with 160mm insulation”, in accordance with the procedures given in EN 13501-2:2003.

## 2 Details of classified product:

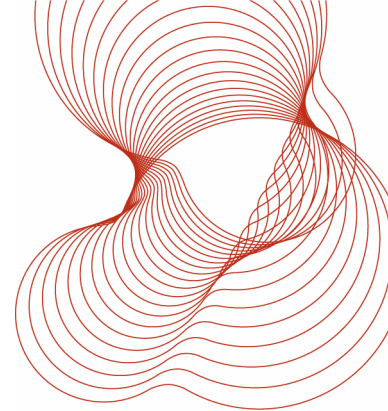
A horizontal roof described as an Astron Buildings S.A. “LPR1000 single skin bridge roof with 160mm insulation” system was supported by four “Z” profile steel purlins pitched at 1050mm centres; the purlins, nominally 203mm deep, were fixed in place by steel brackets attached to the ends of each purlin. Astrotherm insulation, 80mm-thick with a foil facing on its lower surface was laid over the top of the purlins and was held in place by steel pedestals positioned over the insulation and fixed to the underlying purlins. The pedestals, nominally 80mm-deep, were fitted with steel rails which were then covered with a layer of 80mm-thick unfaced Astrotherm insulation. The roof assembly was completed by 0.5mm-thick corrugated steel roofing sheets laid over the unfaced insulation and fixed to the underlying rails. The perimeter of the roof was finished with sections of flashing

The roof construction is fully described in the test report provided in support of the classification listed in Clause 3.1.

## 3 Test report and test results in support of classification.

### 3.1 Test report.

Name of Laboratory	Name of sponsor	Test report No.	Test method
BRE Global	Astron Buildings S.A.	246815	EN 1365-2:1999



### 3.2 Test results.

Test method & Test number	Parameter	Results.
EN 1365-2:1999 Test report: 246815	Temperature/time curve:	Standard temperature/time curve.
	Load applied:	0.4kN/m <sup>2</sup> . Uniformly distributed.
	Loadbearing capacity <b>(R)</b>	35min.*
	Integrity: <b>(E)</b>	
	cotton pad	23min.
	gap gauges	35min.*
	sustained flaming	17min.
	Insulation: <b>(I)</b>	
	mean temp rise	13min.
	max temp rise	2min.

- No failure during course of test.

## 4 Classification and field of application

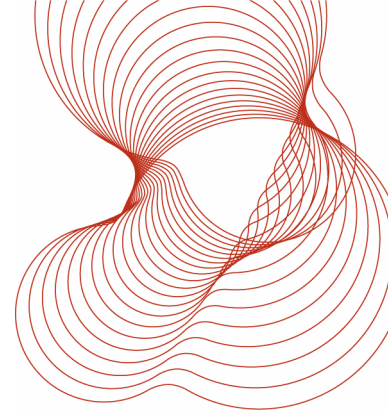
### 4.1 Reference of classification

This classification has been carried out in accordance with clause 7.2.3 of EN 13501-2:2003.

### 4.2 Classification

The roof, constructed using Astron Buildings S.A. components and designated "LPR1000 single skin bridge roof with 160mm insulation" is classified:

**Fire resistance classification: R30**



### 4.3 Field of application

The fire test results are directly applicable to a similar untested roof construction provided the following is true:

1. With respect to the structural building member:

The maximum moments and shear forces, which when calculated on the same basis as the test load, shall not be greater than those tested.

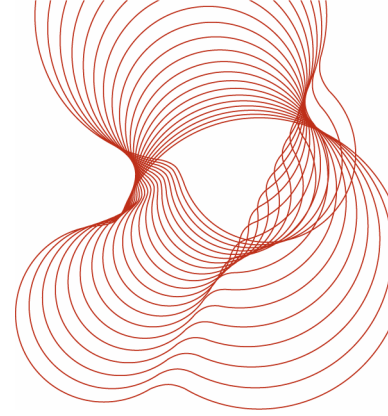
2. With respect to the inclination of roof constructions:

For apex or monopitch roof constructions having a span normal to the inclination, the results are valid for an installation with a gradient between 0° and 25°.

## 5 Limitations

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

The specification and interpretation of fire test methods are the subject of ongoing development and refinement. Changes in associated legislation may also occur. For these reasons it is recommended that the relevance of test reports over 5 years old should be considered by the user. The laboratory that issued the report will be able to offer, on behalf of the legal owner, a review of the procedures adopted for a particular test or classification to ensure that they are consistent with current practices, and if required, may endorse the report.



**Prepared on behalf of BRE Global by**

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BRE Global is not UKAS accredited to make opinions and interpretation. Any opinions and interpretations included as part of this report are clearly marked as such.

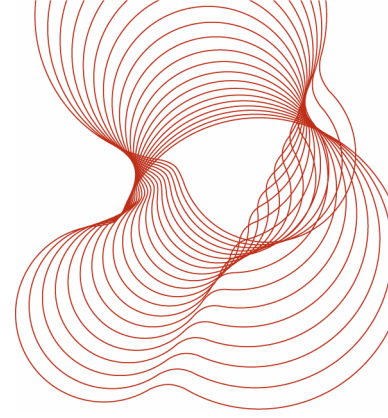


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Classification of fire resistance performance in accordance with EN 13501-2:2003 on an Astron Buildings S.A. roof assembly, Reference "LPR1000 single skin bridge roof with 160mm insulation"



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=====REPORT ENDS=====