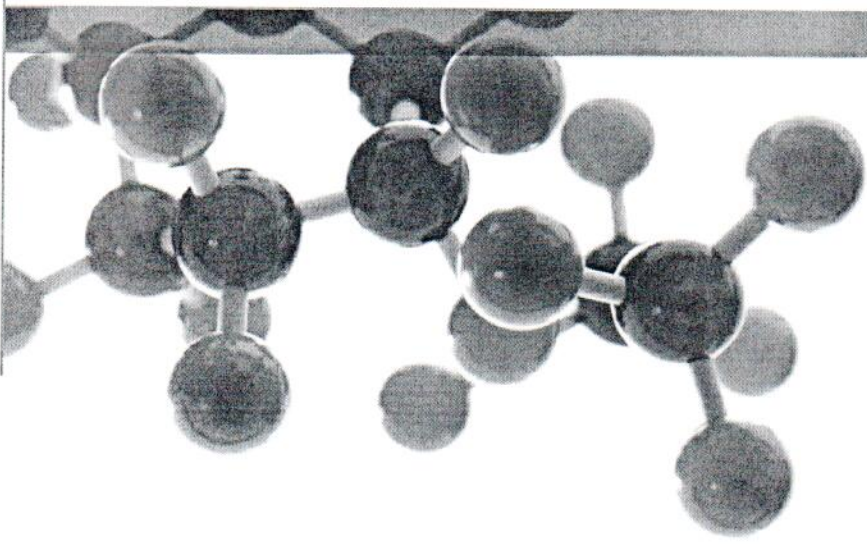




# NFP 92-501:1995



## Epiradiateur Test

A Report To: Brand Management Group

Document Reference: 364757

Date: 20<sup>th</sup> June 2016

Issue No.: 1

Page 1



## Executive Summary

**Objective** To determine the performance of the following composite when tested in accordance with NFP 92-501:1995.


Generic Description	Product reference	Thickness	Weight per unit area or density
Wallcovering adhered to a plasterboard substrate	"HP PVC-Free Durable Wall Paper"	12.99mm*	8.72kg/m <sup>2</sup> *
<b>Individual components used to manufacture composite:</b>			
Wallcovering	"HP PVC-Free Durable Wallpaper"	0.4572±0.0635mm	298±25g/m <sup>2</sup>
Adhesive	"Murabond Heavy"	Not applicable	200g/m <sup>2</sup>
Substrate	"Gyproc Soundbloc"	12.5mm	700kg/m <sup>3</sup>
<b>Please see page 5 of this test report for the full description of the product tested</b>			

**Test Sponsor** Brand Management Group, 1605 Main Street, Suite 503, Sarasota, FL 34236, United States of America


**Test Results:** The results of this test, when assessed in accordance with the stipulations of the order from the **Ministere de l'Industrie et de la Decentralisation**, dated 28th August 1991 relating to reaction to fire, indicate that the specimens, as tested, are classified as **M1**.

**Date of Test** 31<sup>st</sup> May 2016

## Signatories



Responsible Officer  
 T. Mort \*  
 Senior Technical Officer



Authorised  
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 Business Unit Head

\* For and on behalf of **Exova Warringtonfire**.

Report Issued: 20<sup>th</sup> June 2016

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## Test Details

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<b>Purpose of test</b>	<p>To determine the performance of specimens of a product when they are subjected to the conditions of the test specified in the "Epiradiateur test", NFP 92-501:1995, "Test procedure for the classification of rigid materials or materials on rigid substrates of all thicknesses and flexible materials over 5 mm thick".</p> <p>The test was performed in accordance with the procedure specified in NFP 92-501:1995 and this report should be read in conjunction with that Standard. The specimens were not subjected to the accelerated ageing test.</p>
<b>Fire test study group/EGOLF</b>	<p>Certain aspects of some fire test specifications are open to different interpretations. The Fire Test Study Group and EGOLF have identified a number of such areas and has agreed Resolutions which define common agreement of interpretations between fire test laboratories which are members of the Groups. Where such Resolutions are applicable to this test they have been followed.</p>
<b>Instruction to test</b>	<p>The test was conducted on the 31<sup>st</sup> May 2016 at the request of Brand Management Group, the sponsor of the test.</p>
<b>Provision of test specimens</b>	<p>The specimens were supplied by the sponsor of the test. <b>Exova Warringtonfire</b> was not involved in any selection or sampling procedure. <b>Exova Warringtonfire</b> supplied the adhesive and substrate and bonded the composite together.</p>
<b>Conditioning of specimens</b>	<p>The specimens were received on the 6<sup>th</sup> May 2016.</p> <p>Prior to testing the specimens were conditioned to constant mass at a temperature of <math>23 \pm 3^{\circ}\text{C}</math> and a relative humidity of <math>50 \pm 10\%</math>.</p>
<b>Specimen orientation</b>	<p>The decorative face of the specimens was exposed to the radiant heat of the test when the specimens were mounted in the test position.</p>

Note 1. The sponsor was unable to provide this information.

Note 2. The sponsor was unwilling to provide this information.



## Test Results

Test results	The results of the tests are given in Table 1 and the derived indices are given in Table 2.
Observations taken during the test	None
Classification	<p><b>The results of this test, when assessed in accordance with the stipulations of the order from the Ministere de l'Industrie et de la Decentralisation, dated 28th August 1991 relating to reaction to fire, indicate that the specimens, as tested, are classified as M1.</b></p> <p>The indicated classification in no way prejudices the conformity of the materials commercialised to the samples submitted to the tests and can in no way be considered as a certificate of qualification as defined by the act of 10th January 1978. This conformity can be tested by the certificates of qualification acknowledged by the "Ministère de l'Industrie" and notably by the NF quality mark Réaction au feu.</p> <p>The test procedures for classifying rigid materials and flexible materials of greater than 5mm thickness are detailed in Appendix 1 to this report.</p>
Durability of classification	The accelerated aging test has not been conducted.
Applicability of test result	<p>The test results relate only to the behaviour of the test specimens of the product under the particular conditions of test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.</p> <p>The test results relate only to the specimens of the product in the form in which they were tested. Small differences in the composition or thickness of the product may significantly affect the performance during the test and may therefore invalidate the test results. Care should be taken to ensure that any product which is supplied or used is fully represented by the specimens which were tested.</p>
Validity	<p>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 five 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 to ensure that they are consistent with current practices, and if required may endorse the test report.</p> <p>This report may only be reproduced in full. Extracts or abridgements shall not be published without permission of <b>Exova Warringtonfire</b>.</p>



Table 1

Specimen Number	Exposed Face				Unexposed Face				$\Delta t$
	$t_i$	$i_1$	$e_1$	$\Delta t_1$	$t_{i2}$	$i_2$	$e_2$	$\Delta t_2$	
1	81	82	135	53	Nil	Nil	Nil	Nil	53
2	77	78	119	41	Nil	Nil	Nil	Nil	41
3	71	72	112	40	Nil	Nil	Nil	Nil	40
4	74	76	117	41	Nil	Nil	Nil	Nil	41

All measurements are recorded in seconds.

- $t_i$  : Time taken in seconds for the test piece to ignite on exposed face after it has been placed in the cabinet.  
 $i_1$  : Time of ignition occurring above the upper limit of the plane section of the radiating surface on the exposed face.  
 $e_1$  : Time of extinction of flaming occurring above the upper limit of the plane section of the radiating surface on the exposed face.  
 $\Delta t_1$  : Duration of flaming with or without interruption above the upper limit of the plane section of the radiating surface on the face exposed to the heating conditions of the test.  
 $t_{i2}$  : Time in seconds for the test piece to ignite on the unexposed face after it has been placed in the cabinet.  
 $i_2$  : Time of ignition occurring above the upper limit of the plane section of the radiating surface on the unexposed face.  
 $e_2$  : Time of extinction of flame occurring above the upper limit of the plane section of the radiating surface on the unexposed face.  
 $\Delta t_2$  : Duration of flaming with or without interruption above the upper limit of the plane section of the radiating surface on the unexposed face.  
 $\Delta t$  : The duration of flaming with or without interruption above the upper limit of the plane section of the radiating surface on each face.

Table 2

SPECIMEN NUMBER	$\sum h$	$\Delta T$	$q = \frac{100 \sum h}{t_i \sqrt{\Delta T}}$	$\bar{q} = \frac{\sum q}{n}$
1	9	53	1.53	1.34
2	8	41	1.22	
3	6	40	1.34	
4	6	41	1.27	

- $\sum h$  : Is the sum of the maximum height of the flames (h) reached in every 30 second period (in centimetres) during each test  
 $\Delta T$  : The total duration of flaming combustion above the top of the radiator (it is calculated whether either one or both faces of the specimen flame)  
 $q$  : Is the classification index obtained from the data derived from each test  
 $\bar{q}$  : Is the arithmetic mean of the q indices  
 $n$  : The number of tests

Table 3

Specimen number	Mass before test (g)	Mass after test (g)	Mass loss (g)
1	1049.31	1047.21	2.10
2	1049.31	1048.28	1.03
3	1048.11	1044.11	4.00
4	1052.11	1050.99	1.12

## Appendix 1

### Test Procedures For Classifying Rigid Materials And Flexible Materials Over 5 mm Thick

**Heat Radiation Test** These tests consist in submitting the samples, in clearly defined conditions, to the action of a radiating heat source and producing:

- (Articles 26 to 42)
- a) Ignition of the gases released, if it occurs,
  - b) Flame propagation.

The test sample (30 x 40 cm) inclined at 45° is submitted to a clearly defined radiation, emitted by an electric radiator, whose surface is 3.0 cm below the surface of the test sample. The gases released pass in contact with gas igniters located on either side of the test sample.

The duration of the test is 20 minutes.

**Complementary Tests** Article 42: The materials which display very special behaviour during the tests are submitted to complementary tests.

#### Tests on Fusible Materials (Articles 43 to 45)

70 mm side square samples, so as to obtain a weight of over 2 g, are installed on a clearly defined metal grid, and submitted to the radiation of a radiator located 3.0 cm above. On each ignition it is moved aside and replaced after extinction, during the first 5 minutes; then for 5 further minutes, it remains in position.

The determining elements are:

- The presence or not of burning drops
- The ignition of the cellulose wool placed under the test sample.

#### Flame Propagation Tests (Articles 46 to 48)

The test sample (400 x 35 mm), placed horizontally on edge, is submitted to the action of a small burner flame described in ISO 6940. The non-persistence or non-propagation of the flame is checked with the possible speed of propagation between 2 marks 25 cm apart.

#### **Conditioning of the Samples**

The samples submitted with normal dimensions are kept in a conditioned enclosure (23°C ± 3°C and 50% ± 10% relative humidity) until their mass has stabilised.

#### **Classification of Materials**

These are established subsequent to the above tests. Combustible materials are classified M.1, M.2, M.3, M.4. Only those materials classified M.1 can claim to M.0 classification (P.C.S. < 2500 kJ/kg, i.e. 600 kcal/kg).

(Articles 65 to 86)



## Revision History

Issue No :	Re-issue Date:
Revised By:	Approved By:
Reason for Revision:	