# RADIAL ENGINEERING LTD

# TEST REPORT

**SCOPE OF WORK**
BROADBAND

**REPORT NUMBER**
211012007SHF-002

**TEST DATE(S)**
2021-10-12- 2021-10-27

**ISSUE DATE**
2021-11-01

**PAGES**
7

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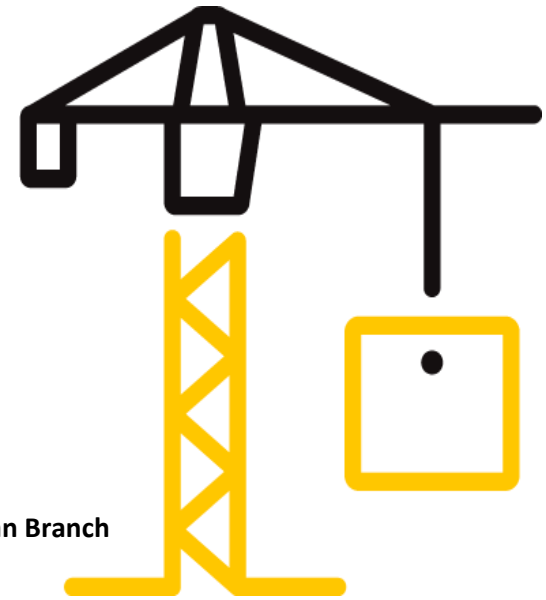

**Intertek Testing Services Shenzhen Ltd. Shanghai Fengxian Branch**

# Test Report

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# Test Report

Issue Date: 2021-11-01 Intertek Report No. 211012007SHF-002

Applicant: RADIAL ENGINEERING LTD

Address: 1845 KINGSWAY UNIT 1165, PORT COQUITLAM, V3C 1S9. CANADA

Attn: JUAN CARLOS BOLOMEY

Test Type: Performance test, samples provided by the applicant.

**Product Information**

| **Product Name** | BROADBAND | | **Brand** | PRIMACOUSTIC |
|---|---|---|---|---|
| **Sample Description** | Good Condition | | **Sample Amount** | 8 pcs + 4 packages |
| | | | **Received Date** | 2021-09-30 |
| **Sample ID** | | **Model** | **Specification** | |
| S211012007SHF.002<br>S211012007SHF.004~006 | | PAINTABLE | 48”×48” PAINTABLE FINISH PANEL | |

**Test Methods And Standards**

| | |
|---|---|
| **Test Standard** | EN 13823:2010+A1:2014 and EN ISO 1716:2010 |
| **Specification Standard** | EN 13501-1:2018 |
| **Test Conclusion** | The samples were tested according to the above standards, and the results are shown in the following page. |

Note:

1.This report relates specifically to the sample(s) that were drawn and provided by the applicant or their nominated third party. The reported result(s) provide no warranty or verification on the sample(s) representing any specific goods and/or shipment and only relate to the sample(s) as received and tested.

**Report Authorized**

Name: Sally Xie
Title: Reviewer

Name: Lu Cheng
Title: Project Engineer

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# Test Report

Issue Date: 2021-11-01 Intertek Report No. 211012007SHF-002

**Test Items, Method and Results:**

EN 13501-1:2018 Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests

**1.1 HEAT OF COMBUSTION TEST**

The test was conducted in accordance with EN ISO 1716. This test evaluates the gross heat of combustion ($Q_{PCS}$) of products at constant volume in a bomb calorimeter.

**1.2 SINGLE BURNING ITEM TEST**

The test was conducted in accordance with EN 13823. This test evaluates the potential contribution of a product to the development of a fire, under a fire situation simulating a single burning item near to the product.

**1.3 CLASSIFICATION CRITERIA**

The classification was determined in accordance with EN 13501-1:2018. The class A2 with its corresponding fire performance is given in the table below.

Table - Class of reaction to fire performance for construction products excluding floorings and linear pipe thermal insulation products.

| Class | Test Method(s) | Classification criteria | Additional classifications |
|---|---|---|---|
| A2 | EN ISO 1716 and | PCS ≤3.0 MJ/kg [a] and<br>PCS ≤4.0 MJ/m$^2$ [b] and<br>PCS ≤4.0 MJ/m$^2$ [c] and<br>PCS ≤3.0 MJ/kg [d] | -- |
| | EN 13823 | $FIGRA_{0.2MJ}$ ≤ 120 W/s and<br>LFS < edge of specimen and<br>$THR_{600s}$ ≤ 7.5 MJ | Smoke production [e] and<br>Flaming droplets/particles [f] |

**Note:**

a. For homogeneous products and substantial components of non-homogeneous products.
b. For any external non-substantial component of non-homogeneous products.
c. For any internal non-substantial component of non-homogeneous products.
d. For the product as a whole.
e. s1 = SMOGRA ≤ 30m$^2$/s$^2$ and $TSP_{600s}$ ≤ 50m$^2$; s2 = SMOGRA ≤ 180m$^2$/s$^2$ and $TSP_{600s}$ ≤ 200m$^2$; s3 = not s1 or s2.
f. d0 = no flaming droplets/particles in EN 13823 within 600s;
d1 = no flaming droplets/particles persisting longer than 10s in EN 13823 within 600s;
d2 = not d0 or d1.
Ignition of the paper in EN ISO 11925-2 results in a d2 classification.

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# Test Report

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**Test Items, Method and Results:**

**2 RESULTS AND OBSERATIONS**

| Method | Parameter | | Result |
|---|---|---|---|
| EN ISO 1716:2010 | PCS | SURFACE TISSUE , MJ/$m^2$ | 0.6297 |
| | | GLUE, MJ/$m^2$ | 0.1520 |
| | | BASE MATERIAL, MJ/kg | 1.7742 |
| | | GLUE, MJ/$m^2$ | 0.1520 |
| | | BACK TISSUE , MJ/$m^2$ | 0.3657 |
| | | the whole product, MJ/kg | 1.8 |
| EN 13823:2010+A1:2014 * | $FIGRA_{0.2MJ}$ , W/s | | 86 |
| | $THR_{600s}$ , MJ | | 1.9 |
| | LFS, m | | <Edge of specimen |
| | SMOGRA, $m^2/s^2$ | | 81 |
| | $TSP_{600s}$, $m^2$ | | 58 |
| | Flaming droplets/particles | | No flaming droplets/particles occur within 600s |

Note

1. *Test item is subcontracted on accreditation by CNAS L0057.

2. Per EN 13823, the samples were free standing at a distance of 80mm from the backing board. Backing board was a 12mm thick calcium silicate board. The density of the calcium silicate board was 900kg/$m^3$.

3. The information of each component of the product was declared by applicant, see below table.

| Layer No. (from face to back) | Material of each Layer | Mass per unit area (kg/$m^2$) | Thickness (mm) |
|---|---|---|---|
| 1 | SURFACE TISSUE | 0.38 | 0.6 |
| 2 | GLUE | 0.008 | 0.01 |
| 3 | BASE MATERIAL | 5.5 | 50 |
| 4 | GLUE | 0.008 | 0.01 |
| 5 | BACK TISSUE | 0.19 | 0.4 |

**3 CLASSIFICATION**

The classification has been carried out in accordance with EN 13501-1.

| Fire behaviour | | Smoke production | | | Flaming Droplets | |
|---|---|---|---|---|---|---|
| *A2* | - | s | *2* | - | d | *0* |

Reaction to fire classification: *A2 - s2, d0*

# Test Report

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**Test Items, Method and Results:**

**4 Test Photos of EN 13823**


Before test (Long wing)


Before test (Short wing)


After test (Long wing)


After test (Short wing)

# Test Report

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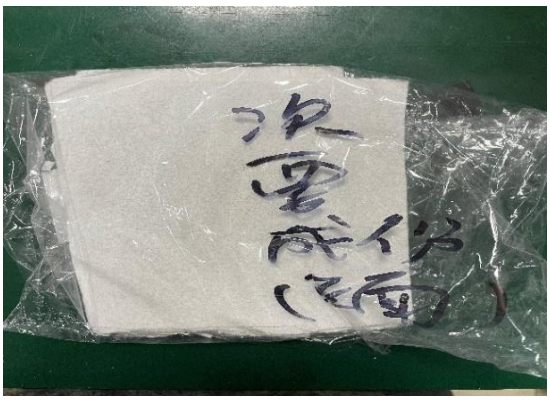
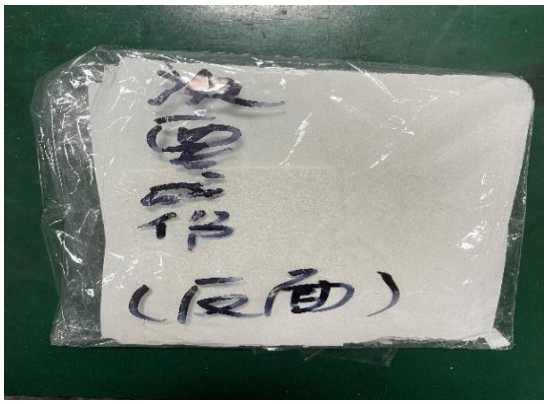
**Appendix A: Sample Received Photo**

Front view

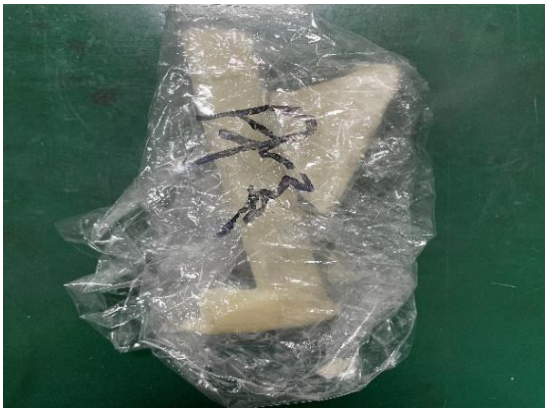
Back view



SURFACE TISSUE



BACK TISSUE



GLUE

BASE MATERIAL

**Revision:**

| NO. | Date | Changes |
|---|---|---|
| 211012007SHF-002 | 2021-11-01 | First issue |