# Certificate of Test

**QUOTE No.: NC8429** **REPORT No.: FNC12632**

## COMBUSTIBILITY TEST FOR MATERIALS IN ACCORDANCE WITH AS 1530.1-1994

**TRADE NAME:** Resene Construction Systems Ceramic Wool

**SPONSOR:**
Resene Construction Systems
5 Ventura Place
Middleton 8024
NEW ZEALAND

**DESCRIPTION OF TEST SAMPLE:**
The sponsor described the tested specimen as a ceramic wool material comprised of aluminium oxide ($Al_2O_3$), silicon dioxide ($SiO_2$), alkali ($Na_2O+K_2O$) and iron oxide ($Fe_2O_3$).

Nominal thickness: 50 mm
Nominal density: 128 kg/m³
Colour: white

**TEST PROCEDURE:**
Five (5) samples were tested in accordance with Australian Standard 1530 Methods for fire tests on building materials, components and structures, Part 1- 1994: Combustibility Test for Materials.

An alternative suitable insulating material was used to fill the annular space between the furnace tubes, as specified in Clause 4.2 of ISO 1182:2010.

**RESULTS:**
The following calculated results were obtained, refer also to Summary of measurements:

| **Arithmetic mean** | $= \frac{\Sigma\, results}{5}$ |
|---|---|
| Mean furnace thermocouple temperature rise **(°C)** | 0.72 |
| Mean specimen centre thermocouple temperature rise **(°C)** | 0.00 |
| Mean specimen surface thermocouple temperature rise **(°C)** | 0.19 |
| Mean duration of sustained flaming (s) | 0 |
| Mean mass loss (%) | 0.78 |

**DESIGNATION:**
The material is NOT deemed combustible according to the test criteria specified in Clause 3.4 of AS 1530.1-1994.

These test results relate only to the behaviour of the test specimens of the material under the particular conditions of the test and they are not intended to be the sole criterion for assessing the potential fire hazard of the material in use.

DATE OF TEST: 14 September 2020

Issued on the 3rd day of November 2020 without alterations or additions.

Faustin Molina
Testing Officer

Stephen Smith
Team Leader, Reaction to Fire & Façade Fire Laboratory

**End of Report**



**NATA Accredited Laboratory**
**Number: 165**
**Corporate Site No 3625**
Accredited for compliance with ISO/IEC 17025 - Testing.



**CSIRO** INFRASTRUCTURE TECHNOLOGIES

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**SUMMARY OF MEASUREMENTS AND OBSERVATIONS OF SAMPLES UNDER TEST C12632**

| Parameters | Symbol or expression | Unit symbol | Sample Number | | | | |
|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 |
| Initial specimen mass | $m_{si}$ | g | 12.65 | 11.99 | 11.27 | 12.53 | 11.86 |
| Final specimen mass | $m_{sf}$ | g | 12.53 | 11.92 | 11.19 | 12.43 | 11.76 |
| Mass loss | $\Delta m = \frac{Msi - Msf}{Msi} \times 100$ | % | 0.95 | 0.58 | 0.71 | 0.80 | 0.84 |
| Total duration of sustained flaming | Cumulative total of duration of flaming* | s | 0 | 0 | 0 | 0 | 0 |
| Initial furnace thermocouple temperature | $T_{fi}$ | °C | 754 | 747 | 746 | 751 | 754 |
| Maximum furnace thermocouple temperature | $T_{fm}$ | °C | 799 | 776 | 777 | 785 | 779 |
| Final furnace thermocouple temperature | $T_{ff}$ | °C | 798 | 775 | 777 | 784 | 779 |
| Furnace thermocouple temperature rise | $\Delta Tf = Tfm - Tff$ | °C | 1 | 1 | 0 | 1 | 0 |
| Maximum specimen centre thermocouple temperature | $T_{cm}$ | °C | 777 | 761 | 769 | 764 | 767 |
| Final specimen centre thermocouple temperature | $T_{cf}$ | °C | 777 | 761 | 769 | 764 | 767 |
| Specimen centre thermocouple temperature rise | $\Delta Tc = Tcm - Tcf$ | °C | 0 | 0 | 0 | 0 | 0 |
| Maximum specimen surface thermocouple temperature | $T_{cm}$ | °C | 812 | 801 | 806 | 811 | 808 |
| Final specimen surface thermocouple temperature | $T_{sf}$ | °C | 811 | 801 | 806 | 811 | 808 |
| Specimen surface thermocouple temperature rise | $\Delta Ts = Tcm - Tsf$ | °C | 1 | 0 | 0 | 0 | 0 |
| Test duration | - | min | 35 | 30 | 30 | 30 | 30 |

- Any individual duration flaming less than 5 seconds was discarded

**End of Test Certificate**



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