

IGNIS ENGINEERING CERTIFICATION

Evaluation No. IGNS-7424 Issue 02 Revision 01 [2019]

KNAUF INSULATION

1 Introduction

Ignis Solutions has been engaged to evaluate the Knauf Insulation in line with compliance to AS 1530.1-1994 based on Exova Warringtonfire test reports 56297900b.1 for R2.7 and 56297900a.1 for R3.5 being AS/NZS 1530 Methods for Fire Tests on Building Materials, Components and Structures, Part 1 – Combustibility Test for Materials, 1994.

Knauf Insulation have requested that Ignis Solutions undertake a technical assessment of product for compliance under the National Construction Code of Australia 2019 and the likely fire performance of the insulation in addition to the fire test report 311313 for 32kg/m³ for non-combustibility of building products in accordance with BS EN ISO 1182:2010.

This engineering certificate serves as a certificate from a professional engineer in accordance with Clause A5.2(1)(e) of the National Construction Code Volume One Building Code of Australia 2019.

This evaluation is valid for the duration of the National Construction Code – Volume One and Two – Building Code of Australia 2019.

2 Evaluation

The BCA details that non-combustible means –

- (a) applied to a material – not deemed combustible as determined by AS 1530.1 – Combustible Tests for Materials; and
- (b) applied to construction or part of a building – constructed wholly of materials that are not deemed combustible.

The Knauf Insulation glasswool with ECOSE[®] Technology is made of two main components;

- Mineral fibre (inert to fire)
- Binder (reactive to fire).

The test specimens required for AS 1530.1 are cylindrical, in the order of 45mm diameter and 50mm thick. The size of the test specimens is identical for each test. As the test is a material test, the actual thickness of the insulation does not affect the performance when tested to AS 1530.1.

The Knauf Insulation glasswool with ECOSE[®] technology is bonded using a thermal setting binder, with a nominal density in the order of 2.56kg/m³ glasswool has been tested as detailed below. Each of the products did not present sustained flaming or reached the fail temperature of 50°C.

The following table of tests and results were completed by Exova Warringtonfire.

Product	Density (kg/m ³)	Sustained flaming (s)	Mean furnace/centre/surface temperature rise (°C)	AS 1530.1 Status
90mm R2.7 Earthwool [®] (56297900b.1)	24	0	5.5 / 23.8 / 6.1	NOT deemed COMBUSTIBLE



175mm R3.5 Earthwool® (56297900a.1)	9.5	0	6.4 / 17.6 / 8.1	NOT deemed COMBUSTIBLE
HD-32-8-ET (311313)	32kg/m ³	0	6.8 / 10.6 / 6.3	NOT deemed COMBUSTIBLE

Where Knauf Insulation manufactures a product with ECOSE® Technology with the nominal density range of 7.0kg/m³ to 32kg/m³, and the binder content is equivalent to the above range, the product is considered equivalent

Products that are included within this range are:

- Earthwool®
- Earthwool® glasswool
- Knauf Insulation® glasswool

3 Summary

In the opinion of Ignis Solutions, the above listed products remain within the acceptable percentage of binder, the material will be consistent with a NOT deemed COMBUSTIBLE status and as such deemed non-combustible.

Ignis Solutions reserves the right to amend or withdraw this assessment if information becomes available which indicates the stated fire performance may not be achieved.

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