

## DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE

NO. 3519

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## DEPARTMENT OF PUBLIC WORKS

AGRÉMENT SOUTH AFRICA

(Approval of innovative construction products and systems)

Notice is hereby given that Agrément South Africa has, with effect from 03 July 2019, issued an Agrément certificate, details of which appear in the schedule hereto.

## SCHEDULE

Agrément Certificate 2019/600

**Subject:** CITRA Building System

**Certificate holder:** CITRA Construction (Pty) Ltd

**Description:** The CITRA Building System utilises prefabricated panels that are assembled to form the building envelope of the structure. The exterior panels are used for the wall and roof as an integrated shell type structure i.e. the wall and roof form part of a continuous building envelope.

The CITRA panel consists of factory produced interlocking expanded polystyrene (EPS), minimum thickness 80 mm, with a minimum density of 15kg/m<sup>3</sup>, sandwiched between two layers of 30 mm structural plaster (14 MPa). The two plaster layers are reinforced by an alkali resistant glass fibre mesh (<250g/m<sup>2</sup>).

The EPS panels interlock vertically to form the building envelope. A non-flammable polyurethane glue is applied at the interlocking joints. Adjacent EPS panels are separated by 9.0 mm Magnesium Oxide (MgO) board fins, which they are bonded to using the non-flammable polyurethane glue. The MgO panels also interlock in the vertical direction like the EPS. Panels at the corner and T-junctions are connected with the non-flammable polyurethane glue at the interface of two EPS panels. The overall thickness of the smallest exterior CITRA panel is 140 mm. With 80 mm thick EPS between 20 mm plaster skins, the overall thickness of the interior panel is 120 mm.

innovative construction product assessments

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The foundations are designed and approved by an approved competent person. The panels are fixed to a concrete foundation using a galvanised steel U-channel (whose size varies depending on the EPS thickness) that is anchored to the foundation using expansion anchor bolts, steel grade 4.8.

For services, the EPS core is cut out to create openings for conventional services that go through the wall like water piping. This is done prior to plastering. The EPS is chased using a heat source or a pointed instrument for services that run in the wall like electrical services.

The Agrément certificate contains detailed information on the system and can be accessed at <http://www.agrement.co.za>

Copies are obtainable from: Chief Executive Officer (CEO)

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