

This certificate is valid for Building Regulations & associated technical guidance in force on the date of registration and for the regulations in the countries indicated

## JUWO Poroton ThermoPlan (Smartwall™) System

### Description of Product

This is an assessment of the JUWO Poroton ThermoPlan block (Smartwall™) System. The blocks are constructed of fired-clay and use a thin-joint mortar system, applied with a specialist mortar roller. The blocks contain a vertical cellular void structure and the non-face ends of the blocks are keyed with a vertical tongue-and-groove interlocking profile, which eliminates the need for vertical mortar joints. The system includes a range (ref: MZ) as an option, with voids infilled with Rockwool insulation. The block system complies with EN 771 and is certified by CE Norm with the highest range of classification CE 2+. The compressive strength of the clay units ranges from 5N/mm<sup>2</sup> to 15N/mm<sup>2</sup> and has been tested to demonstrate its non-shrinking characteristics, including the mortar, which is also supplied by JUWO.



### Key Factors Assessed

- Mechanical Resistance & Stability
- Durability serviceability and identification
- Safety in case of fire

### Validity

This certificate was first issued on 24<sup>th</sup> April 2018 and is valid until 24<sup>th</sup> April 2022

Issue Dated 18<sup>th</sup> May 2020

## Scope of Registration

This registration applies to the JUWO Poroton ThermoPlan clay block (Smartwall™) System, which can be used either in solid external wall constructions or as part of an external cavity wall, or it can be used for internal solid walls. The requested assessment is for **loadbearing structure only**.

Block reference types subject to the assessment are:

ThermoPlan MZ60/MZ70/MZ8/MZ80-G/MZ90-G/S7/S8/S9/T10/T11/TS12/T14/T/TS Square/Acoustically insulating filled blocks T, T1,2 & T1,4.

The clay block units are supplied in a range of varying modular sizes and compressive strengths.

The blocks are laid using the VD System – thin joint mortar applied with a specialist mortar roller.

Laying in the "dipping system" is also possible, but not recommended.

The block system benefits from a Certificate of Conformity of Factory Production Control, in compliance with Regulation 305/2011/EU and complies with harmonised standard BS EN 771-1:2011 (valid until 31<sup>st</sup> December 2020).

### **For Scotland purposes:**

The assessment includes safety in the case of fire also.

## Conditions of Certificate

The block system is suitable for residential/commercial building types up to 6 storeys max.

The design of the clay block masonry walls shall comply with Eurocode 6, BS EN 1996 accordingly.

There is no limitation on the geographical use of the block system in terms of exposure.

The block must be protected externally from weathering and moisture ingress by an appropriate layer (such as external render) and DPCs as appropriate. The manufacturer recommends the use of 'Quick-Mix' external render with their blocks.

The block system is not suitable for use in retaining earth situations.

The block system can be used below DPC level (though the manufacturer recommends using their own specific basement clay block product for such purposes)

The mortar design shall comply with BS EN 998-2: Specification for mortar masonry

The block system is suitable for use with ETICS.

The block system is to be laid and bonded in strict accordance with the manufacturer's recommendations and installation processes.

Joints in block panels are to be kept within tolerances noted in the manufacturer's installation guide, and shall be infilled with suitably approved filler products.

The choice of block and compressive strength required is subject to the individual design and loading of each building, and may require the input of a structural engineer to Eurocode 6 BS EN 1996: 1/2/3

The manufacturer states that the mortar achieves its ultimate compressive strength after 5 days, during which no further applied loading should occur from intermediate floors/roofs/structural elements etc.

Structural fixings into the clay block units must comply with the manufacturer's recommendations and installation guide. Bearings for structural elements (beams/pc floor units etc), slots and chases should be formed in the clay block walls in strict accordance with the manufacturer's recommendations and in accordance with DIN 1053-1: 11-1996

The application of any external render or internal plaster finish is subject to the individual manufacturer's recommendations and installation guides.

Other considerations for fire resistance, thermal & acoustic performance will need to be assessed separately for compliance with the Building Regulations 2010 in England and Wales and the Domestic and Non-Domestic Handbooks under the Building Standards (Scotland) Regulations 2004.

**For Scotland purposes:**

The specifications and materials referred to have been assessed in accordance with the Building (Scotland) Regulations 2004 and in accordance with the supporting guidance in the Domestic Technical Handbooks which come into force with effect from 1 October 2019.

Where reference is made on a plan or specification document to any Code of Practice, British or European Standard or manufacturer's instruction it shall be construed as a reference to such publication in the form in which it is in force at the date of this Registered Detail.

The materials specified shall be for purposes of this Registered Detail and should not be changed without first gaining approval so to do from Local Authority Building Standards Scotland [LABSS]. Failure to do so will invalidate the Registered Detail.

This Registered Detail should not be regarded as a formal approval under the building warrant process prescribed by the Building (Scotland) Act 2003 enacted from 1 May 2005

This Registered Detail shall contribute to compliance with relevant Mandatory Standards specified under the Building (Scotland) Regulations 2004 as amended when read with the scope, conditions and regulations sections to this Registered Detail.

LABC and LABSS consider that, JUWO Poroton ThermoPlan (Smartwall™) System will meet the functional requirements of the Building Regulations (listed below) if the criteria detailed in this certificate are met;



### The Building Regulations 2010 (as amended) England & Wales

Regulation 7	Materials and workmanship
Note:	The system is acceptable.
AD A1	Fire Safety
Note:	The system is acceptable subject to limitations detailed in the Conditions of Certificate section.



### The Building Regulations 2010 (as amended) England

None presently.



### The Building Regulations 2010 (as amended) Wales

None presently.



### The Building (Scotland) Regulations 2004 (as amended)

Technical Handbooks Domestic and Non-Domestic

Regulation 8	Durability, workmanship and fitness of materials
Regulation 0.8.5:	Ways of establishing the fitness of materials
Note:	The block system benefits from a Certificate of Conformity of Factory Production Control, in compliance with Regulation 305/2011/EU and complies with harmonised standard BS EN 771-1:2011 (valid until 31st December 2020) - DECLARATION OF PERFORMANCE (DOP) 01-365-10-1-3/1.
Regulation 9	Building Standards applicable to construction
Note:	Construction shall be carried out so that the work complies with the applicable requirements of schedule 5.

Mandatory Standard 1.1 Note:	Structure The choice of block and compressive strength required is subject to the individual design and loading of each building, and may require the input of a structural engineer to Eurocode 6 BS EN 1996: 1/2/3.
Mandatory Standard 2.3 Note:	Structural protection Reliable fire protection: European class for fire resistance REI-M 90: The S8 is non-flammable and strong. It provides the highest level of fire protection and safety. "Fire protection: with plaster and render on both sites of the wall: Fire resistance based on EN 1996-1-2 and national UK annex for group 1 and 2".
Mandatory Standards 5.1 Mandatory Standard 5.2 Note:	Noise separation Noise reduction between rooms The product can contribute to compliance with these standards in site-specific cases if built in accordance with the manufacturer's instructions.
Mandatory Standard 6.2 Note:	Building insulation envelope The product can contribute to compliance with this standard in site-specific cases if built in accordance with the manufacturer's instructions.

## Non-Regulatory Information



### LABC Warranty

The use of the JUWO Poroton ThermoPlan (Smartwall™) System has not been assessed to meet the requirements of the LABC Warranty Technical Manual. If you would like to discuss a specific use please make an enquiry to [technical.services@labcwarranty.co.uk](mailto:technical.services@labcwarranty.co.uk)

## Supporting Documentation

MFPA (Official Laboratory Testing Centre 0992 - DAkkS accredited testing laboratory) – thermal resistance of dried masonry

MFPA (Official Laboratory Testing Centre 0992 - DAkkS accredited testing laboratory) – confirmation of accreditation to EN 17025

BCCA (Belgian Construction Certification Association) – certificate of conformity

CERT Baustoffe GmbH – certification of conformity with EN 771-1:2011

IZF Test Report for shrinking/expansion – (in German)

Certificate of Performance/Declaration of Performance

JUWO Poroton ThermoPlan System manufacturer's product information manual – current edition

JUWO cold-bridge catalogue detail excerpts

### For Scotland purposes:

Fire resistance test of a brick wall thickness 365 mm, made of bricks type ThermoPlan S8 according to DIN EN 1365-1:2012\* combined with DIN EN 1363-1:2012\* with 90 minutes of unilateral exposure to fire and impact test according to DIN EN 1363-2:1999\*190827\_PB\_3.2\_14-169-2-S 8\_EN final

Test of a load-bearing, space-enclosing, heat-insulating wall construction thickness 175 mm, made of flat vertical coring bricks to establish fire resistance time with unilateral fire load  
190828\_TS Quadrat Prufbericht\_Test report-Nr 3561-012-10\_EN final

## Contact Information

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