




DECLARATION OF PERFORMANCE No.1/2019

PANABLOK LOADBEARING SANDWICH PANELS

1. Unique identification code of the product-type:	The Panablok Loadbearing Structural Insulated Sandwich Panel.
2. Type, batch or serial number or any other element allowing identification of the construction product:	1.2m x 2.4m x 100mm Panel – PIM 1201 (2400-100) 1.2m x 2.7m x 100mm Panel – PIM 1203 (2700-100)
3. Intended use/es:	Panablok loadbearing panels form part of a panelised steel frame building kit to be mainly used as the structural envelope (walls, floors and roof) in low and medium-rise residential buildings.
4. Manufacturer:	Panablok International Limited Reg. Office: 4 th Floor, 36 Spital Square, London E1 6DY Tel: 0844 798 1184 Registered in England & Wales Number 9019553 Registered Trademark: Panablok® Manufacturing plant: c/o Nova Scotia Works, Dale Street, Ossett, West Yorkshire WF5 9HQ
5. Authorised Representative:	N/A
6. System/s of Assessment & Verification of Constancy of Performance (AVCP) of the construction product:	System 3
7. Harmonised Standard:	European Assessment Document 340282-00-0303
8. Notified Body:	BRE Global UK European Technical Assessment 17/0263 (08/10/2019)
9. Declared Performances:	The characteristics summarised in the table below apply to all products mentioned in section 2 above.

Essential Characteristics	Performance/Test Report	Harmonised Technical Specification
BWR (Basic Work Requirement) 1 – Mechanical Resistance & Stability		
1. Racking Resistance for wall panel and Shear Capacity of joints	BRE Structural Test Report P105468-1000 Issue 1 dated 17/05/2018. Structural Engineer's Assessment Report reviewed by BRE Global. Racking resistance: 0.93kN/m (2.4m panel); 0.83kN/m (2.7m panel)	Calculated to the appropriate Eurocode

	Shear capacity of joints: 7.3kN/m (2.4m panel); 6.5kN/m (2.7m panel)	
2. Shear strength & modulus	Not applicable	
3. Compressive strength & modulus	Not applicable	
4. Cross panel tensile strength	Not applicable	
5. Bending moment capacity	Structural Engineer's Assessment Report reviewed by BRE Global. 1.437kN/m (characteristic) (2.4m panel) 1.278kN/m (characteristic) (2.7m panel) 0.958kN/m (manufacturer's recommended design value) (2.4m panel) 0.852kN/m (manufacturer's recommended design value) (2.7m panel)	Section 5.2.1.7 of EN14509 section A.5
6. Bending moment capacity over a central support	Not applicable	
7. Compressive load capacity for a wall panel	Structural Engineer's Assessment Report reviewed by BRE Global: 180kN/m (characteristic) (2.4m panel) 167kN/m (characteristic) (2.7m panel) 90kN/m (manufacturer's recommended design value) (2.4m panel) 85.5kN/m (manufacturer's recommended design value) (2.7m panel)	EN 1993-1-3 Concentric axial load and eccentric load tests to ISO 22452 Racking tests to BS EN 594:2011 (and also ISO 22452) Racking resistance based on test data and BS 5268 Part 6.1
BWR 2 – Safety in case of Fire		
8. Reaction to fire	Euro Class A1 Exova Test Report 313814 Issue 1 dated 01/12/2011	
9. Resistance to fire	75 minute test carried out on wall under a total vertical load of 80kN (23.3kN/m). Panablok system classified as R (load bearing capacity), E (integrity), and I (insulation): REI 60 BRE Test Report P107782-1000 Issue 1 dated 13/12/2018 and Classification Report P103466-1000	EN 1365-1:2012 ISO 834 and ES EN 1363-1:2012 and where appropriate EN 1363-2
BWR 3 – Hygiene, Health & Environment		
10. Water permeability	Assessed to provide adequate moisture control for the panel and the galvanised metallic connecting components considering the intended use.	
11. Water vapour permeability	Assessed to provide adequate moisture control for the intended use.	
12. Emission of formaldehyde	No wood or wood derived products are used in the manufacture of the panel or the building kit. MgO facing boards are free of formaldehyde, benzenes, and oil-based chemicals. Polyurethane foam core is made from sustainable biomass using inert blowing agents.	All components manufactured in accordance with ISO 9001 (2015)

BWR 4 – Safety in Use		
13. Impact resistance	The structures have been assessed on the basis of experience to be adequate for the intended use of the building kit. Informed also by BRE Structural Test Report P105468-1000 Issue 1 dated 17/05/2018, and Structural Engineer's Assessment Report dated 17/01/2019, reviewed by BRE Global.	
BWR 5 – Protection against Noise		
14. Direct airborne sound insulation	BRE Acoustic Test Report P105468-1000-2 dated 22/12/2016 Panablok wall panel assembled as detailed by the Manufacturer: Rw(C;Ctr) (dB) 29(-2;-4)	Airborne and sound insulation: EN 10140-2:210 to BS EN ISO 10140-1:2010+A2:2014; Single number quantities: BS EN ISO 717-1:2013
BWR 6 – Energy Economy & Heat Retention		
15. Thermal conductivity/resistance	Senior Building Physics Consultant's Report plus Manufacturer's calculations reviewed by BRE Global. Total Resistance Panablok 100mm Panel: 4.1405 ⁻¹ U Value Panablok 100mm panel: 0.24m ² K/W	BS EN ISO 6946
16. Air permeability	Manufacturer's assessment reviewed by BRE Global. Minimal air leakage provided the panels are properly assembled as detailed by the Manufacturer.	
Working Life		
Assumed working life of the product for the intended use is at least 50 years for the panels.		
Condensation Risk		
Minimal surface and interstitial condensation under normal domestic temperature and humidity conditions provided the panels are properly assembled as detailed by the Manufacturer.		BS 5250:2002 (using RUSFA calculations)
10. Manufacturer's Declaration:	<p>The performance of the product identified in section 1 and 2 above is in conformity with the set of declared performances. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the Manufacturer identified above.</p> <p>Signed for and on behalf of the Manufacturer by:</p>  <p>Alex Panko Director, Panablok International Limited</p> <p>London, 18/10/2019</p>	